Newsletter

Department of Mechanical & Production Engineering Muffakham Jah College of Engineering & Technology, Hyderabad.



ANNUAL ISSUE OF THE YEAR

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OUOTES:

- ➤ "Creativity is thinking up new things. Innovation is doing new things" – Thedore Levit.
- ➤ "The value of an idea lies in the using of it" – Tom Freston.
- ➤ "Turn your obstacles into opportunities and your problems into possibilities. "- Roy T Bennett

VISION AND MISSION THE DEPARTMENT

Vision: To produce high caliber, competent, industry oriented Mechanical Engineers

Mission: To impart quality education by providing state of art technical facilities and enhance the professional abilities to meet the demands of the ever-changing manufacturing industry.

Plantation Drive Conducted By The Department:



Mechanical Engineering Department has successfully conducted Plantation drive on 14th August 2023, from 2.00 PM in MJCET Campus. NSS volunteers, along with faculty members participated in the event with great enthusiasm. The program commenced with an inaugural ceremony where the significance of tree plantation and environmental conservation was highlighted. The NSS plantation drive exemplified the organization's commitment to community service and environmental conservation. By mobilizing volunteers and fostering partnerships with local stakeholders, the event served as a catalyst for positive change. Moving forward, it is imperative to sustain the momentum generated by such initiatives and continue to advocate for environmental stewardship. The event was led by

Dr.Mahipal Singh Rawat, Principal, MJCET and NSS Programme officer NBV Lakshmi Kumari, all student volunteers, faculty members, and who contributed to the success of the plantation drive.

SAE (SOCIETY OF AUTOMOTIVE ENGINEERS):

About SAE:

SAE stands for Society of Automotive Engineers, is a one-stop resource for standards development, events, technical information and expertise used in designing, building, maintaining, and operating self-propelled vehicles for use on land or sea, in air or space. SAE International has a diverse membership of engineers, business executives, educators, and students from across the globe, who share information and exchange ideas for advancing the engineering of mobility systems.

Objectives of SAE:

SAE demonstrates commitment to society through local, national, and international public awareness programs that promote vehicle safety and maintenance and energy resource conservation. The SAE Foundation, is deeply involved in the engineering-related education of children, teachers, college students, and faculty by conducting seminars, webinars, symposia, conferences and competitions like Baja SAE Series, SAE Aero Design, Clean Snowmobile, Formula SAE Series & Super mileage. For more information, refer to Baja Website www.bajasaeindia.org.

• On 16th November, 2023, SAE Tier 1 Convention MJCET organized a Python Programming event. This event was designed to assess students' understanding of Python programming, provide hands-on learning experiences, and prepare them for future technical challenges. The event was divided into two rounds.

Round One: A preliminary round focused on testing participants' basic knowledge of Python. This round served as an introductory assessment to gauge the participants' understanding of fundamental programming concepts.

Round Two: Following the initial round, participants engaged in a practical session where they applied their knowledge by working on mini projects using Python. This round aligned with the SAE convention guidelines and was aimed at providing hands-on experience.

Participants concluded the event with a quiz on Python basics, which was designed to test their comprehension and retention of the material covered. The primary objectives of the Python Programming event were:

- To test and evaluate students' foundational knowledge of Python.
- To offer practical experience by having participants build mini projects.
- To provide a platform for learning and applying programming skills in a hands-on manner.
- To prepare students for future programming challenges and events.

The event successfully met its objectives by gauging technical skills, assessing software knowledge including programming languages, and offering practical experience. It also aimed to promote participants and prepare them for upcoming events and challenges.

The Bridge Building event, part of the SAE Tier 1 Convention, was held on 16th November, 2023. Organized by the SAE MJCET club, this event was designed to challenge participants' engineering skills and provide practical experience. The event was conducted in two main rounds:

Round One: This round assessed participants' basic knowledge of bridge building principles. It served as an introductory phase to evaluate the participants' understanding of fundamental concepts.

Round Two: Participants were given a set of components and tasked with building a bridge. This round followed the SAE convention guidelines and was aimed at offering hands-on experience. Following the construction task, participants completed a quiz covering the basics of bridge building. in bridge construction.



Overall, the Python Programming event was a valuable and effective initiative, contributing to the professional and technical development of the students.



CAM-FIRST PRIZES



TECHNICAL PAPER PRESENTATION- SECOND PRIZE.

CAM: 1st Position

Technical Paper Presentation: 2nd Position

Auto Quiz: 3rd Position

Welding: 3rd Position

Sheet Metal: 3rd Position

Participants provided positive feedback, highlighting the following:

Learning Experience: Participants gained valuable knowledge about bridge building and related engineering concepts.

Enjoyment: The event was engaging and enjoyable, allowing participants to apply theoretical knowledge in a practical setting.

Exploration: The event allowed participants to explore various aspects of design and creativity in bridge construction.

The event successfully achieved its goals by providing technical training, fostering design and creativity, and offering hands-on experience. It also aimed to promote participants and prepare them for future engineering competitions and challenges. In summary, the Bridge Building event was a successful and educational experience, contributing to the participants' technical and creative development.

On 27th January, 2024, the SAE ISS Student's Convention Tier-2 was hosted by SAE OU at the Mechanical Department of Osmania University in Hyderabad. The event drew participation from multiple colleges across the Hyderabad division, with a total of 120 participants. SAE MJCET, representing Muffakham Jah College of Engineering and Technology (MJCET), competed and achieved outstanding results in all participated events:

Participants expressed high satisfaction with the event, noting significant learning opportunities. The convention allowed them to apply core principles in technical areas such as CAM, technical presentations, auto quiz, welding, and sheet metal work. It also provided a platform for exploring various interests and enhancing their technical understanding and capabilities. The SAE ISS Student's Convention Tier-2 was a successful and enriching experience for SAE MJCET, demonstrating the team's skill and dedication in a competitive environment.

ENGINEERS WITHOUT BORDERS (EWB):

Engineers Without Borders: Engineers without Borders (EWB) – MJCET student chapter has been established in the year 2002 in affiliation with EWB-USA and currently it is affiliated to EWB-India. Its mission is inspired by an urgent concern for accelerating sustainable rural development, assisting in capacity building in backward rural and urban communities of India, protecting the country's natural resource base and working across national boundaries for social and economic justice and for responsible use of technology. The Faculty Coordinators : Dr. Ishrat Meera Mirzana, and Mrs NBV Lakshmi Kumari.

• Plantation Drive

A Plantation drive was conducted on 14th August, 2023 from 2.00 PM in MJCET Campus.

The plantation drive took place on 14th July, 2023 at MJCET Campus. NSS volunteers, along with faculty members participated in the event with great enthusiasm. The program commenced with an inaugural ceremony where the significance of tree plantation and environmental conservation was highlighted.

EWB-MJCET in collaboration with NSS-MJCET conducted an online event which included online quiz. More than 70 participants have registered for the event.



Medical Camp

A medical camp was conducted on 15th July 2023 at MJCET, targeting economically disadvantaged communities. A team of healthcare professionals, including doctors, nurses, and support staff, collaborated with NSS volunteers to ensure the success of the event.



Road Safety Awareness Program Report

The road safety awareness program took place on 10th August,2023 at MJCET, targeting a diverse audience including drivers, pedestrians, students, and community members. The program featured interactive sessions, demonstrations, and educational materials designed to engage participants and impart practical road safety knowledge.



Road Safety Awareness

Swachh Bharath Abhiyan

Swachh Bharath Abhiyan Program was organized on 24th August 2023, at Govt.High School Erramanzil.



• On the occasion of World Environment Day, i.e 5th June 2024, a online quiz was conducted, more than 100 students participated in the quiz. Plantation Drive was organized at Government School. more than 100 students participated in the quiz. Plantation Drive was organized at Government School, Erramanzil explaning the importance of Plantation. More than 25 students participated in the program.



KGNMT Project Project Name: KGNMT Collaboration: EWB-MJCET & EWB-INDIA Date of Visit: 28-08-2023

The Kasturba Gandhi National Memorial Trust (KGNMT) plays a pivotal role in addressing the challenges faced by women in rural India. Established in 1945, it emerged as a result of a national movement led by Mahatma

Gandhi, emphasizing the importance of empowering women as a key element of social development. The formation of KGNMT is deeply rooted in the history of India's freedom struggle. It mobilized resources from eminent individuals and the masses alike, all united under the vision of improving the lives of rural women. With its headquarters in Kasturbagram, Indore, KGNMT has expanded to include 22 state branches, each dedicated to fostering change in their respective regions.

The primary objectives of the KGNMT include:

- Empowering women through education and vocational training.
- Promoting health and sanitation initiatives in rural areas.
- Supporting the economic development of women through self-help groups.
- Preserving the cultural heritage and promoting social justice.

Location: Kasturba Gandhi National Memorial Trust

Hyder Shah Kote, Langar Houz,

Bandlaguda Jagir, Telangana 500091

This strategic location allows KGNMT to effectively reach and serve women in need across various rural areas in Telangana.

Objectives:

The purpose of the visit was to evaluate the underlying problems and issues faced at KGNMT Trust.

Findings from the Survey:

1. High electricity bills due to maintenance charges for the batteries that store the

solar energy.

- 2. Inefficient networking of wires for flood lights.
- 3. High Consumption of Fuel for cooking.
- 4. Increased water consumption.





Interaction with the staff



Analysis of the Solar Panels



Discussion with Staff on Cooking Charges



Examination of the Water Heating System

UBA (UNNAT BHARATH ABHIYAN):

Institute Cod	Institute Name	S. No	Name of Village	Block /Mandal Name	Panchayat Name	District Name	State Name
		1	Gudi Thanda	Sangareddy	Gudi Thanda	Sangareddy	Telangana State
C-25464	MUFFAKHAM JAH2COLLEGE OF ENGINEERING3AND TECHNOLOGY4	2	Hanuaman Nagar	Sangareddy	Hanuaman Nagar	Sangareddy	Telangana State
		3	Dasugadda Thanda	Sangareddy	Hanuaman Nagar	Sangareddy	Telangana State
		4	TunikilaThanda	Kandi	Tunikila Thanda	Sangareddy	Telangana State
		5	Koyyagundu Thanda	Kandi	Vaddanguda Thanda	Sangareddy	Telangana State

Training Cum Workshop on Approaches to Village Out-reach Programmes

India is a country of villages; therefore, rural development is the fundamental need of its progress. This program describes the various dimensions of rural life and its development in India. It advocates the importance of community development through self-help groups and it also emphasises on the health and well-being of villagers. In addition to this, the concepts of literacy and employment have been elaborated in the context of rural culture and multi-dimensional development of rural India. This program highlighted the contribution of social networking as a bridge between the various government schemes and the people of India. Sensitivity towards the environment and education, safety and energy, enthusiasm towards physical, mental and spiritual health along with simple living and high thinking have been explained for better understanding of the students. The program also outlines the benefits of community engagement through research and innovation. Students will be able to understand the various problems of any community and the possible ways to address the same.

Donation And Distribution of Note Books for Government Schools:

Under the activity of UBA Cell, we have donated and distributed the note books for the government school students at the adopted villages in the academic year of 2022-23 as particulars given below.

	Tota	Total Number				
Class	Gudi Thanda	Hanuman Nagar	Tunikila Thanda	Koyyagundu Thanda	of Students Per Each Class for all Villages	
Ι	10	7	6	7	30	
II	9	4	4	17	34	
III	5	12	2	14	33	
IV	4	2	3	1	10	
V	2	7	7	6	22	
Total	30	32	22	45	129	

Details of Class Strength for all Schools:

S. No	Activity	Place	Date	Time
1	Note Books Distribution	Gudi Thanda	23.07.2023	10.30 to 11.15 AM
2	Note Books Distribution	Hanuman Nagar		11.30 to 12.15 PM
3	Lunch	At MNR Medical College, Sangareddy		12.30.1 PM
4	Note Books Distribution	Tunikila Thanda		1.15 to 2 PM
5	Note Books Distribution	Koyyagunda Thanda		2.20 to 3 PM

Schedule for Note Books Distribution in the Government Schools, Sangareddy, Telangana.

1.Gudi Thanda



Tunikila Thanda

2. Koyyagundu Thanda

Participation in 75th Republic Day Celebration, Village: Gudi Thanda

Date: 26/01/2024

Under the participating institutions (PIs) of Unnat Bharat Abhiyaan (UBA), Muffakham Jah college of engineering and Technology, Banjara Hills, Hyderabad had been participated in 75th republic day celebration at Gudi Thanda. On the day of republic day celebration, UBA team were participated in flag hoisting, singing of national anthem, and then sweat and chocolate distribution for villagers and school children. Moreover, Grama Sabhawas conducted with Grama Panchayat members and villagers.



Participation in 75th Republic Day Celebration, Village: Tunikila Thanda Date: 26/01/2024

Under the participating institutions (PIs) of Unnat Bharat Abhiyaan (UBA), Muffakham Jah college of engineering and Technology, Banjara Hills, Hyderabad had participated in 75th republic day celebration at Gudi Thanda. On the day of republic day celebration, UBA team participated in flag hoisting, national anthem, and in distribution of sweets and choclates for villagers and school children.



Participation in 75th Republic Day Celebratino, Village: Hanuman Nagar, dated 26th January 2024

Under the participating institutions (PIs) of Unnat Bharat Abhiyaan (UBA), Muffakham Jah college of engineering and Technology, Banjara Hills, Hyderabad participated in 75th republic day celebration at Gudi Thanda. On the day of republic day celebration, UBA team participated in flag hoisting, singing of national anthem, and then sweets and chocolate distribution for villagers and school children.



Flag Hoisting

CLUB OPTIMUS

• Club OPTIMUS conducted a front-end submissions contest titled "Web Showdown"online for the students of MJCET on 5th August 2023. Certain Guidelines were set for the participants such as their submissions having HTML and CSS files and having a minimum of two pages. A restriction of not enlisting the use of any AI tools in the creation of the website was applied as well.

Theme Suggestions were provided and out of 20 registered participants, 16 had submitted a complete and functioning website for judgement. Submitted websites were of a refined quality and showcased the potential of future developers from amongst the students of MJCET.

• A Personality development program was conducted on Entrepreneurship by the Former Director of Ingentas Robotics and Club optimus Chairman, Zafeer Ahmed on 11th October 2023. The role of Institution Innovation Council was highlighted for fostering a culture of innovation and entrepreneurship on campus. It also provides students with guidance, mentoring and the opportunity to attend various activities, workshops and training program related to innovation and entrepreneurship.



ABC'S OF ROBOTICS 2.0

• Club OPTIMUS conducted a multi-game contest for the students of MJCET on 24th Octoberv2023. Individual Rulebooks and Moderators were set for the participants for all the games in the event which were held and moderated remotely. The games that were hosted by Optimus were Call of Duty Mobile, BattleGrounds Mobile, VALORANT as well as a Chess Tournament.

• Club OPTIMUS conducted a hands-on, foundational workshop on Robotics for the students of MJCET on 7th December 2023.. The panel of speakers selected from the Execom team as well as the Governing Body of Club Optimus talked about the Basics of Robotics in detail, Arduino and it's implementation in robotics, Electrical Components such as sensors, motors, and drivers and the process of coding robots. All of this was made possible with a tailored and all-encompassing demonstration using bots made by OPTIMUS for ROBOVEDA, SNIST's Annual Robotics Fest. This event was conducted in one day.

• OPTIMUS MJCET has participated in 6 robotics competitions held in ROBOVEDA. Yoddha (Sumo Wrestling) : Two robots compete to push the other out of the circular arena. Sarvaagami - A multi-terrain track is to be navigated by a vehicular bot successfully. Gati - An obstacle course that is to be navigated by a vehicular bot successfully. Goalaa - A robo-soccer event where two bots face off to score the most goals against each other. Lakshmanrekha - A line-following event where the robot has to successfully navigate multiple distractions and obstacles in the line. Jaladhmatra - An obstacle course on the water surface where a water bot has to navigate around the obstacles within the time limit.



Participation in ROBOVEDA at SNIST

• Club Optimus' team under the name of HexaHive, participated in the Smart India Hackathon, a nationwide initiative to solve some of the nation's pressing problems. This hackathon inculcates a culture of product innovation and a mindset of problem solving within its participants. Hexa Hive worked on the problem of developing an AI-Based training system that designs a course in real-time based on the individual's understanding and learning capacity. It utilise the capabilities of of artificial intelligence and machine learning to transform education and training internally within organisations. At the core of the system is an initial assessment that comprehensively evaluates a user's knowledge, capacity, technical expertise, learning style, and areas of interest. Leveraging AI algorithms, this data is transformed into a detailed user profile, serving as the foundation for personalized training. The training

content is dynamically generated and adjusted in real-time based on the user's progress and performance. By continuously monitoring user interactions, the system selects optimal learning resources, adjusts the pace of learning, and provides timely feedback through quizzes and a dedicated chatbot. A key strength of the system lies in its ability to cater to diverse learning styles. Whether auditory, visual, verbal, or kinesthetic learners, the platform offers tailored content formats. Additionally, the integration of collaborative learning features promotes knowledge sharing and fosters a supportive learning environment. Users are encouraged to provide feedback on training materials and report any difficulties they may have encountered through an essential feedback mechanism.



Team for SIH

 Members from the team of Club Optimus participated in HackEnvision 2.0, A Hackathon hosted by NSAKCET. Team "The Elites", composed of members from Optimus won the first Prize for Project "Pet Monitoring" using ESP32-CAM microcontroller and various detection sensors paired a userfriendly web interface. Another team of Optimus won the best Innovative Project for "Deepfake Analyzer". Other teams of Optimus participated in the hackathon with their projects of "Volume Control via Hand Gesture" and "Student Trail", an initiative tracker for student-led events. The winning teams were felicitated with Certificates & cash prizes. The hackathon provided the numerous teams from Optimus with invaluable insights into problem-solving and teamwork, helping them develop not just winning projects and mindsets but also

essential skills for all our future endeavours as well-accomplished and driven engineers. The guidance and motivation from the seniors at Optimus as well as the Hackathon organisers was instrumental in driving our teams to completion and successes in the competition.

ROBOTEC – 2K24 was a prestigious state-level robotics competition hosted at MLRIT, drawing in some
of the most innovative robotics enthusiasts from across the state. This grand event saw participation
from numerous colleges and institutes, all eager to showcase their skills and ingenuity in the field of
robotics. Among the participants were members of Club Optimus, who took on the challenge with great
enthusiasm and determination. Club Optimus entered three highly competitive contests: Robo Sumo,
Robosoccer, and the Robo Race, each requiring distinct skill sets and strategic planning. The Robo
Sumo contest was an intense and electrifying event where robots were pitted against each other in a
battle of strength and design. This competition tested the engineering and programming skills of the
participants. The members of Optimus showcased their mechanical prowess and strategic acumen,
earning respect and admiration from their peers and competitors

alike. In the Robosoccer contest, teams designed and controlled robots to play soccer. This contest was a display of technological innovation, as each robot seamlessly integrated movement and decision-making to outplay the opposing teams. The Optimus team displayed their well-coordinated bot as well as their strategic play. The Robo Race required robots to navigate through a course filled with various obstacles as quickly and efficiently as possible. This contest tested the programming and sensory capabilities of the robots, as well as the precision and foresight of their creators. The members of Optimus tackled this event by optimising their bots' navigation algorithm. Competing against other colleges and institutes in this rigorous and demanding race was a refreshing and invaluable experience for the team.



Club Optimus team of MJCET

IEOM (Industrial Engineering and Operations Management)

On17th February, 24, a group of 57 Mechanical Engineering students from MJCET embarked on an industrial visit to Central Institute of Tool Design, located at Balanagar. The purpose of the visit was to provide students with practical exposure to industrial processes, technologies, and applications related to their academic curriculum.

The main objectives of the industrial visit were as follows:

To gain insights into real-world applications of mechanical engineering concepts.

To observe advanced technologies and state-of-the-art equipment used in the industry.

To understand industrial processes and best practices in mechanical engineering

Factory Tour: Students were guided through various departments, witnessing the manufacturing processes and assembly lines. They observed the utilization of cutting-edge machinery and automation techniques.

Interactive Sessions: Q&A sessions were conducted where students had the opportunity to engage with engineers and technicians, gaining deeper insights into the practical aspects of their work.

Technology Showcase: Students were introduced to the latest technologies employed in the industry, including robotics, CNC machining, and 3D printing. Observations and Learnings: The industrial visit proved to be highly beneficial for the students, offering the following key takeaways:

Practical Application: Students gained a deeper understanding of how theoretical concepts learned in the classroom are applied in real-world scenarios.

Technological Advancements: Exposure to advanced machinery and technologies showcased the industry's commitment to innovation and efficiency.

Safety Protocols: Observing the strict adherence to safety guidelines emphasized the importance of workplace safety in industrial settings.

Challenges and Recommendations: While the visit was overall successful, some challenges were noted, such as time constraints and limited access to certain areas. It is recommended that future visits be extended or tailored to specific areas of interest to maximize the learning experience.



WORKSHOPS CONDUCTED BY THE DEPARTMENT:

The following workshops were conducted :

A Training Cum Workshop on Approaches to Village Outreach Programmes was organized on 23.07.2023.

RESEARCH PROJECTS:

Eight Projects of MED are approved in the year 2023-24.

- Amount of Rs. Rs. 4,14,000/- (Rupees Four Lakhs Fourteen Thousand Only) is granted for the project titled "Design and Fabrication of Student Formula Racing Vehicle". The project is under the guidance of Mr. Mohd. Viquar Mohiuddin, Professor & Head, M.E.D, and Mr. Hasham Ali, Assistant Professor . MED, MJCET.
- Amount of Rs. 1,30,151/- (Rupees One Lakh Thirty thousand One hundred and fifty one only) is granted for the project titled "Smart Agri Four Legged Bot". The project is under the guidance of 1. Dr. K. Hemalatha, Associate Professor, MED - (PI), Dr. Uma N. Dulhare, Professor and Head, CS & AI- (Co- PI), and Mrs. B. Sucharita, Asst. Professor, ECED
- Amount of Rs.50,000/- (Rupees Fifty Thousand only) is granted for the project titled "Design and Fabrication of a Dual Extruder 3D Printer". The project is under the guidance of Dr. Mohammed Viquar Mohiuddin, Professor, MED - (PI)

- Amount of Rs. 50,000 (Rupees Sixty eight thousand Nine hundred and ninety three only) is granted for the project titled "Design and Fabrication of Mechanically-driven Cleaning equipment". The project is under the guidance of Dr. Mohammed Sadak Ali Khan, Professor, MED - (PI) and Dr. V. Dharam Singh, Assistant Professor, MED - (Co- PI) MED ,MJCET.
- Amount of Rs. 51,300 (Rupees Fifty one thousand three hundred only) is granted for the project titled "Design and Fabrication of Setup of Friction Stir Welding of Pipes ."The project is under the guidance of Mr. Ahmed Abdul Muneem, Assistant Professor, MED - (PI) and Dr. Mohammed Viquar Mohiuddin, Professor, MED- (Co- PI).
- Amount of Rs. 68,993 (Rupees Sixty Eight Thousand Nine Huundred and Ninety Three only) is granted for the project titled "Design and Fabrication of an Automobile Disc Brake Rotor Test Rig". The project is under the guidance of Mr. Irfan Sadaq, Assistant Professor, MED, MJCET.
- Amount of Rs. Rs. 47,850 (Rupees Forty Seven Thousand Eight hundred and Fifty only) is granted for the project titled "Development of Friction Welding Setup for Welding of Pipes". The project is under the guidance of Mr. Ahmed Abdul Muneem, Assistant Professor, MED - (PI) and Mr. K. MD. Mazharuddin, Assistant Professor, MED- (Co- PI).
- Amount of Rs. Rs. 34,000 (Rupees Thirty Four only) is granted for the project titled "Design and Fabrication of HHO Hybrid Vehicle". The project is under the guidance of Dr. G. Sailaja, Associate Professor, MED - (PI) and Dr. G. Prasanna Kumar, Associate Professor, MED - (Co-PI)

INDUSTRIAL VISITS ARRANGED FOR THE STUDENTS:

An Industrial visit to CITD, HYDERABAD, was organized on 17th February 2024 for VII Semester Mechanical Students.

GUEST LECTURES ORGANIZED BY THE DEPARTMENT:

- A Guest Lecture on "Perspectives on Arterial blood flow with focus on flow structures" by Dr. V. Karthik Bulusu, Professor, The George Washiington University, USA, was arranged on 31st July, 2023. He delivered an insightful talk on arterial blood flow, emphasizing the complex flow structures and their implications. His presentation provided a deep understanding of the physiological and engineering aspects of blood flow dynamics.
- A Guest Lecture on "From Student to Profession Journey" an Interactive session was held on 28th December, 2023 .Mr. Syed Murtuza Qadri, Assistant Manager, Maruti Suzuki India Limited, R & D Body Division. He engaged with students in an interactive session focusing on the transition from academic life to professional careers. He shared practical insights and experiences from his role at Maruti Suzuki, offering valuable advice on navigating the early stages of professional life.
- A Guest Lecture on February 7, 2024, an informative session titled "Mission Life Lifestyle for Environment" was held. The talk was organized by the NIDPR (National Institute of Disaster Management and Prevention), Ministry of Education, with a focus on promoting sustainable living practices and environmental conservation.

PAPERS PUBLISHED / PRESENTED BY FACULTY MEMBERS:

 Dr. Mohammad Sadak Ali Khan, "Experimental and kinematic analysis of air driven slider crank mechanism "AIP Conf. Proc. 5th September 2023; 2754 (1): 080002. https://doi.org/10.1063/5.0165350.

- 2. Dr. Shaik Khadar Vali, S. Irfan Sadaq "Failure Analysis of GFRP and CFRP Composite Laminated Pressure Vessel " AIP Conference AIP Conf. Proc. 3007, 100002 (2024).
- Dr. Mohd Mohinoddin, S. Irfan Sadaq, V. Suvarna Kumar, "Experimental characterization of unidirectional carbon – Carbon composite laminate," Materials Today: Proceedings, ISSN 2214-7853, (In Press) (2023).
- 4. Dr. Shaik Khadar Vali, S. Irfan Sadaq, "Failure analysis of composite pressure vessel by means of natural and synthetic fibers ," Materials Today: Proceedings, ISSN 2214-7853, (In Press) (2023).
- 5. Dr. V. Dharam Singh, "Evaluation of Mechanical Properties and Flow Behaviour of Brass Sheet at Superplastic Region and Room Temperature," International Journal of Mechanical Engineering and Technology (IJMET), 14(03), 2023, pp. 31-45.
- 6. Dr. V. Dharam Singh, "Study of Formability of Brass Sheet Metal under Different Temperature Conditions," E3S Web of Conferences, 391, 01166 (2023), ICMED-ICMPC 2023.
- 7. Dr. V. Dharam Singh, "Experimental Investigation and Optimization of Coefficient of Friction of Brass Sheet Metal using Taguchi Technique," AIP Conf. Proc. 2754, 100003 (2023),
- N B V Lakshmi Kumari and Ishrat Meera Mirzana," Fabrication and microstructural study of the heat sink using functionally graded material", AIP Conference Proceedings, Volume 2821, Issue 1, <u>https://doi.org/10.1063/5.0168747</u>.
- 9. Dr. Md. Abdul Raheem Junaidi, "Simulation of insufflation gas via an alternative multi-functional forceps with applications in laparoscopic surgeries," International Journal of Biomedical Engineering and Technology, 42(2).
- Dr. Md. Abdul Raheem Junaidi, "Experimental Findings and Analysis of a Split Unit Evaporative Cooler for Efficient and Eco- Friendly Cooling Applications", Renewable & Sustainable Energy Technology, Article Number 02006, pages 1-11, https://doi.org/10.1051/e3sconf/202345502006.

ACHIEVEMENTS BY FACULTY MEMBERS:

Faculty Participation in FDP/Workshop/Seminars

No of FDPs/STTPs attended by faculty members: 27 No of National Workshops attended by faculty members : -No of Seminars attended by faculty members : -No of Online courses attended by faculty members, other than NPTEL : 01 No of NPTEL Certifications : 03 No. of ATAL / ARPIT certifications : 03

• Faculty details about NPTEL course achievements such asElite/ Gold/Silver medals

S. No.	Name of the Faculty	Elite Gold / Elite Silver
	member	
1	Mr. K M D Mazeruddin	Elite Silver
2	Mr. Ahmed Abdul Muneem	Elite Silver
3	Ms. SyedaRomana	Elite Silver

• List of faculty members who have completed ATAL FDP or ARPIT Refresher Course

S. No.	Name of the Faculty member	Course Title
1	Dr. Ishrat M.M	"Conventional Vehicles Sustainability & Future of Electrical Vehicles"
2	Mrs. N.B.V. Lakshmi Kumari	IoT and Sensor design for Industry 5.0 (ATAL FDP)
3.	Dr. S. Irfan Sadaq	IoT and Sensor design for Industry 5.0 (ATAL FDP)

• Individual Faculty Achievements:

S. No.	Name of faculty member	Award / Recognition / Achievement details / Book	
		Publications	
1	Dr. Ishrat M.M	ProblemBasic Manufacturing Technology by Dr. Ishrat M. Mirzana, Radiant Publishers, ISBN 978-81-962081-9-6Integration of Mechanical and Manufacturing Engineering with IoT by Dr. Ishrat M. Mirzana, COSMAS Scientific Publications, ISBN -978-93-6096-366-8NIEP Star Volunteer Appreciation Award from Noble Institution for Environmental Peace, Canada Design Patent Grant; Utility Patent GrantReviewer certificate of Archives of Current Research InternationalReviewer Certificate for Material Todays Proceedings Expert Speaker for COP2030SCR-RC of UHV appointed by AICTE-NCCIP Telugu Translator for UHV teacher's manual appointed by AICTE-NCCIPSpeaker at Dr. MGR Educational and Research Institute, Chennai	
		Jury Member for IET competition at VIT-AP Speaker at Learner's Academy	
		Speaker at MJCET	
		Speaker at Ghulam Ahmed College of Education	
		Fellowship in Environment Sustainability	
		WRCA World Record for IGEN Energathon 2023	
		1 Design Patent grant	
		1 Utility Patent Grant	
		Certificate for exceptional contribution as primary evaluator from AICTE Ministry of Education for evaluating projects for Toyacthon	
2	Md. Abdul Raheem Junaidi	Young Engineer of the Year Award felicitated and citation acknowledged by Government of Telanagana and Institution of Engineers, India	
		Gold Medal award for Numerical Analysis research	
		Outstanding Certificate of Excellence in reviewing	
		DESIGN PATEINT OKAINT	

		Reviewer for Thermal Science and Engineering Progress- SCI		
3	Mrs. Syeda Romana	Certificate for exceptional contribution as primary evaluator from AICTE Ministry of Education for evaluating projects for Toyacthon		
4	Mrs. NBV Lakshmi Kumari	Faculty Coordinator Award from Institute of Engineers India for ENERGY CONSERVATION WEEK 2023 DESIGN PATENT GRANT		
5 Dr. K. Hema Latha		3 Design Patent Granted		
		Yukti Innovation challenge Funded Project –MIC-AICTE 1 Design Patent Publication		
		I Utility Patent Publication		
6	6 Dr. G. Sailaja Design Patent Grant			
		Utility Patent Grant		
7	Dr. V. Dharam Singh	Jordan Journal Of Mechanical And Industrial Engineering		
8	S. Irfan Sadaq	Reviewer in IJEAT Journal		
9	S. Irfan Sadaq	Elsevier		

List of Faculty members who acquired Ph.D. degree in academic year 2023-24.

S. No.	Name of Faculty Member	Designation
1	Dr. V. Dharam Singh	Assistant Professor, MED
2	Dr. Mohd Hasham Ali	Assistant Professor, MED
3	Dr. H. KrishnaMurty Dora	Assistant Professor, MED

YEAR WISE MOUS WITH INDUSTRIES AND ACADEMIC INSTITUTIONS

 Mechanical Engineering Department has signed MOU with Advanced Tooling Systems and Sahara Industry on 27th July 2024.