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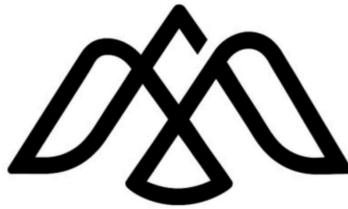Maisammaguda, Dhullapally, post via Kompally, Secunderabad - 500100

A Report of

"Design Thinking Critical Thinking & Innovation Design"

Organized by

Department of CSE (ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)

In Association with **Plexus Club & IIC**

Date   : 07 -02 -2026

Venue   : TPO Cell, MRCE

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ABOUT THE INSTITUTION

MALLA REDDY BLOCK-A

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself.

Since the beginning Mr. Malla Reddy has endeavoured to ensure quality education and carved a niche for himself by managing this group of institutions.

Malla Reddy College of Engineering has been laid upon a very strong foundation and has ever since been excelling in every aspect. The bricks of this able institute are certainly the adept management, the experienced faculty, the selfless non-teaching staff and of course the students.

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INSTITUTION VISION:

To emerge as a centre of Excellence for producing professionals who shall be the leaders in technology innovation, entrepreneurship, management and in turn contribute for advancement of society and human kind.

INSTITUTION MISSION:

- To provide an environment of learning in emerging technologies.
- To nurture a state of art teaching learning process and R&D culture.
- To foster networking with Alumni, Industry, Institutes of repute and other stakeholders for effective interaction.
- To practice and promote high standards of ethical values through societal commitment.

VISION OF THE DEPARTMENT

- To teach excellence education for undergraduates in the field of Artificial Intelligence and Machine Learning in the technological-embedded domain and make professionals who help the better cause of society.

MISSION OF THE DEPARTMENT

- Impart demanding training to create knowledge through the state-of-the-art ideas and skills in Artificial Intelligence and Machine Learning.
- Facilitate the students to adapt to the rapidly changing technologies by providing cutting-edge laboratories and facilities.
- Kick off the research and training, paying special attention to the essential skills of the subsequent generation's workforce.

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ABOUT CSE (AI&ML) DEPARTMENT

CSE-ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

The Department of Artificial Intelligence and Machine Learning (AI&ML) was founded in 2020 with the goal of providing high-quality higher education to as many students as possible and to satisfy the enormous need for highly trained professionals in the industry. The Department of AI&ML offers a B. Tech program in Computer Science and Engineering (Artificial Intelligence and Machine Learning). The curriculum is created to give students a firm foundation in AI and ML principles and concepts as well as practical experience in handling situations from the real world. Programming languages, computer architecture, machine learning, natural language processing, artificial intelligence, and deep learning are some of the department's core subjects. Students are continuously trained with an attitude of excellence to overcome automation challenges across all industries and provide new context and background to improve the agile process with the assistance of great laboratory facilities and well-qualified faculty members. Because of the program's interdisciplinary nature, it draws on knowledge and coursework from many different disciplines, including computer science, mathematics, and statistics. Students will have the chance to take part in research projects in addition to the required courses, both inside the department and with other departments and organizations. Students who complete the B.Tech. programme in Computer Science and Engineering (Artificial Intelligence and Machine Learning) will be well-versed in the theories and methods of AI & ML and will be qualified for employment in a range of fields and positions, including data analysis, software development, and research.

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PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

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

PO.2 **Problem Analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO.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.

PO.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.

PO.5 **Engineering Tool Usage.** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO.6 **The Engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO.7 **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO.8 **Individual and Collaborative Teamwork.:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO.9 **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.

PO.10 **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.

PO.11 **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.

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PROGRAM SPECIFIC OUTCOMES (PSO)

PSO1 - An ability to apply unconventional fundamental AI technologies, to citation information and deliver knowledge to intelligent decision-making systems.

PSO2 - An ability to grow an ethical and contemplative approach to the machine learning tools that can address complex reasoning tasks for the enhancement of society.

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

PEO1 – Graduates will obtain robust knowledge in the field of artificial intelligence and machine learning theory and principles for classifying, examining and solving problems.

PEO2 – Graduates will upgrade skill to work efficiently within a squad and apply suitable practices within a skilled and ethical framework for societal needs.

PEO3 – Graduates will pursue higher education and accomplish sustainable growth through lifelong learning and research.

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ABOUT PLEXUS
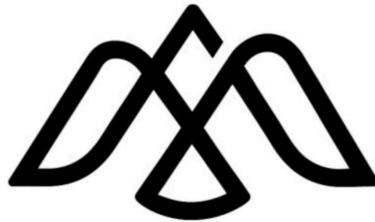
The Plexus Club envisions a dynamic, inclusive, and empowering community that nurtures the holistic development of every student. Rooted in the belief that education extends beyond the classroom, the club is committed to offering a comprehensive platform where students can explore a broad spectrum of interests — spanning technical, non-technical, creative, and athletic pursuits.

Our mission is to cultivate a vibrant environment where students are encouraged to step out of their comfort zones, unlock their potential, and actively engage in diverse opportunities. Whether it's through hands-on technical workshops, coding marathons, public speaking events, artistic showcases, sports tournaments, or leadership forums, Plexus is designed to be a space where talents are discovered, passions are pursued, and ideas come to life.

By fostering collaboration, innovation, and critical thinking, the club aims to equip students with essential skills that prepare them for both professional success and personal fulfilment. Emphasis is placed not only on academic and career-oriented growth but also on emotional intelligence, creative expression, and teamwork — qualities that define well-rounded individuals in today's interconnected world.

Ultimately, the Plexus Club aspires to be more than just an extracurricular space; it seeks to be a transformative journey. Through meaningful experiences, lasting friendships, and impactful projects, our members emerge as confident, compassionate, and competent contributors to their communities and industries.

Constitution of INDIA-POSTER

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ABOUT THE EVENT

INTRODUCING THE THEME – DESIGN THINKING AS A MINDSET:

The webinar begins by emphasizing that Design Thinking is not just a methodology, but a mindset. Participants are encouraged to move beyond conventional problem-solving approaches and adopt creative, human-centered strategies. The session highlights how innovation begins with empathy, curiosity, and the courage to question existing systems.

CRITICAL THINKING – THE POWER OF ANALYTICAL DECISION MAKING:

A core focus of the session is developing strong critical thinking abilities. Students are guided to analyze problems logically, evaluate multiple perspectives, and make informed decisions. Through structured insights and examples, the webinar stresses how critical thinking strengthens academic performance, professional competence, and real-world problem-solving capabilities.

INNOVATION DESIGN – TRANSFORMING IDEAS INTO IMPACT:

The event provides clarity on how innovative ideas can be structured into actionable solutions. Participants learn the step-by-step Design Thinking process, including empathy, ideation, prototyping, and testing. Real-world case studies demonstrate how creativity combined with systematic thinking leads to breakthrough innovations across industries.

INDUSTRY-ORIENTED APPROACH & PRACTICAL LEARNING:

The session bridges the gap between theoretical knowledge and industry application. With an industry-oriented approach, students gain insights into how organizations implement innovation frameworks to solve complex challenges. Practical examples and interactive discussions enhance engagement and understanding.

EMPOWERING FUTURE INNOVATORS:

Organized by the Institution's Innovation Council (IIC), Department of CSE (AI & ML), and Plexus Club at MRCE, the webinar serves as a platform to nurture future innovators. Under the guidance of Dr. S.S. Aravinth, Associate Professor, School of Computing, KL University, the session inspires participants to think smart, design better, and innovate faster.

**BUILDING A CULTURE OF CREATIVE LEADERSHIP:**

The event concludes by motivating students to apply design thinking principles in academics, projects, research, and entrepreneurship. By fostering creativity, analytical ability, and innovation-driven thinking, the webinar strengthens the foundation for leadership and future-ready professionals.

BRIEF OVERVIEW OF THE WORKSHOP
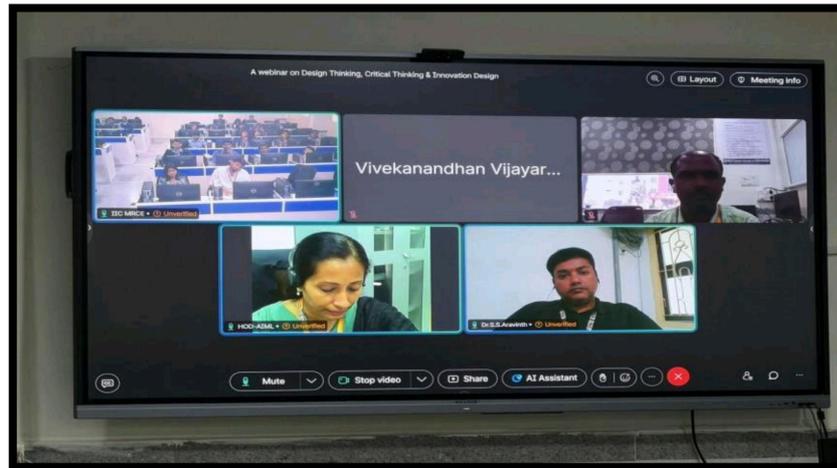
The Department of Computer Science and Engineering (Artificial Intelligence & Machine Learning), in association with the Plexus Club and IIC, successfully organized a webinar on **"Design Thinking, Critical Thinking & Innovation Design"** at Malla Reddy College of Engineering on 7th February (Saturday), conducted in online mode. The session was designed to equip students with essential problem-solving skills and an innovation-driven mindset required in today's dynamic technological landscape.

The primary objective of the webinar was to introduce students to the principles of design thinking and strengthen their critical thinking abilities. The session emphasized human-centered problem solving, analytical reasoning, and structured innovation processes that transform creative ideas into impactful solutions. Participants were encouraged to think beyond conventional approaches and adopt systematic methods to address real-world challenges.

Through insightful explanations and industry-oriented examples, the resource person, Dr. S.S. Aravinth, Associate Professor, School of Computing, KL University, provided practical exposure to the design thinking framework, innovation strategies, and real-world case studies. The webinar

bridged the gap between theoretical knowledge and practical application, fostering creativity, clarity, and confidence among students.

By the conclusion of the session, participants gained a deeper understanding of innovation methodologies, improved analytical thinking skills, and a stronger motivation to apply these concepts in academics, research, and future professional endeavors. The event stood as a valuable initiative aligned with the AIML Department's commitment to nurturing innovative, industry-ready, and future-focused engineers.
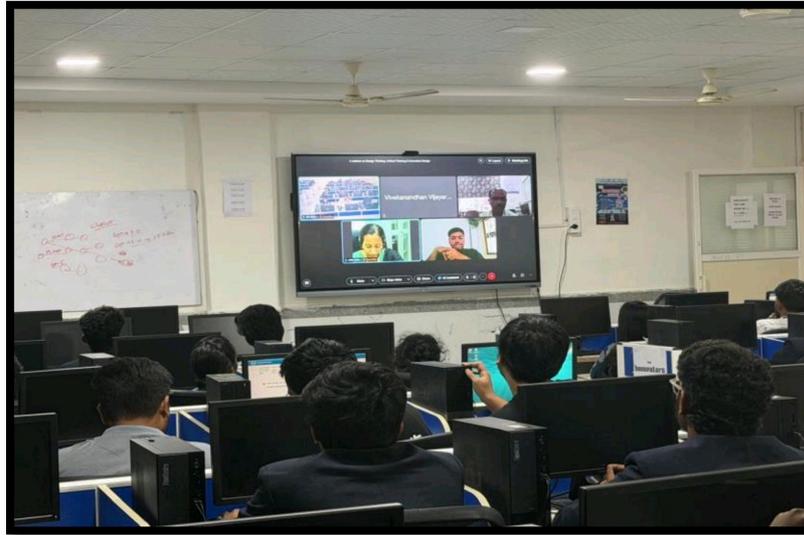
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About the Resource Person:

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Summary:

The Department of Computer Science and Engineering (Artificial Intelligence & Machine Learning), in association with the Institution's Innovation Council (IIC) and Plexus Club, successfully conducted a virtual webinar on **"Design Thinking, Critical Thinking & Innovation Design"** on **7th February** (Saturday). The webinar was organized through an online platform, enabling active participation from more than **60 students and faculty members.** The session was designed to enhance analytical abilities, creative problem-solving skills, and innovation-driven thinking among participants.

The webinar began with a welcome address by the Faculty Coordinators, who highlighted the objectives and relevance of the session. The respected Principal**, Dr. M. Ashok,** addressed the gathering virtually and emphasized the importance of cultivating creativity and critical thinking skills in today's competitive technological world. He encouraged students to utilize such academic platforms to strengthen their professional competencies. This was followed by the address of the **Head of the**

Department, Dr. Anantha Raman G R, who spoke about the significance of design thinking in Artificial Intelligence and Machine Learning domains and its impact on research, projects, and industry applications. The IIC Dean further motivated students by stressing the role of innovation ecosystems in academic institutions.

The technical session was delivered by **Dr. S.S. Aravinth, Associate Professor, School of Computing, KL University,** who provided detailed insights into the Design Thinking process, innovation frameworks, structured problem-solving methods, and real-world case studies. The speaker explained how empathy, ideation, prototyping, and testing form the foundation of effective innovation. Through practical examples and interactive discussion, the webinar helped students understand how to transform ideas into impactful solutions.

The importance of this webinar lies in its ability to bridge the gap between theoretical knowledge and practical implementation. It strengthened students' ability to think critically, analyze problems from multiple perspectives, and approach challenges with creativity and confidence. In the rapidly evolving field of technology, such skills are essential for academic excellence, research advancement, entrepreneurship, and career growth.
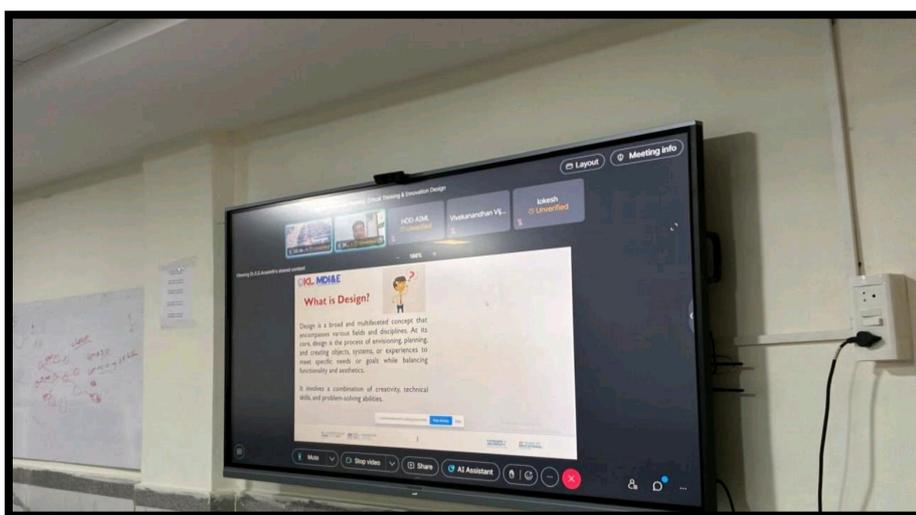
The event concluded with a Vote of Thanks delivered by the **Dr. V Vivekanandhan IIC Dean**, expressing gratitude to the Principal, HOD, resource person, faculty coordinators, and participants for their valuable presence and support. Overall, the webinar served as a meaningful initiative that promoted innovation, intellectual growth, and industry readiness among students, aligning with the department's vision of nurturing competent, responsible, and future-ready engineers.
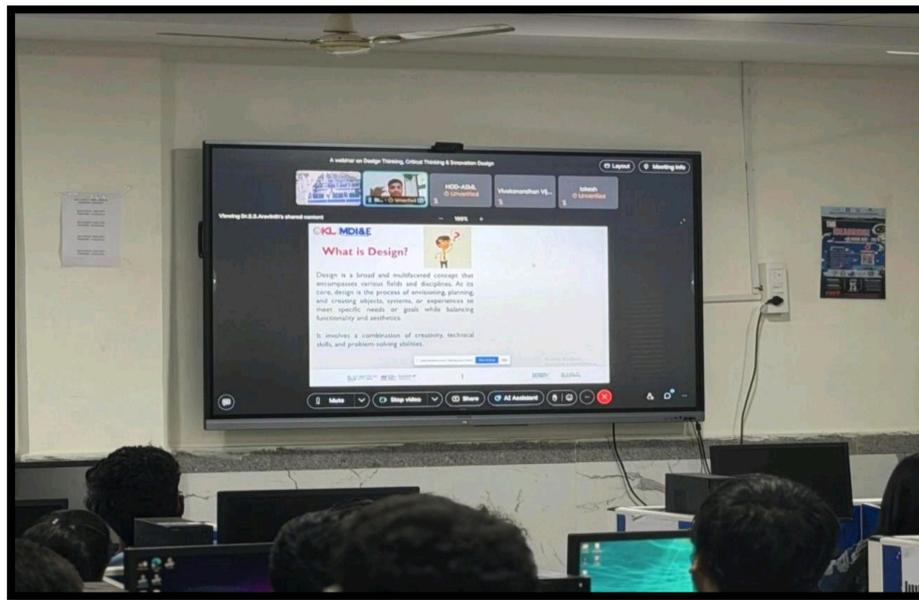
CONCLUSION

The webinar on *"Design Thinking, Critical Thinking & Innovation Design"* concluded on a highly impactful and inspiring note, leaving participants with a renewed sense of curiosity, creativity, and confidence. The virtual session served not only as a platform for knowledge sharing but also as a transformative learning experience that encouraged students to rethink their approach toward problem-solving and innovation. Throughout the program, the importance of structured thinking, analytical reasoning, and human-centered design was clearly emphasized, reinforcing the idea that true innovation begins with empathy and clarity of purpose.

The insightful addresses by the **Principal, Head of the Department, and IIC Dean** set a strong foundation for the session, highlighting the institution's commitment to fostering an innovation-driven academic environment. Their words motivated students to actively engage in research, collaborative learning, and entrepreneurial initiatives. The expert session delivered by the resource person provided practical exposure to real-world applications of design thinking methodologies, enabling participants to understand how creative ideas can be transformed into impactful and sustainable solutions.

One of the key takeaways from the webinar was the realization that critical thinking and innovation are not limited to academic projects but are essential life skills required in every professional domain. Students gained clarity on how to approach complex challenges systematically, evaluate multiple perspectives, and design solutions that are both practical and meaningful. The session also strengthened the understanding that continuous learning, adaptability, and creative exploration are vital attributes for future engineers and leaders in the rapidly evolving technological landscape.

The active participation of over 60 attendees demonstrated the enthusiasm and eagerness of students to enhance their competencies beyond classroom learning. Despite being conducted in virtual mode, the webinar maintained high levels of engagement and interaction, proving that meaningful learning can transcend physical boundaries when guided by strong vision and effective organization.

In conclusion, the webinar stood as a successful academic initiative that aligned perfectly with the AIML Department's vision of nurturing innovative, industry-ready, and socially responsible professionals. It not only enriched students with technical insights but also instilled a mindset of creativity, confidence, and purpose-driven growth. The event truly reflected the spirit of "Think Smart, Design Better, Innovate Faster," and will continue to inspire participants in their academic pursuits, research endeavors, and future professional journeys.

"Design Thinking Critical Thinking & Innovation Design"
Successfully organized and completed with support of Principal, Head of Department,

Faculty Coordinators, and Student Coordinators

Signature

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ATTENDANCE SHEET

Title: Workshop on "Design Thinking Critical Thinking & Innovation Design"
Organise by: CSE (AIML) and in association with PLEXUS
Date: 07ᵗʰ , Feb 2026,   Start Time: 10.01AM, End time: 3.50PM
Venue: MRCE Seminar Hall (Inauguration)   Sessions: B Block. 110 Lab

List of Students Participated in Workshop on Design Thinking Critical Thinking & Innovation Design

S.No	Rolln No	Name	Dept.	Year	Section	Signature
1	24Q91A6728	KARUMANCHI CHARAN	CSD	III	A	
2	24Q91A0479	CHAKALI AKSHAY KUMAR	ECE	III	A	
3	24Q91A0480	CHALLOORI ASHWITH	ECE	III	A	
4	24Q91A0481	CHENNABOINA PRASHANTH	ECE	III	A	
5	24Q91A0482	CHENNOJU SURYATEJA	ECE	III	A	
6	24Q91A0483	CHILVURI SIVARAMA SAI PRAVEEN VARMA	ECE	III	A	
7	24Q91A0484	D.SAI RAJESH	ECE	III	A	
8	24Q91A6616	EMMEWAR SAIKOUSHIK	CSM	III	A	
9	24Q91A6617	ENAGANTI MANSI	CSM	III	A	
10	24Q91A6618	G RAMYA	CSM	III	A	
11	24Q91A6619	GOTTE RANJITH	CSM	III	A	
12	24Q91A6620	J LAXMINANDAN REDDY	CSM	III	A	
13	24Q91A6729	KETHAVATH NAVEEN	CSD	III	A	
14	24Q91A6730	KOLLURI NAVEEN	CSD	III	A	
15	24Q91A6731	KOMMU SHRUTHI	CSD	III	A	
16	24Q91A6732	KOTHA DHANUSH REDDY	CSD	III	A	
17	24Q91A05G9	KUNTIMUKKALA KALYANI	CSE	III	C	
18	24Q91A05H0	KURMETI SIDHARDHA	CSE	III	C	
19	24Q91A6733	LAKAVATH SRINU	CSD	III	A	
20	24Q91A66A7	MADDIKUNTLA TRIVENI	CSM	III	B	
21	24Q91A66A8	MALLADHI MANOHAR	CSM	III	B	
22	24Q91A66A9	MEDICHELIMALA MANITEJA	CSM	III	B	
23	24Q91A66B0	MEDISHETTI HARSHITH VARMA	CSM	III	B	
24	24Q91A66B1	MERUGU USHASRI	CSM	III	B	
25	24Q91A66B2	MOHAMMAD MUZEEB PASHA	CSM	III	B	

"Design Thinking Critical Thinking & Innovation Design"

Successfully organized and completed with support of Principal, Head of Department, Faculty Coordinators, and Student Coordinators

Signature

Patron/ Principal :

Head of Department :

Faculty Coordinators :
2. K. Lacey

Student Coordinators : 1.
2.

THANK YOU!!