



# **A.J. Institute of Engineering and Technology** **Mangaluru**

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## **PRACTICAL RECORD BOOK**

NAME : AKHILA.V.P

USN : 4JK19ME004 DEPT : ME

SUBJECT : HT Lab SUBJECT CODE : 18MEL67

SEMISTER/SECTION: VI ACADEMIC YEAR : 2021-22



# A.J. Institute of Engineering and Technology Mangaluru

( A unit of Laxmi Memorial Education Trust (R))

NH-66, Kottara Chowki, Mangaluru - 575 006.

## Certificate

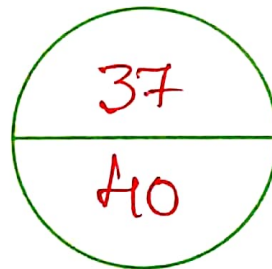
This is to certify that ~~Mr.~~ /Miss. Akhila. V.P.....

bearing USN No. 4JKI9ME004.....has satisfactorily completed

the course of experiments in Heat Transfer.....

lab prescribed by the Visvesvaraya Technological University for the VI.....

semester B.E. Course during the academic year 2021 - 2022.....
















Marks Obtained (In Words) :

Thirty Seven Only

Wijln Rajah  
Signature of Lab In-charge

[Signature]  
H.O.D. - Mechanical Engineering  
A.J. INSTITUTE OF ENGINEERING AND TECHNOLOGY  
Mangaluru - 575 006, D.K., Karnataka

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3	20/04/22	Heat transfer coefficient in Natural convection	14-17	8+8+8 =24	
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9	01/06/22	Vapour compression refrigeration test rig.	38-41	8+8+7 =23	
10	01/06/22	Air conditioning test rig	42-46	8+8+7 =23	
11	08/06/22	Transient heat conduction	47-54	8+8+8 =24	
12	08/06/22	Dropwise and Filmwise Condensation	55-58	8+8+8 =24	



## DEPARTMENT OF MECHANICAL ENGINEERING

### VISION OF THE INSTITUTE

To produce top quality engineers who are groomed for attaining excellence in their profession as well as competitive enough to help in growth of society and nation.

### MISSION OF THE INSTITUTE

M1: To offer affordable high-quality graduate program in engineering with value education and make the students socially responsible.

M2: To support and enhance the institutional environment to attain research excellence in both faculty and students and to inspire them to push the boundaries of knowledge base.

M3: To identify the common areas of interest amongst the individuals for the effective industry-institute partnership in a sustainable way by systematically working together.

M4: To promote the entrepreneurial attitude and inculcate innovative ideas among the engineering professionals.

### VISION OF THE DEPARTMENT

To create globally competent and self-reliant

mechanical engineers adaptive to an interdisciplinary environment contributing to society through development, authority and entrepreneurship.

### MISSION OF THE DEPARTMENT

M1: To offer high quality graduate program in the fields of Mechanical Engineering with value education to the students and make them responsive to societal needs.

M2: To nurture the students with a global outlook for a sustainable future with high moral and ethical values.

M3: To strengthen collaboration with industries, academia and research organizations to enrich learning environment, thus enhance research and entrepreneurship culture.

M4: To create awareness about the need of interdisciplinary applications through alumni industry-institution interactions.

### PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: Prepare graduates with mathematical, scientific and engineering skills to design and develop energy efficient systems for sustainable development.

PEO2: Excel graduates with high level of technical competency combined with research and complex problem-solving ability to generate innovative solutions in Mechanical and multi-disciplinary areas.

PE03: Equip students with modern tools, technology and advanced softwares for deliberating engineering solutions.

PE04: Inculcate graduates with strong foundation in academic excellence, soft skills, leadership qualities, professional ethics and social concerns and understand the need for lifelong learning for a successful professional career.

### PROGRAM OUTCOMES (POs)

PO1: Engineering knowledge - Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO2: 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.

PO3: 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.

PO4: 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.

P05: Modern 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.

P06: 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.

P07: Environment and sustainability - understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

P08: Ethics - Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

P09: Individual and team work - Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.

P010: 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.

PO11: 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.

PO12: 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 (PSOs)

PSO1: Apply the knowledge of modern engineering tools to design and analyze the products and process related to Mechanical Engineering systems.

PSO2: Develop technical and interpersonal skills pertinent to mechanical and allied engineering for careers in industry, academia and government organizations.