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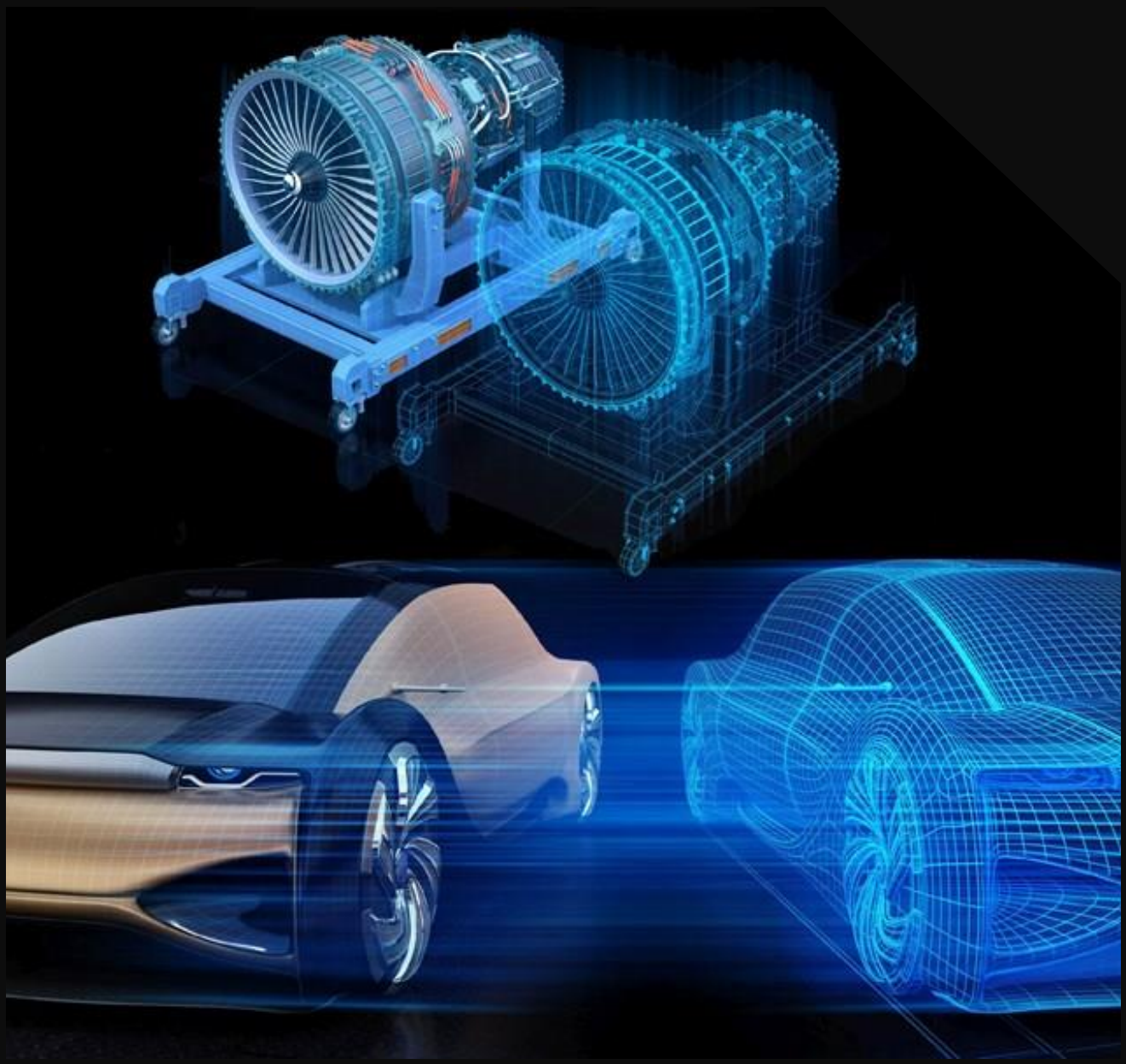
INGENIUM

Volume 2, Issue 3, April – June, 2021

Department Newsletter

Department of Mechanical Engineering



A. J. Institute of Engineering and Technology

(A unit of Laxmi Memorial Education Trust ®)

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DEPARTMENT NEWSLETTER

Message from Editor's Desk:

Welcome to the second volume, third issue of Newsletter from the Department of Mechanical Engineering. This newsletter is a digital way for us to communicate with our students, faculty members, alumni and industrial partners. It aims to showcase the glimpse of the departmental activities and achievements. It enlightens the readers about the latest happenings in the department, focusing about different activities like placement, industry-academia, club activities, student and faculty achievements.

HOD's Message

Welcome to the third issue of the Mechanical Engineering Department Newsletter - 'IGENIUM' in its volume 2 series. It is about looking back and summing up every prestigious moment in the department. This newsletter is a bridge for us to communicate with our students, faculty members, alumni and industrial partners. It aims to showcase their achievements by which make them proud and self-motivated. We take the readers for a voyage of the latest incidence and happenings in the department. Any feedback will be greatly appreciated for the improvement of the next issue of the Newsletter.

Dr. Rajesh Rai P
Head, Department of Mechanical Engineering
A. J. Institute of Engineering and Technology

VISION

To create globally competent and self-reliant mechanical engineers adaptive to an interdisciplinary environment contributing to society through development, authority and entrepreneurship.

MISSION

- To offer high quality graduate programme in the fields of Mechanical Engineering with value education to the students and make them responsive to societal needs.
- To nurture the students with a global outlook for a sustainable future with high moral and ethical values.
- To strengthen collaboration with industries academia and research organizations to enrich learning environment, thus enhance research and entrepreneurship culture.
- 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.

PEO3: Equip students with modern tools, technology and advanced software's for deliberating engineering solutions.

PEO4: 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)

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. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

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.

7. 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.

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

9. Individual and team work: 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 (PSOs)

PSO1: Apply the knowledge of modern engineering tools to design and Analyse the products and processes related to mechanical engineering system.

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

RESEARCH

Domain Name	Domain Co-coordinator	Domain Members
MANUFACTURING	Dr. Rajesh Rai P	Mr. Prashanth D A, Mr. Nithin Shet, Mr. Prasad B G
THERMAL	Dr. Vighnesha Nayak	Dr. Sreejith B K, Mr. Prakhyath, Mr. Karthik A V
DESIGN	Mr. Sunil Kumar S	Mr. Sudheer Kini, Mr. Harold J D'Souza

List of Companies Visited For Placements

PLACEMENTS FOR MECHANICAL STUDENTS - 2021 BATCH		
COMPANY NAME	**DATE OF DRIVE**	**ELIGIBLE STUDENTS**
JARO Education Pvt Ltd.	10th September, 2020	55
Tata Consultancy Services	23rd to 30th October, 2020	37
SLK Software	22nd December,2020	23

Mr. Chirag S Poonja, student of 7th Semester is placed in Jaro Education Pvt. Ltd.-CTC: 6.6 LPA

Silver Peak Global-CTC: 14 LPA

Mr. Abhiram Prakash, student of 7th Semester is placed in MaxVal IP Services Pvt. Ltd.

CTC: 3 LPA

Mr. Vikas, student of 7th Semester is placed in Infosys

CTC: 3.6 LPA

Silver Peak Global-CTC: 14 LPA

Mr. LANCE KURIYAN, student of 7th Semester is placed in FACE

CTC: 3 Lac per annum

Mr. Rahul P Suvarna , student of 7th Semester is placed in Silver Peak Global-CTC: 14 LPA

Ms. Miss Karna Thulasi, student of 7th Semester is placed in Silver Peak Global

CTC: 14 LPA and Intern in Autoliv

Mr. Nihal Lloyd, student of 7th Semester is placed in Silver Peak Global

CTC: 14 LPA

Mr. Sushanth Jogi, student of 7th Semester is placed in Silver Peak Global

CTC: 14 LPA

Mr. Rithesh, student of 7th Semester is placed in Silver Peak Global

CTC: 14 LPA

Mr. Charan Raj Shetty, student of 7th Semester is placed in Silver Peak Global

CTC: 14 LPA

PLACEMENTS FOR MECHANICAL STUDENTS - 2021 BATCH		
COMPANY NAME	**DATE OF DRIVE**	**ELIGIBLE STUDENTS**
Zomato	26th JUNE, 2021	55
FACE	10th MAY, 2021	55
BYJU'S	30th MAY, 2021	55

WORKSHOPS/WEBINAR

Webinar on "PREREQUISITE FOR CAREER IN HEATING-VENTILATION AND AIR-CONDITIONING" on 16-06-2021 from 11:00 am- 12:30 PM by Mr. Asif, CEO, Prinston smart engineers organized by Sreejith and Karthik A.V.

Prinston Smart Engineers Organized on 16-06-2021 at 11:00 AM-12:30 PM through Google meeting platform.

The session began by welcoming and introducing the resource person by Dr.Sreejith B K, Associate Professor to the audience. Students from 2nd, 3rd and final year students acknowledged the event.

The speaker shared industry relevant knowledge & guidance on Insight to Mechanical industry - its vertical & domains. Later he briefed about Internship Opportunities & associated job roles. Also mentioned about prerequisites to securing a job, future technologies trends in Heating ventilation and Air conditioning.

The session was concluded by giving the vote of thanks by Mr. Karthik A.V., Assistant Professor, Department of Mechanical Engineering.

Webinar on "A Webinar on "Prerequisites to be a Design Engineer" by Mr. Ashwin Roysten Lobo, Assistant Manager, Skill Development, CADMAXX Solution Pvt Ltd, Bengaluru was organized on 31-05-2021 at 10:00 AM-11:15 AM through Google meet platform.

A Webinar on "Prerequisites to be a Design Engineer" by Mr. Ashwin Roysten Lobo, Assistant Manager, Skill Development, CADMAXX Solution Pvt Ltd, Bangaluru was organized on 31-05-2021 at 10:00 AM-

11:15 AM through Google meet platform.

The session began by welcoming the resource person by Dr. Vighnesha Nayak, Associate Professor and introducing the

resource person by Mr. Sudheer Kini K, Assistant Professor to the audience. Students from 2nd, 3rd and final year students acknowledged the event.

The speaker shared industry relevant knowledge & guidance on Insight to Mechanical industry - its vertical & domains. Later he briefed about product life cycle & associated job roles. Also mentioned about prerequisites to securing a job, future technologies and trends.

The session was concluded by giving the vote of thanks by Dr. Rajesh Rai P, Professor and HOD, Department of Mechanical Engineering.

Webinar on "Opportunities through GATE Exam" by Mr. Ananth Pai S , Founder-APEX Academy, Mangaluru was organized on 07-06-2021 at 11:00 AM-12:30 PM through Google meet platform.

The session began by welcoming the resource person by Dr. Vighnesha Nayak, Associate Professor and introducing the resource person by Mr. Sudheer Kini K, Assistant Professor to the audience. Students from 2nd, 3rd and final year students of Mechanical and Civil Engineering witnessed the event.

Mr. Ananth Pai S covered the following topics by interacting the students:-

- What are the opportunities through the GATE exam?
- Will it be useful to just clear GATE?
- What material must we follow?
- Will GATE only for toppers?
- Will GATE preparation help me in campus selection?
- How many months of preparation is needed?

The session was concluded by giving the vote of thanks by, Dr. Vighnesha Nayak, Associate Professor, Department of Mechanical Engineering.

VIRTUAL LAB

- Virtual labs are simulated learning environments that allow students to complete laboratory experiments online and explore concepts and theories without stepping into a physical science lab.
- Students can try out lab techniques for the first time and become more familiar with advanced lab equipment that might otherwise be inaccessible.
- Through animations, students can explore life science at a molecular level and look inside the machines they are operating.
- Virtual lab software creates opportunities for alternative access to science education.

Mr. Karthik A V demonstrated experiments to students of 4th Semester on Whitworth Mechanism from Mechanics of Machine lab related to the subject Kinematics of Machine (18ME44).
Mr. Sunil Kumar demonstrated experiments to students of 4th Semester on Izod Impact Test, Charpy Impact Test and Strength of Materials lab from Mechanics of Materials (18ME32).

MINI-PROJECT

SL NO	TITLE	GUIDE	STUDENTS NAME	
1	**EFFECT OF POROSITY ON AIRFOIL**	**Dr. Sreejith B K**	SARANG CM	4JK18ME032
			PRANAV TV	4JK18ME028
			PRANAV AP	4JK18ME027
			ABHISHEK S	4JK18ME049
2	**AGRIBOT**	**Mr. Prakhyath**	SHRAVAN K	4JK19ME405
			MANISH K ANCHAN	4JK19ME402
			MOHAMMEDFAYAZ	4JK19ME404
			MANISH M P	4JK19ME403
3	**ROBOSOCCER**	**Mr. Prakhyath**	ASHISH H	4JK18ME009
			HARSHITH SHETTY	4JK18ME018
			DHEERAJ RAO	4JK18ME016
			DEEKSHITH	4JK18ME013
4	**AIR ENGINE**	**Mr. Karthik A.V.**	ADITH AJITH KUMAR	4JK18ME003
			DEEPA A S	4JK18ME014
			DHARMIK ATTAVAR	4JK18ME015
			RAKSHITH ACHARYA	4JK18ME051

STUDENT PROJECTS

Sl. No.	TITLE	GUIDE	STUDENTS NAME
1	Mechanical pocket manuring	Dr. Vighnesha Nayak	SHAILESH V AITHAL RAHUL P SUVARNA BHUVANESH R. M VIKAS P
2	Multipurpose farming machine	Dr. Rajesh Rai P	CHIRAG S POONJA NIHAL LLOYD ADRIEL S MIRANDA KEERTHAN KUMAR
3	Computational Analysis of Pin-fin based Cross Tube Heat Exchanger using CFD	Mr. Harold J D'Souza	SAURABH S ADDOOR GURUPRASAD G GURUPRASAD R MALLI LIKITH S RAJ
4	Automated drain cleaning machine	Mr. Nithin Shet	KARAN K KARTHIK RITHESH SANATH KUMAR M
5	Design and Fabrication of Corn De-seeding machine with Crusher	Mr. Karthik A V	AHMED AMEEN M MUSTHAFA MOHAMMED AZVIL MOHAMMAD FARHAN
6	Influence of geometric discontinuity and thermal aging on mechanical behaviour of aircraft aluminium alloy	Mr. Sunil Kumar S	MOHAMMED SHIYAN MOHAMMED RAZI MOHAMMAD AFEEZ HASSAN MUQSITH
7	Design & fabrication of solar refrigeration system	Dr. Rajesh Rai P	CHARAN RAJ SHETTY NAVARAG K K PRITHVIRAJ A SHETTY MISS K THULASI S H
8	Design and fabrication of shredder machine for recycling of Polyethylene terephthalate (PET) waste	Mr. Prashanth D A	ABIRAM PRAKASH ARJUN PRAKASH LANCE KURIYAN PRASOBH D V V
9	Design and fabrication of coconut dehusker with coconut milk and multiple oil extractor	Mr. Sudheer Kini	AKHIL SUDHEER ANIL RAJ T V ARJUN P P ANIRUDH E. T.
10	Performance Combustion and Emission Characteristics of Single Cylinder CI Engine with WCO Biodiesel and Nanoparticles With Oxygen Enrichment Process	Dr. Vighnesha Nayak	PURUSHOTHAMA H S MANISH KULAL WILFRED MARSHAL V TEJESH
11	Motorized wheel chair	Mr. Prakhyath	ABHIRAJ K U AKSHAY SUNIL K PRANAV K RAAFIH A Y

12	**Automatic solar powered railway track crack Detecting vehicle**	**Dr. Sreejith B K**	NEHA S JAIN LIKITH S AMIN JACOB ANTONY JATIN KUCKIAN
13	**Effect of corrosive environment on fracture toughness of aluminium 6061 alloy: An experimental approach**	**Mr. Harold J D Souza**	SHON TOM AMAL M N ASHOK KUMAR R G SUSHANTH JOGI
14	**Waste segregation system in railway coach Pertaining to swach-Bharath**	**Mr. Prasad B G**	M I SHIYAZ M GILCHRIST P D'SILVA HASSAN ZAHEER

INTERNSHIPS

	Students name	Organization	Guide
1	ARJUN PRAKASH	Prinston Smart Engineers	Mr. Prashanth D A
2	HASSAN ZAHEER	MANGALORE PIPE INDUSTRIES	Mr. Prasad B G
3	ABHIRAJ K U	Prinston Smart Engineers	Mr. Prakhyath
4	ABIRAM PRAKASH	CAD VISION R & D	Mr. Prashanth D A
5	AHMED AMEEN	Galacon(MRPL)	Mr. Karthik A V
6	AKHIL SUDHEER	Prinston Smart Engineers	Mr. Sudheer Kini
7	AKSHAY SUNIL K.	Prinston Smart Engineers	Mr.Prakhyath
8	AMAL M N	Prinston Smart Engineers	Mr. Harold J D Souza
9	ANIL RAJ T V	Prinston Smart Engineers	Mr. Sudheer Kini
10	ANIRUDH E. T.	Prinston Smart Engineers	Mr. Sudheer Kini
11	ARJUN P P	Prinston Smart Engineers	Mr. Sudheer Kini
12	ASHOK KUMAR REDDY G	Prinston Smart Engineers	Mr. Harold J D Souza
13	BHUVANESH R. MALLYA	MANGALORE PIPE INDUSTRIES	Dr. Vighnesha Nayak
14	CHARAN RAJ SHETTY	CAD VISION R & D	Dr. Rajesh Rai P
15	CHIRAG S POONJA	Vinayaka Engineering Work	Dr. Rajesh Rai P
16	GILCHRIST PRAVAL D'SILVA	MANGALORE PIPE INDUSTRIES	Mr. Prasad B G
17	GURUPRASAD G	Caliper Engineering and Lab Pvt Ltd	Mr. Harold J D'Souza

18	GURUPRASAD R MALLI	Caliper Engineering and Lab Pvt Ltd	Mr. Harold J D'Souza
19	HASSAN MUQSITH.	MANGALORE PIPE INDUSTRIES	Mr. Sunil Kumar S
20	JACOB ANTONY	Prinston Smart Engineers	Dr. Sreejith B K
21	JATIN KUCKIAN	MCF	Dr. Sreejith B K
22	KARAN K	Caliper Engineering and Lab Pvt Ltd	Mr. Nithin Shet
23	KARTHIK	Caliper Engineering and Lab Pvt Ltd	Mr. Nithin Shet
24	LIKITH S AMIN	INDOTECH	Dr. Sreejith B K
25	M I SHIYAZ MOHAMMED	Galacon(MRPL)	Mr. Prasad B G
26	MAHAMMED MUSTHAFA	Galacon(MRPL)	Mr. Karthik A V
27	MANISH KULAL	MCF	Dr. Vighnesha Nayak
28	MOHAMMAD AFEEZ	Galacon(MRPL)	Mr. Sunil Kumar S
29	MOHAMMED AZVIL	MANGALORE PIPE INDUSTRIES	Mr. Karthik A V
30	MOHAMMAD FARHAN	MANGALORE PIPE INDUSTRIES	Mr. Karthik A V
31	MOHAMMED RAZI	MANGALORE PIPE INDUSTRIES	Mr. Sunil Kumar S
32	MOHAMMED SHIYAN	Galacon(MRPL)	Mr. Sunil Kumar S
33	NAVARAG K K	cad vision R & D	Dr. Rajesh Rai P
34	NEHA S JAIN	KIOCL	Dr. Sreejith B K
35	PRANAV KANHIRAKUNNATH	HVAC	Mr.Prakhyath
36	PRITHVIRAJ A SHETTY	Caliper Engineering and Lab	Dr. Rajesh Rai P
37	PURUSHOTHAMA H SHETTY	MK Agrotech Pvt Limited	Dr. Vighnesha Nayak

38	RAAFIH ABUBACKER YUSUF	HVAC	Mr.Prakhyath
39	RAHUL P SUVARNA	MCF LTD	Dr. Vighnesha Nayak
40	RITHESH	Vinayaka Engineering Work	Mr. Nithin Shet
41	SANATH KUMAR M	Caliper Engineering and Lab Pvt Ltd	Mr. Nithin Shet
42	SAURABH S ADDOOR	Caliper Engineering and Lab Pvt Ltd	Mr. Harold J D'Souza
43	SHON TOM	Prinston Smart Engineers	Mr. Harold J D Souza
44	SUSHANTH JOGI	Vinayaka Engineering Work	Mr. Harold J D Souza
45	VIKAS P	Eleation	Dr. Vighnesha Nayak
46	WILFRED MARSHAL VARGHESE	PRINSTON smart engineers	Dr. Vighnesha Nayak
47	SHAILESH V AITHAL	Market Bird	Dr. Vighnesha Nayak
48	NIHAL LLOYD	Vinayaka Engineering Work	Dr. Rajesh Rai P
49	PRASOBH DINESAN V V	Prinston Smart Engineers	Mr. Prashanth D A
50	LANCE KURIYAN	Prinston Smart Engineers	Mr. Prashanth D A
51	MISS KARNA THULASI S HEMALATHA	Vinayaka Engineering Wor	Dr. Rajesh Rai P
52	ADRIEL SAVIO MIRANDA	Vinayaka Engineering Work	Dr. Rajesh Rai P
53	LIKITH S RAJ	Caliper Engineering and Lab Pvt Ltd	Mr. Harold J D'Souza
54	KEERTHAN KUMAR	Vinayaka Engineering Work	Dr. Rajesh Rai P
55	TEJESH	Caliper Engineering and Lab	Dr. Vighnesha Nayak

National/International Conferences

Dr. Vighnesha Nayak, Mr. Karthik A.V. has successfully published a paper ''Analytical investigation on energy separation in Ranque – Hilsch vortex tube'' in UNHB: Numerical Heat Transfer, Part B: Fundamentals,
DOI:10.1080/10407790.2021.1969816.-INTERNATIONAL JOURNAL

Mr. Sunil Kumar S has successfully published an article titled "Estimation of fracture toughness (KIC) using Charpy impact test for Al6061T6 and Al7075T6 alloys subjected to corrosion" in Materials Today : Volume 46, Part 7, 2021, Pages 2414-2420, under 'ELSEVIER' publication.
https://doi.org/10.1016/j.matpr.2021.01.298 - International Journal

An article written by Mr. Sunil Kumar S, titled "Investigation of Accelerated Salt Spray Corrosion on Mechanical Response of Al6061T6 and Al7075T6 Alloys" has been accepted for publication in 'International Journal of Integrated Engineering'
Article Text, 7383-Article Text-29163-1-2-20201023 - International Journal

Mr. Jacob Antony, Mr. Ebin Antony, Dr. Sreejith B K has successfully published a paper ''Holistic Review of Smart Manufacturing in Industry 4.0'' in Journal of Huazhong University of Science and Technology
ISSN-1671-4512.-INTERNATIONAL JOURNAL

FDP/WEBINAR/SEMINARS/TRAINING

Dr. SREEJITH B K attended a five days FDP on "Mobile Application Development" organised by Department of Computer Science and Engineering in association with the Departments of ECE & ISE, A. J. Institute of Engineering & Technology, Mangaluru from 14-06-2021 to 18-06-2021

Mr. Sudheer Kini K a participated and completed the AICTE Sponsored Short Term Training Programme (STTP) on "Innovative Approaches in Teaching Pedagogy" during 31st May 2021 to 5 June 2021 organized by Sahyadri College of Engineering & Management, Mangaluru.

Mr. Sudheer Kini K from A J Institute of Engineering and Technology, Mangaluru, Karnataka, India has successfully presented the paper titled "Simply Supported Polygon Plate Frequencies Using Classical and Shear Deformation Theories" at the 2nd International Conference on Advanced Research in Mechanical Engineering - 2021"(2nd ICARME-21), organized by the Department of Mechanical Engineering, in association with IWS, IIC and IQAC-MVJ College of Engineering, Bengaluru, on 29th and 30th April 2021.

STUDENT ACHIEVEMENTS

ACADEMIC TOPPERS

ABIRAM PRAKASH, Scored 9.42 SGPA in 7th Semester university exam

VIKAS P, Scored 9.25 SGPA in 7th Semester university exam

HARSHITH SHETTY, Scored 8.62 SGPA in 5th Semester university exam

DEEPA A S, Scored 8.52 SGPA in 5th Semester university exam

DHANUSH M S, Scored 8.56 SGPA in 3rd Semester university exam

RISHI JOSHI, Scored 8.20 SGPA in 3rd Semester university exam

TECHNICAL EVENTS

Mr. Jacob Antony, Mr. Ebin Antony, Dr. Sreejith B K has successfully published a paper ''Holistic Review of Smart Manufacturing in Industry 4.0'' in Journal of Huazhong University of Science and Technology ISSN-1671-4512.-INTERNATIONAL JOURNAL
Mr. Jacob Antony, Mr. Ebin Antony has successfully published a paper 'HVAC Design and Operation for Green School Building'' in International Journal of Innovative Research in Science, Engineering and Technology e-ISSN: 2319-8753, p-ISSN: 2320-6710, Impact Factor: 7.512, Volume 10, Issue 5, DOI:10.15680/IJIRSET.2021.1005153

GRADUATION DAY-2021

BATCH OF 2016-2020

Department of Mechanical Engineering

A. J. Institute of Engineering and Technology

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