



# APPC MECH TIMES



Arulmigu Palaniandavar Polytechnic College, Palani

Department of Mechanical Engineering

ஒருமைக்கண் தான்கற்ற கல்வி ஒருவற்கு  
எழுமையும் ஏமாப் புடைத்து. - திருக்குறள் (398)

The man who store of learning gains, in one, through seven worlds, bliss  
attains. -Thirukkural (398)

ஒரு பிறப்பில் தான் கற்றக் கல்வியானது அப்பிறப்பிற்கு  
மட்டுமல்லாமல் அவனுக்கு ஏழு பிறப்பிலும் உதவும் தன்மை  
உடையது.

## INSTITUTION

### VISION :

ARULMIGU PALANIANDAVAR POLYTECHNIC COLLEGE aims for holistic development of rural students with Engineering Knowledge, Skills, Values and Ethics towards employability, entrepreneurship and higher studies for their bright future, thus emerging as the best Polytechnic College.

### MISSION :

- By providing good infrastructure facilities towards learning and practice.
- Through experienced and qualified faculty members.
- By industry supported Skill laboratories, IIPC, EDC and CIICP.
- By focusing on communication skills, aptitude and technical skills and through values and ethics, programs and by contribution to society.

## **DEPARTMENT**

### **VISION :**

*The Mechanical Engineering program of Arulmigu Palaniandavar Polytechnic College aims for students' holistic development with mechanical and allied engineering knowledge, Skills, Values and ethics towards employability and higher studies with the blessings of Lord Muruga.*

### **MISSION :**

- Through good infrastructure facilities towards learning, Laboratory practices, Sports and games etc.*
- Through industry sponsored Laboratories for skill development.*
- Through Co and extra-curricular activities NSS activities in addition to academics for students overall development.*

<i>Editorial Board Members</i>	
<i>Patron :</i>	<i>Dr. R.Kandasamy, Principal, APPC.</i>
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## From Principal's Desk:

*I am glad that the Department of Mechanical Engineering is bringing out its third newsletter successfully. The newsletter gives various activities carried out by the department to the benefit of students. My sincere appreciations for the entire team.*



*Dr.R.Kandasamy  
Principal*

## Department Activities:

### Engineer's Day Celebration:

*The programme was held in our College on 15<sup>th</sup> September 2022. In this programme college Principal Dr.Kandasamy, and Head of the Department of Mechanical Engineering Mr.D.Padmanaban and Mechanical Engineering students participated. Many students participated in the speech competition and the winners were awarded Prizes..*



- **Engineer's Day celebration was conducted by Mechanical Engineering Department.**

### Entrepreneurship Awareness Programme for Final Year Students :



- **Entrepreneurship Awareness Programme for all department Final Year Students by Mr.K.Varatha Ganesan, Assistant Director, DIC Dindigul delivered keynote address on Entrepreneurship**

**Resource Person:** *Mr.K.VarathaGanesan, Assistant Director, District Industries Centre, Dindigul.*

*One day Entrepreneurship Awareness Programme was organized by the Department of Mechanical Engineering of Arulmigu Palaniandavar Polytechnic College on 19<sup>th</sup> October 2022. The objective of this programme was to create awareness about entrepreneurial opportunities and career avenues to develop individual talents for successful career for **Final year Mechanical Engineering Students.***

## **Industrial Visit for Final Year Students :**

One day industrial visit to TANSI Fabrication works, Palani was organized by the Department of Mechanical Engineering of Arulmigu Palaniandavar Polytechnic College on 20<sup>th</sup> December 2022. Students visited the factory to see the machines used in sheet metal work. The objective of this programme was, to give the industrial exposure to our students.



- **Industrial Visit to TANSI Fabrication Works, Palani for Final year students.**

## **Guest Lecture :**

### **Seminar on Advances in Metrology :**



- **Seminar on Advances in Metrology for II & III Year Students by Dr.P.Manojkumar Associate Professor, KPR Institute of Engineering and Technology, Coimbatore.**

**Resource Person:** Dr.P.Manojkumar, Associate Professor, KPR Institute of Engineering and Technology, Coimbatore.

This One day Seminar was organized by the Department of Mechanical Engineering of Arulmigu Palaniandavar Polytechnic College on 18<sup>th</sup> November 2022. The objective of this programme was to give the knowledge about advances in metrology and LASER Metrology and use of Computers in metrology and Measurement of Mechanical Parameters for our II and III year Mechanical Engineering Students.

## Social Activities :

### Morning Breakfast Scheme:

A Scheme for distributing Free Morning breakfast to the students of the educational institution functioning under our college management was inaugurated by Honourable CM of Tamilnadu Mr.M.K.Stalin on 16<sup>th</sup> November 2022 through video conferencing mode.

The Programme was started by the Chief Minister of Tamilnadu to provide daily breakfast to the students studying in the college under the

HR&CE department. In this online event college Principal Dr.Kandasamy, and Head of the Department of Mechanical Engineering Mr.D.Padmanaban and Mechanical Engineering staff students participated. The scheme has created a renewed enthusiasm among students to pursue their studies.



- Morning breakfast programme was conducted on 16<sup>th</sup> November 2022.

### Mass Tree Planting Event:



- Tree Planting Event at Idayakottai.

A Mass Tree Planting event was held on 23<sup>th</sup> December 2022, at Idayakottai village.

Our students participated in a mass tree planting event organised by the government of Tamilnadu where six lakh saplings were planted with the help of students and public. Dr.R.Kandasamy, Principal and other faculty members guided the students in the successful completion of the project.

## Student Activities :



- **K.Pandidurai, III Year Mechanical Engineering Student participated in Speech Competition (Engineer's Day Celebration) and won the 1<sup>st</sup> Prize.**



- **S.Karthikeyan, III Year Mechanical Engineering Student participated in Speech Competition (Engineer's Day Celebration) and won the 2<sup>nd</sup> Prize.**



- **B.Prasannakumar, II Year Mechanical Engineering Student participated in Speech Competition (Engineer's Day Celebration) and won the 3<sup>rd</sup> Prize.**

### Technical Quiz

#### Hydraulics and Fluid Mechanics

- One litre of water occupies a volume of
  - 100 cm<sup>3</sup>
  - 250 cm<sup>3</sup>
  - 500 cm<sup>3</sup>
  - 1000 cm<sup>3</sup>
- The value of bulk modulus of a fluid is required to determine
  - Reynold's number
  - Froude's number
  - Mach number
  - Euler's number
- In one dimensional flow, the flow
  - is steady and uniform
  - takes place in straight line
  - takes place in curve
  - takes place in one direction
- The kinematic viscosity is the
  - ratio of absolute viscosity to the density of the liquid
  - ratio of density of the liquid to the absolute viscosity
  - product of absolute viscosity and density of the liquid
  - product of absolute viscosity and mass of the liquid
- The length  $AB$  of a pipe  $ABC$  in which the liquid is flowing has diameter ( $d_1$ ) and is suddenly enlarged to diameter ( $d_2$ ) at  $B$  which is constant for the length  $BC$ . The loss of head due to sudden enlargement is
  - $(v_1 - v_2)^2 / g$
  - $v_1^2 - v_2^2 / g$
  - $v_1^2 - v_2^2 / 2g$
  - $(v_1 - v_2)^2 / 2g$

#### Check Your Answers :

Qn No:	1	2	3	4	5
Ans:	d	c	b	a	d

Prepared by,  
K. PRAVINKUMAR

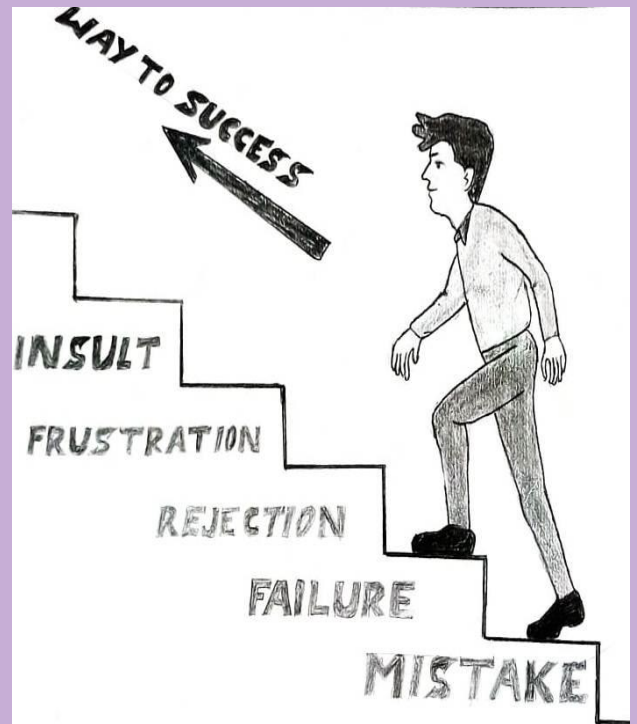
- **Technical Quiz prepared by K.Pravinkumar, Final Year**

**ABBREVIATIONS ON UNCONVENTIONAL MACHINING PROCESS**

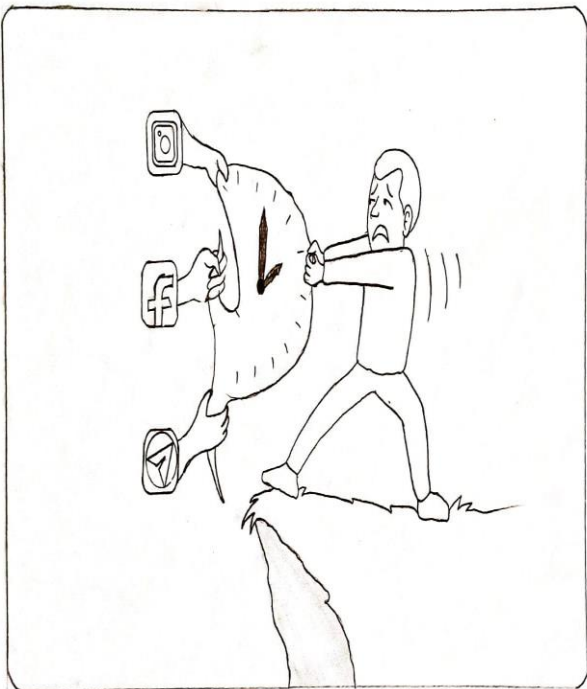
Qn No.	Questions	Answers
1	What is USM ?	Ultrasonic machining (USM)
2	What is AJM ?	Abrasive jet machining (AJM)
3	What is WJM ?	Water jet machining (WJM)
4	What is CHM ?	Chemical machining(CHM)
5	What is ECM?	Electro chemical machining (ECM)
6	What is ECG?	Electro chemical grinding (ECG)
7	What is EDM ?	Electrical discharge machining (EDM)
8	What is PAW ?	Plasma arc welding (PAW)
9	What is LBM ?	Laser beam welding (LBM)
10	What is EBM ?	Electron beam welding (EBM)

Prepared by,  
V.KAVIBALAN

- **Abbreviations Prepared by V.Kavibalan, Final Year.**



- **T.KAVIN, Final Year**



by  
K. Pravin Kumar

- **K.PRAVINKUMAR, Final Year**



by  
V.Kavibalan

- **V.KAVIBALAN, Final Year**

## Faculty Activities :

- *Mr.M.Sakthivel Senior Lecturer attended One week Online FDP on “Recent Advancement in Heat Transfer of Manufacturing Processes” organized by GCT, Coimbatore on 25.07.2022 to 29.07.2022. (One Week)*



- *Mr.M.Sakthivel Senior Lecturer has presented a paper titled “Enhancing the efficiency of photo voltaic solar panel using anti reflective coating prepared using Ti based nanoparticle incorporated polydimethylsiloxane silica sols” in Energy Conclave 2022 held on 23 and 24 August, 2022 organized by Department of Mechanical Engineering, AMET University, Chennai.*



- *Mr.M.Sakthivel Senior Lecturer attended One week Online FDP on “3D Printing, Additive Manufacturing: Theory and Practice” organized by GCT, Coimbatore on 05.09.2022 to 09.09.2022. (One Week)*





## **Online Learning Resources:**

*Online Learning Resources for students, Visit these sites and you can find plenty of educational videos on Engineering Topics.*

### **Digital Learning Practice Initiatives**

#### **1. Google Play Store:**

- a) *Type the Subject Name for Apps and Download*
- b) *Browse the Subject Matter (pdf)*
- c) *Browse for Subject Videos*
- d) *After learning, go for online Tests.*

#### **2. Digital Library:**

*Students shall be asked to register in the National Digital Library portal for Online learning.*

#### **3. National Programme on Technology Enhanced Learning (NPTEL):**

*Students shall be encouraged to register in NPTEL portal for Online courses. Also, Lecturers can download study materials for their classroom lectures which can be very easily understood by students.*

#### **4. Massive Open Online Courses (MOOCS):**

*Students shall be encouraged to register Online Courses which they will be given certification at the end of the course after the evaluation.*

#### **5. Study WEBS of Active – Learning for Young Aspiring Minds (SWAYAM):**

*Students shall be motivated to join NPTEL – SWAYAM online courses.*

#### **6. Google Class Room:**

*Lecturers shall use students mail id to create Google Class Room. In that Google Class room, Learning materials, Assignments and Tutorials can be uploaded for students reference.*

**“Improve Knowledge  
through  
Online Learning Resources”**

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