



Department of Instrumentation and  
Control Engineering

**SARANATHAN COLLEGE OF  
ENGINEERING**

**ICERYX** 

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**EDITORIAL**

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MAY - AUG 2021

# FOREWARD

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Old things have passed away behold all things have become new. This saying would be the right one for all of us, in this present day today life. The pandemic situations had suffered us a lot. It has taught us to live United and we are all born not to give up. We have made it and let's all unite to get adapted to this new normal. Lets revive energy to this world.

## FROM THE EDITORS DESK

### **Dear Readers,**

It's our pleasure to provide you with interesting articles. From this edition, the magazine of ICERYX is getting its new form. Hope you would like to read it this way. Many new measures have been taken to bring in more fervent readers for our magazine. From the Public Relations team, we express gratitude to everyone who supported us in this endeavor. Stay tuned on to update yourself with the deeds of our department as well as the outside world. Happy reading!

# PR TEAM

**MUKESH.P**  
**SHARAN.R**  
**SHERENE.G**  
**HARI VARSHINI.S**

**SIVA SUBRAMANIAN. A**

**1ST YEAR**

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**REGENA ARSHINI**  
**DHARSHINI.G**  
**SWATHI .A**  
**BAIRAVI .S**

**SHARLENE. A**

**2ND YEAR**

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**HARIHARAN.T**  
**SHIVA SHANKAR.A**  
**SURYA PRAKASH.D**

**VASUNDRA.R**  
**SWETHA.R**  
**PRANAV KUMAR .S**

**3RD YEAR**

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**MAHALAKSHMI.S.P**  
**SHARVIN SHAKESH.P**  
**AKASH SAMI. R**  
**SURYA.S**

**4TH YEAR**

## **1) ARTICLE-**

- History and future of ICE

-Hari Varshini S - 1st Year

## **2) FACULTY CORNER**

## **3) STUDENTS CORNER**

## **4) APTITUDE**

## **5) DID YOU KNOW?**

-Irshath Ahmed.MS - 1st Year

## **6) ART AND PHOTOGRAPHY**

-Siva Subramanian.A - 1st Year





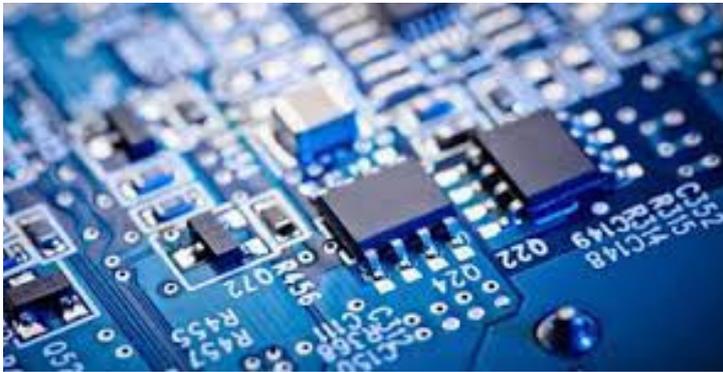


# ARTICLE

## The Future of Instrumentation – The Fourth Industrial Revolution

The fourth industrial revolution is really a focus on the digitisation of industry. The process industries have their challenges in this area as do those engaged with manufacturing.

The end game should be a completely integrated supply chain from feedstock specification and order through high quality and efficient manufacturing to providing customers with their specific order. Mass customisation at mass production costs.



## Best states for instrumentation and control engineering:

California is the best state for jobs for instrumentation engineers,

- 1.Total Instrumentation Engineer Jobs: 3,713
- 2.Average Annual Salary: \$95,171
- 3.Lowest 10 Percent Earn: \$63,000
- 4.Highest 10 Percent Earn: \$141,000
- 5.Location Quotient: 1.54



## New Mexico

1. Total Instrumentation Engineer Jobs: 143
2. Average Annual Salary: \$91,397
- 3.Lowest 10 Percent Earn: \$63,000
4. Highest 10 Percent Earn: \$131,000
- 5.Location Quotient: 0.88

## Washington

- 1.Total Instrumentation Engineer Jobs: 891
- 2.Average Annual Salary: \$87,062
- 3.Lowest 10 Percent Earn: \$62,000
- 4.Highest 10 Percent Earn: \$122,000
- 5.Location Quotient: 1.48

## Best companies for instrumentation and control engineering around world:

### GE:

From jet engines to power generation, financial services to plastics, and medical imaging to news and information, GE people worldwide are dedicated to turning imaginative ideas into leading products and services that help solve some of the world's toughest problems.

### Suzlon:

Suzlon Energy is Asia's strongest growing fully integrated wind power company and ranks amongst the top ten in the world. Suzlon integrates consultancy, design, manufacturing, operation and maintenance services to provide customers with total wind power solutions.

### THEN AND NOW

Sales ballooned for several of the top instrument firms over the past five years

RANK	2008		2013	
	COMPANY	INSTRUMENT SALES (\$ MILLIONS)	COMPANY	INSTRUMENT SALES (\$ MILLIONS)
1	Life Technologies	\$2,317	Danaher	\$6,279
2	Thermo Fisher Scientific	2,200	Thermo Fisher Scientific	4,125
3	Agilent Technologies	2,195	Agilent Technologies	3,894
4	Shimadzu	1,667	Waters	1,904
5	Waters	1,575	Shimadzu	1,754
6	Roche Diagnostics	1,206	Roche Diagnostics	1,733
7	PerkinElmer	1,185	Bruker	1,730
8	Bruker	1,074	PerkinElmer	1,625
9	Danaher	875	Mettler-Toledo	1,094
10	Mettler-Toledo	868	Carl Zeiss	835



# FACULTY CORNER

## **FACULTY DEVELOPMENT PROGRAM**

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1) DATE : MAY18- MAY22

TOPIC : Recent research trends and future research Direction  
in solar technologies.

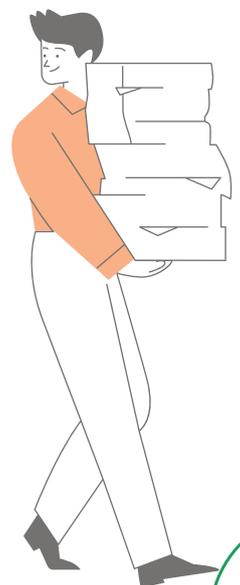
Attended By **Mr.S.Vigneshwaran.**

2) DATE : MAY18- MAY22

TOPIC : Recent research trends and future research Direction  
in solar technologies.

Attended by **Mr.S.Prasanna Perumal.**

3) **Dr.P.Thirumurgan** of Department of Instrumentation And  
Control Engineering has qualified for the award of "**Degree of  
Doctor Of Philosophy**" on **16.07.2021**



# STUDENT'S CORNER

## **Name : HEMANTH.K.K , 2nd Year ICE**

Event : CHESS

Prize : SECOND

Place : Indra Ganesan College of Engineering

Date : 19/03/2021

I learn more from this competition.Thank you for the opportunity.  
Great experience, happy to have this opportunity of learning.  
Thank you for setting up this initiative.

## **NAME : D.BHARATH SAMVEL, 2nd Year ,ICE**

Event : Chess zonals level

Prize : second

Place : Indira Ganesan college of engineering

Date : 19/03/2021

Thank you for giving me this opportunity to gain experience  
about college tournaments, innovative and team work.  
Thanks for boosting up our self confidence by games.





# APTITUDE

BY\_IRSHATH AHMED .MS - 1ST YEAR

1) A and B are friends. They decide to meet between 1 pm and 2 pm on a given day. There is a condition that whoever arrives first will not wait for the other for more than 15 min. The probability that they will meet on that day is

(a)  $1/4$  (c)  $7/16$

(b)  $1/16$  (d)  $9/16$

2. There are eight bags of rice looking alike, seven of which have equal weight and one is slightly heavier. The weighing balance is of unlimited capacity. Using this balance, the minimum number of weighings required to identify the heavier bag is

(a) 2 (c) 4

(b) 3 (d) 8

3. What is the ratio of number of years in which the actual production was above the average production to the number of years whose actual production is below the average production?

(a) 2:1 (c) 1:2

(b) 1:1 (d) 3:2

4. Two cyclists M and N starts from A, B and travels forward to B and A respectively. Once they reach to B and A, they turn back and travel to their starting points. If they meet 36 km from A for the first time and 18 km from B for the second time, then find the ratio of speeds of M and N.

(a) 2:3 (c) 4:5

(b) 3:2 (d) 5:4

5. An LCD TV is available at 27780 cash price or three equal annual installments at 15% per annum under CI compounding annually. Find each installment amount (in ₹).

(a) 10146 (c) 13184

(b) 11123 (d) 12167

6. Mr. Arun purchased few pencils at the rate of 8 for buy three pencils and marked eight pencils for ₹ 30. If he allowed a discount of 20%, then find his percentage of profit or loss.

(a) 12.5% profit (c) 15% loss

(b) 20% profit (d) 12.5% loss

7. What would be the remainder, if the smallest possible number formed of 3 and 0, which is exactly divisible by 48 is divided by 96?

(a) 46 (c) 36

(b) 24 (d) 72

8. Three bikers clubs, Rovers, Aces and Riders have 60, 70 and 90 members respectively. 20 of them are by members of the three clubs, whereas 60 of them have membership of any one club. How many bikers have membership of exactly two clubs?

(a) 50 (C) 100

(b) 60 (d) None of these

9. Some sheets of papers are folded and stapled in the middle to form a book so each sheet contains two leaves and each leaf contains two pages. The sum of the page numbers on the last leaf was 191. Mr. Dheeru removed even number of sheets from the book. If the number of sheets removed are minimum, then find the sum of the page numbers on the remaining sheets.

(a) 4202 (b) 4224

(c) 4224 (d) cannot be determined

10. How many values of n exists such that  $n!$  ends in 30 zeros?

(a) 12 (c) 6

(b) 4 (d) None Of these





# DID YOU KNOW?

- 1) the name physics was introduced by aristotle in the year 350 bc
- 2)The closest living relative to humans are chimpanzees, bonobos, and gorillas. We share between 98 and 99.6% of DNA with these species.
- 3)Most of the Earth's longest-surviving species are found in the ocean.
- 4) 73 million sharks per year die due to shark finning, where fishermen catch the sharklin, cut off its fins, and throw the still-living shark back into the water.
- 5)Many animals exhibit high levels of emotional intelligence.
- 6)The strings of string instruments were originally made from the guts of animals like sheep or lambs.
- 7) The 1939 novel Gadsby is the longest book ever published that doesn't contain the letter 'e.'
- 8)On average, people read 10% slower from a screen than from paper.
- 9)Over 6,000 new computer viruses are created and released every month. 90% of emails contain some form of malware.
- 10)The Firefox logo isn't a fox, it's a red panda.

# ART AND PHOTOGRAPHY

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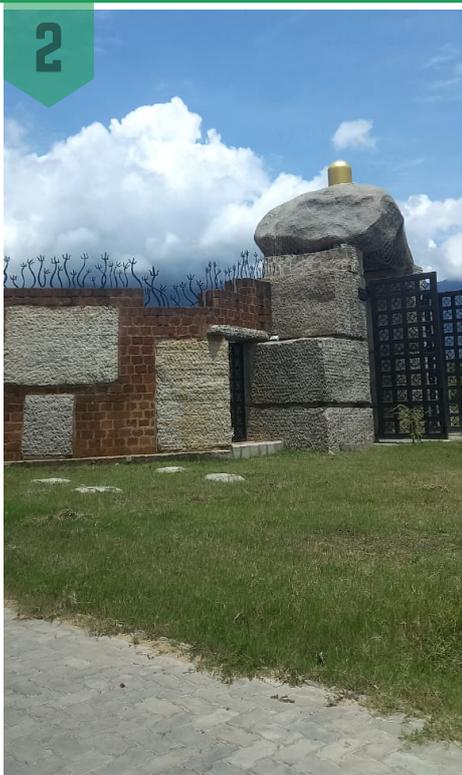
## PHOTOGRAPHY

1. HARI VARSHINI S - 1st YEAR
2. MOHAMED YAHYA A - 2nd YEAR

## DIGITAL ART

3. KAVIN. G - 1st YEAR

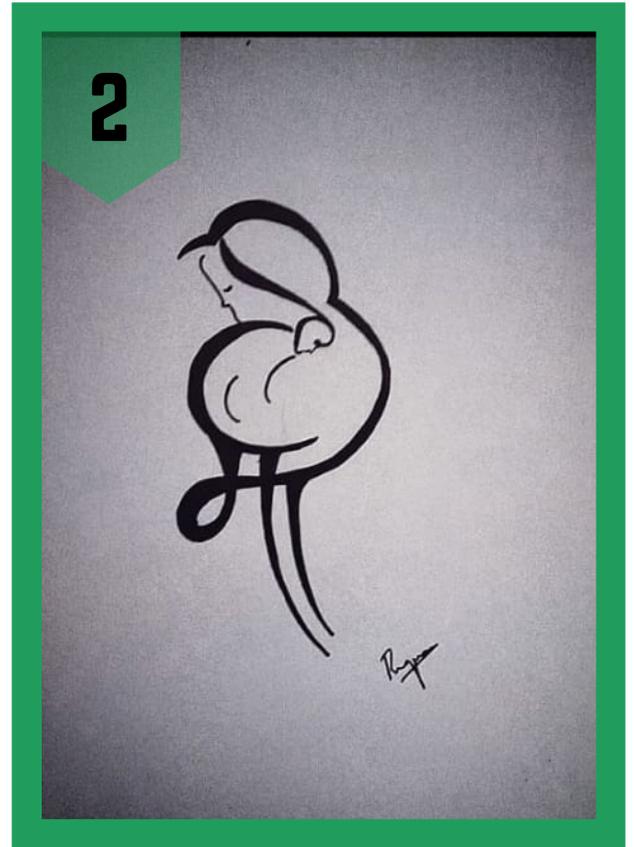
2



3



# ART AND PHOTOGRAPHY



## ART BY

1. VIGNESH - 1st YEAR
2. REGENA ARSHNI S - 2nd YEAR

## PHOTOGRAPHY

3. SIVA SUBRAMANIAN.A - 1st YEAR

