

# KAMARAJ

## COLLEGE OF ENGINEERING & TECHNOLOGY



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus

S.P.G.C.Nagar, K.Vellakulam - 625 701, (Near Virudhunagar), Madurai District.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

# E<sup>⚡</sup> SHOTS

## WHAT IT SAYS?

- 1) Vision and Mission
- 2) ISRO Navic GPS for android phones
- 3) Advancement of Battery Technology
- 4) Guest lecture delivered by faculty
- 5) Research Awards/Recognition/Events attended By faculty
- 6) Achievements by Staff/Student
- 7) Quotes of the day
- 8) Gate corner

*18<sup>th</sup>  
Edition  
(October to  
December)*

## **VISION OF THE DEPARTMENT**

To make the Department of Electrical and Electronics Engineering of this Institution the unique of its kind in the field of Research and Development activities in this part of the world.

## **MISSION OF THE DEPARTMENT**

To impart highly innovative and technical knowledge in the field of Electrical and Electronics Engineering to the urban and unreachable rural student folks through Total Quality Education.

## **ISRO'S NAVoIC GPS FOR ANDROID SMART-PHONES :**

NavoIC is a satellite used within the Indian region and neighboring countries. This means when people use their smart-phones to travel from point A to point B anywhere in India, the receiver inside the phone will turn to the constellation of seven NavoIC satellites which will be sending radio signals to each other and then to the receiver. The receiver allowing it to determine the location and time at any point.

"ISRO is satisfied with the efforts of Qualcomm towards incorporating NavoIC and we urge OEMs to leverage it for future handset launches in India. The availability of NavoIC across multiple mobile platforms will help enhance the geo-location capabilities of smart-phones in the region and bring the benefits of this indigenous solution to Indian consumers for their day-to-day use," Dr. K Sivan, chairman, ISRO said in a press statement. In addition to NavoIC, these chipsets will also support the widely used GNSS (Global Navigation

Satellite System) which includes USA's GPS (global positioning system), European Union's Galileo, Russia's GLONASS and China's Beidou Navigation Satellite System for global coverage.

Unlike the widely used GPS which includes **24 satellites**, NavoIC has seven satellites and their range is within India and its adjoining regions extending up to **1,500km** from the country's border.

Technically satellite systems with more satellites provide more accurate positioning information. However, GPS' 24 satellites provide coverage to the entire planet, whereas NavoIC's seven satellites will only cover India and its adjoining countries. Which is why many believe that compared to GPS which has a position accuracy of 20-30 meters, the NavoIC will be able to pin point location to an estimated accuracy of under 20 meters.

Also, NavoIC satellites are in geosynchronous orbits and are vertically positioned which makes them always visible to a receiver.

NavoIC will provide two types of services- the Standard Positioning Service (SPS), which is meant for the general public and Restricted Service (RS), which is an encrypted service meant for authorized users and agencies.



## **ADVANCEMENT IN BATTERY TECHNOLOGY:**

As we move from fossil fuel to E-vehicle we need to face some problems. They are battery capacity and fast charging.

Most of the E-vehicle today runs 150-250km per single charge. But this is not sufficient for long travel and charging is time consuming. To overcome this loophole we can use graphene.

Single layer of graphite is called graphene. It has high conductivity. Graphene is connected to the electrode of the battery.

This is efficient than lithium battery. But the cost is high. The economy of the vehicle can be improved by coupling generator by SHV Technology. Pollution due to charging is less than pollution caused due to conventional vehicle. One of the major problem is heating.



## **GUEST LECTURE DELIVERED BY FACULTY:**

- **Mr.D.Mariappan, AP/EEE** presented a guest lecture on Shortcut Method and Concept based learning in the subject of Physics in S.D Jain Hr.Sec School, Dimapur, Nagaland on 04.12.2019
- **Mr. D. Mariappan,AP/EEE** exhibited a guest lecture on the topic “How to make learning” for the subject Physics easier and Interesting in Immanuel College, Dimapur, Nagaland on 07.12.2019
- **Mr.D.Mariappan,AP/EEE** has the presentation on Shortcut Method and Concept based learning in the subject of Physics at VallalSabapathy Matriculation School, Chennai on 10.12.2019
- **Mr. D. Mariappan,AP/EEE** exhibited a guest lecture on Stress Management Training at Police office, Thoothukudi on 13.12.2019
- **Mr. D.Mariappan,AP/EEE** presented a guest lecture on Stress Management Training in Sri SRNM Polytechnic College, Sattur.on24.12.2019

## **RESEARCH AWARDS/ RECOGNITIONS RECEIVED BY FACULTY:**

- **Dr.S.Rajesh Babu,AP/EEE** received Doctor of Philosophy from Anna University, Chennai on 03.12.2019

### **EVENT ATTENDED BY FACULTY:**

- **Dr.M.Sudalaimani,AP/EEE** has undergone Short term training Program on Machine learning and Deep learning for Real time Applications at National Institute of Technology, Warangal from 29.11.2019 to 08.12.2019
- **Ms.S.VimalaDevi,AP/EEE** has attended QIP Sponsored Short Term Course on Power Electronic Converters: Operation and Control in Indian Institute of Science, Bangalore from 02.12.2019 to 06.12.2019.
- **Mr.M.Shanmugavel** has attended Skill Development Program in Ramco Institute of Technology, Rajapalyam on 06.12.2019.
- **Mr.P.Muthukrishnan** attended Skill Development Program in Ramco Institute of Technology, Rajapalyam on 06.12.2019.

### **ACHIEVEMENTS BY STAFF / STUDENTS:**

- **Dr.D.Prince Winston, Professor/EEE** has published a paper "Performance improvement of solar PV array topologies during various partial shading conditions" Solar Energy – Elsevier Journal Volume 196, 15 January 2020, Pages 228-242
- **Mr.R.Ganesan, AP/EEE** has published a paper "A New Literature Review of Automatic Generation Control in Deregulated Environment", Scopus Indexed,

International Journal of Scientific & Technology Research (ISSN 2277-8616) Volume 8, Issue 12, December 2019, Page No.: 2083 - 2089.

- **Mr. M. Pravin& Mr.A.G. Akash, III EEE** has got ISTE best Project award during inaugural function of 19th ISTE TN Section Annual Convention at PSG Institute of Technology and Applied Research, Coimbatore on 18th December, 2019.
- **Mr. R. DuraiBabu& Ms. V. Rithi Andal Pooja, IV EEE** has got ISTE best Student award during inaugural function of 19th ISTE TN Section Annual Convention at PSG Institute of Technology and Applied Research, Coimbatore on 18th December.

### **OTHER DETAILS:**

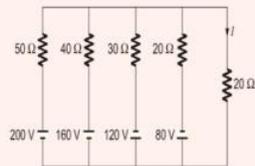
- **Dr.D.Prince Winston, Professor/EEE** has submitted RPS proposal to AICTE - AQIS.
- **Dr.S.Kalyani, Professor& HOD/EEE, Mr.A.KaruppaSamy, AP/EEE &Ms.R.Reenu, AP/EEE** have submitted FDP proposal to AICTE - AQIS.
- NBA Compliance Report for extension of accreditation was submitted on 07.12.2019.
- **Mr.A.AnandhaBalaji, III year EEE** is selected to represent Tamilnadu Contingent and participated in the National Integration Camp at West Bengal from Dec 14th 2019.

### QUOTES OF THE DAY:

“The secret of change is to focus all of your energy, not on fighting the old but on building the new”

### GATE CORNER:

Q.32 Find the value of current  $I$  in the given circuit.



Ans. (0)

$$\text{By Millman's theorem, } I = \frac{\frac{200}{50} + \frac{160}{40} + \frac{120}{30} + \frac{80}{20}}{\frac{1}{50} + \frac{1}{40} + \frac{1}{30} + \frac{1}{20}} = 0 \text{ A}$$

### CHIEF EDITOR:

Dr.S.Kalyani, Prof& HOD/EEE

### Editor:

Ms.S. Vimala Devi, AP/EEE

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