# ECE QUEST

## (A Bi-annual Technical Magazine)

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# PSCMR

## College of Engineering and Technology

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## Principal's Message:
### Dr. K. Nageswara Rao
### PRINCIPAL

"The mind is not a vessel to be filled, but a fire to be kindled." Said Plutarch. ECE Quest Magazine kindles the imagination of our learners. Cradled in the lap of nature on the one hand and archeological edifice on the other, swaying from serious thinking to playful inventiveness, students at PSCMRCET are brimming with a zeal for life empowering themselves with skills and creativity. I congratulate the staff and students who used various mediums of expression to present their ideas. As long as our ideas are expressed and thoughts kindled we can be sure of learning, as everything begins with an idea.

Just as our mother earth gives us more and more, ECE Quest will enable our learners to give and get a little more of learning.

Happy Reading!

## Chief Editor:
### D. Srikanth, Associate Professor

Success of this effort to bring out ECE Quest is the result of dedicated teamwork put in by all concerned. The student editors have done their bit to give ECE Quest an appealing youthful look. This issue of ECE Quest is dedicated to this prestigious institution. The Editorial Committee feels privileged in presenting this special issue. Enjoy the Gems of ECE Quest!

# About the Department

The Department of **Electronics and Communications Engineering** envisions the E.C.E graduate as a competent and ethical professional in the areas of electronics, communications, and digital signal processing. The Department of Electronics and Communication Engineering is established in **2008.** It offers B.Tech programme with a student intake of **120**.

# Vision:

To be a leading center for education and research in electronics and communication engineering, making the students adaptable to contemporary technologies with sound knowledge and socio-ethical values in an integrated learning environment.

# Mission:

- ◉ **M1:** To produce knowledgeable and technologically competent engineers for providing services to the society.

- ◉ **M2**: To have a collaboration with leading academic, industrial and research organizations for promoting research activities among faculty and students.

- ◉ **M3:** To create a unified learning environment for sustained growth in electronics and communication engineering and related areas.

# PSO'S

- **PSO1:** The ECE Graduates will be equipped with knowledge of complete design flow from specification to silicon in areas of both digital and analog VLSI Design and will be able to work in IC design companies.

- **PSO2:** The ECE Graduates will be trained with microprocessor and microcontroller based system design skills and can work as design and verification engineers in the area of embedded systems design.

- **PSO3:** The ECE Graduates will be able to apply engineering knowledge for design and implementation of projects pertaining to signal processing and communications.

- **PSO4:** The ECE Graduates will be incorporated with necessary soft skills, Aptitude and technical skills to work in it and public sector.

# PEO'S

- **PEO1: Engineering Foundation**

To produce graduates with firm foundation in electronics and communication engineering.

- **PEO2: Core Competence**

To motivate graduates to Analyze, Design, Develop, Optimize and implement electronic systems with competent spirit.

- **PEO3: Breadth Knowledge**

To enable graduates with sufficient breadth in electronics and its related fields to solve general engineering problems in an eco-friendly environment.

- **PEO4: Soft Skills**

To make graduates with a professional outlook who can communicate effectively and interact responsibly with colleagues, Clients, Employers and society.

- **PEO5: Knowledge Enhancement**

To prepare graduates who pursue lifelong learning and professional development including higher education.
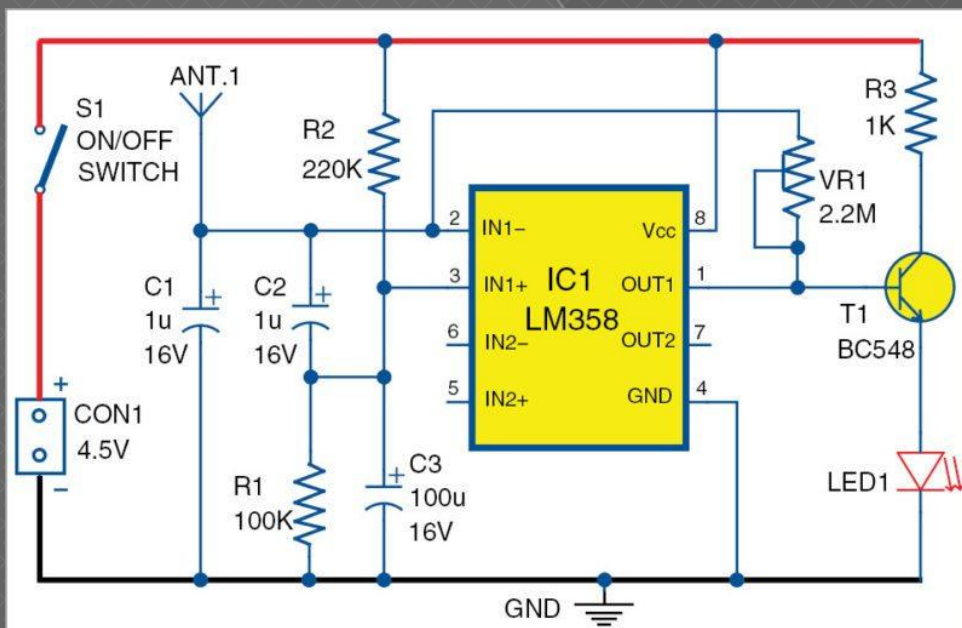
# Do it yourself

## Mobile Phone Detector Using LM358

- This mobile phone detector can sense the presence of an activated mobile phone from a distance of four to five metres. So it can come handy in an examination hall or meetings where mobile phones are not permitted.

- The circuit can detect incoming and outgoing calls, SMSes, Internet and video transmissions even if a mobile phone is kept in silent mode. When it detects an RF signal from an activated mobile phone, its LED starts blinking and continues to blink until the signal stops.

## Circuit and working

When a mobile phone is active, it radiates RF signal that passes through nearby space. The signal contains electromagnetic RF radiation from the phone.
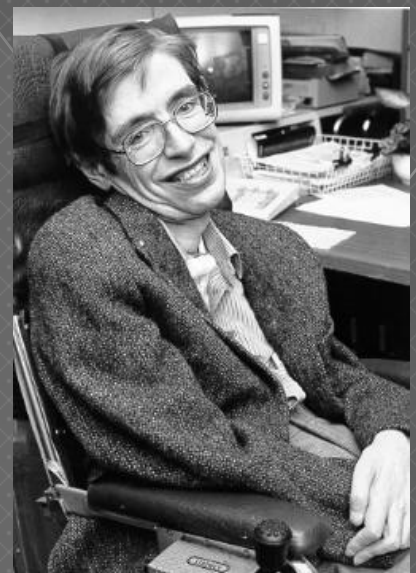
# Stephen Hawking

Theoretical physicist

Stephen William Hawking (8 January 1942 – 14 March 2018) was an English theoretical physicist, cosmologist, and author who was director of research at the Centre for Theoretical Cosmology at the University of Cambridge at the time of his death. He was the Lucasian Professor of Mathematics at the University of Cambridge between 1979 and 2009.

His scientific works included a collaboration with Roger Penrose on gravitational singularity theorems in the framework of general relativity and the theoretical prediction that black holes emit radiation, often called Hawking radiation. Hawking was the first to set out a theory of cosmology explained by a union of the general theory of relativity and quantum mechanics. He was a vigorous supporter of the many-worlds interpretation of quantum mechanics.
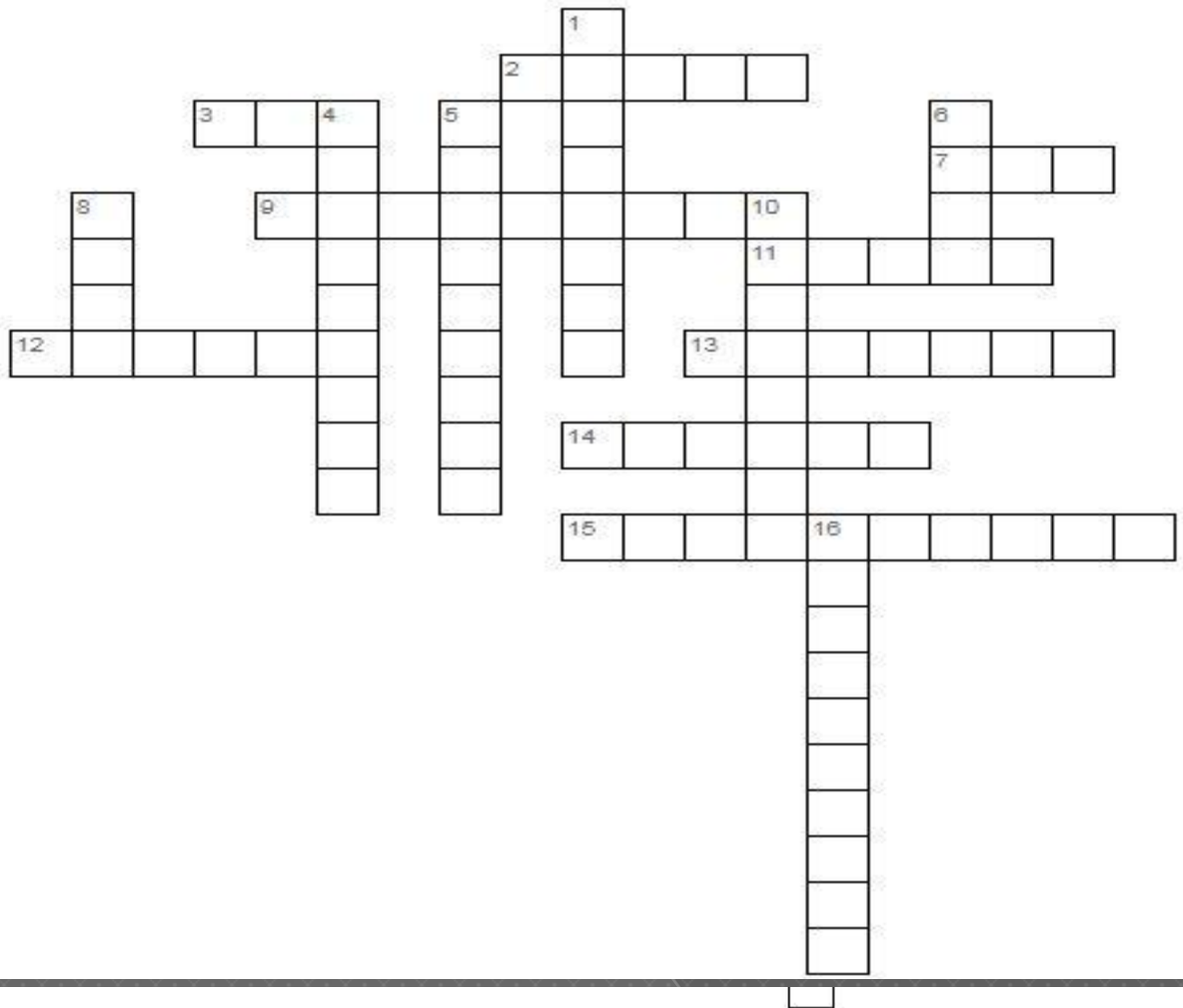
# Important Websites

**1) Jagranjosh.com**

JagranJosh is a website that offers educational information on Banking, Civil Services, MBA Entrance, SSC, etc. and is known for simplifying test preparation. It is also a rich repository of CBSE, JEE, IAS-PCS, SSC study materials. Students can prepare well for their exams by downloading Previous Year's Question Papers or they can ask or answer questions on their interactive forum. Current affairs and general knowledge quiz provide information in a fun way.

**2) Shiksha.com**

Shiksha.com provides complete guidance for MBA, MS, Engineering, Fashion designing and a variety of courses available in various colleges of India. It also has a forum that allows students to post career-related questions and receive answers from experts through a community known as Shiksha Cafe. The website also offers guidance and mock tests to prepare for courses abroad. It has a list of courses offered abroad, countries offering these courses and application process for the same.

# Cross Word



**Across**

2. passage of current through body
3. wiring size
7. a law
9. measures electrical potential
11. a type of ground
12. symbol 'T'
13. enclosed path of current
14. to turn on and off current
15. electromagnetic wave

**Down**

1. measures electrical resistance
4. reference point in an electrical curren
5. measures electric power
6. symbol 'V'
8. protects against excessive current
10. electric component that transmits current
16. generates a continous output waveform

# Events

| S.No. | Name of the event | Event type | Professional societies/chapters | Resource person/team | Date |
|---|---|---|---|---|---|
| 1 | Trends & challenges in VLSI system design | Guest Lecture | IETE Students forum | Dr. K V Sridhar, Professor, NIT Warangal | 1/9/2015 |
| 2 | Indian Innovations | Guest Lecture | IETE Students forum | Mr. T. Praveen Kumar (Embedded software engineer at Robert BOSCH Engineering and Business solutions, Bangalore) | 5/9/2015 |
| 3 | Role of Semiconductor& VLSI Technology in Defense Applications –A Bird's Eye View | Guest Lecture | IETE Students forum | Dr.V.N.Mani, Scientist, Centre for materials for electronics technology, Dept of Electronics and information technology, Govt. of India, Hyderabad | 5/9/2015 |
| 4 | PCB design | Workshop | IEI | Mr.TaZZ | 10/09/15 to 12/9/15 |
| 5 | Overview of recent telecom technologies | Guest Lecture | IETE Students forum | D.HariBabu Prasad, Rtd.DGM, BSNL | 15/9/15 |
| 6 | MATLAB and its applications | Workshop | IETE Students forum | Faculty of Dept. of ECE | 21/9/15 to 30/09/15 |