ELECTROMAG

MAGAZINE

Of

E C E Department

Educate | Empower | Excel
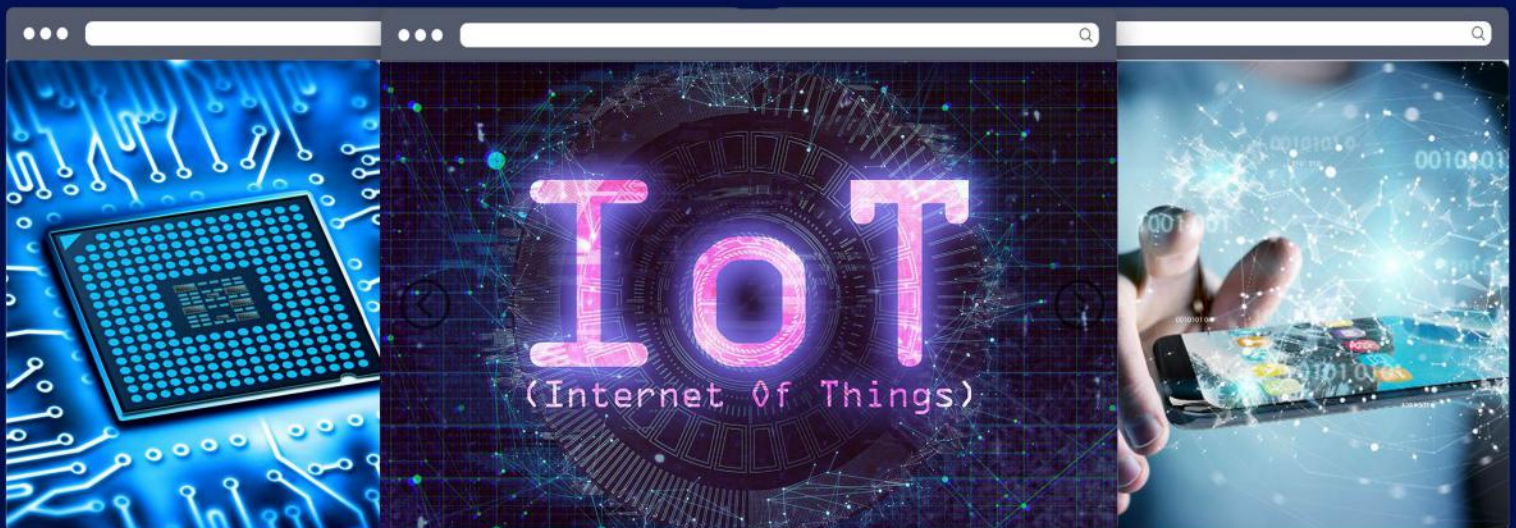
IoT
(Internet Of Things)

ABOUT THE DEPARTMENT

Electronics and Communication Engineering is gaining increasing importance in all works of life. The advancements and technological innovations in electronics are felt in area as diverse as commercial communications, medicine, defense and day today common man activities. The department places strong emphasis on fundamentals, so that the student is introduced to complex subjects in an interesting and easy manner. The Department imparts technical knowledge in the areas of Semiconductor devices, Design of Electronic circuits, Communication engineering and its applications. To meet the nation's interest in developing the manufacturing electronics industries, the department offers training in various domains to develop an employable engineer.

The Department of Electronics and Communication Engineering which was started in the year 2008 offers a UG Programme (B.Tech) in Electronics and Communication Engineering. The B.Tech Electronics and Communication Engineering Programme has been accredited by. AICTE and is affiliated to Pondicherry university. The department has a team of committed faculty members who are not only well qualified but are also backed by rich industrial / research / teaching experience. The development of competency of our students are of utmost importance and various activities are done to enrich the students.

VISION

The department aspires to produce dexterous professionals, competent Researchers and entrepreneurial leaders for the benevolence of the society.

MISSION

Higher Order Thinking
To invoke higher order thinking among the students by means of comprehensive teaching and learning process.

Competency
To provide training on cutting - edge technologies to improve the competency of the students.

Continuous learning
To promote innovation through providing state of-art facilities and active industry institute interaction.

Entrepreneurship
To facilitate the students to improve their leadership and entrepreneurship skills with ethical values.

Internet of things (IOT) - Conquering the Future !

The new rule for the future is going to be, "Anything that can be connected, will be connected." Say for example you are on your way to a meeting; your car could have access to your calendar and already know the best route to take. If the traffic is heavy your car might send a text to the other party notifying them that you will be late. What if your alarm clock wakes up you at 6 a.m. and then notifies your coffee maker to start brewing coffee for you? What if your office equipment knew when it was running low on supplies and automatically re-ordered more? What if the wearable device you used in the workplace could tell you when and where you were most active and productive and shared that information with other devices that you used while working?

The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

On a broader scale, the IoT can be applied to things like transportation networks: "smart cities" which can help us reduce waste and improve efficiency for things such as energy use; this helping us understand and improve how we work and live.

The reality is that the IoT allows for virtually endless opportunities and connections to take place, many of which we can't even think of or fully understand the impact of today. It's not hard to see how and why the IoT is such a predominant topic today; it certainly opens the door to a lot of opportunities but also to many challenges. Security is a big issue that is often times brought up. With billions of devices being connected together, what can people do to make sure that their information stays secure? Will someone be able to hack into your toaster and thereby get access to your entire network? The IoT also opens up companies all over the world to more security threats. Then we have the issue of privacy and data sharing. This is a hot-button topic even today, so one can only imagine how the conversation and concerns will escalate when we are talking about many billions of devices being connected. Another issue that many companies specifically are going to be faced with is around the massive amounts of data that all of these devices are going to produce. Companies need to figure out a way to store, track, analyze and make sense of the vast amounts of data that will be generated.
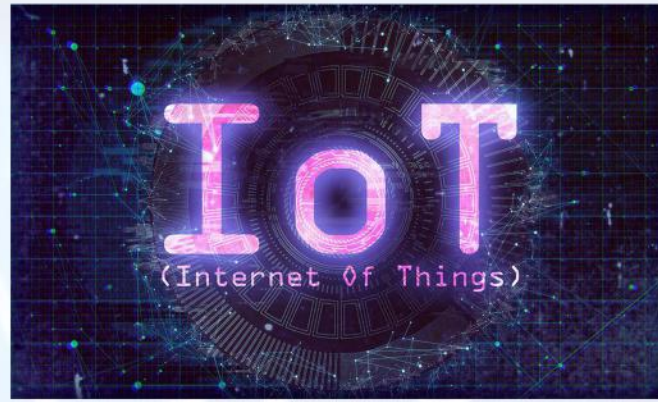
Conversations about the IoT are (and have been for several years) taking place all over the world as we seek to understand how this will impact our lives. We are also trying to understand what the many opportunities and challenges are going to be as more and more devices start to join the IoT. For now the best thing that we can do is educate ourselves about what the IoT is and the potential impacts that can be seen on how we work and live.

Prepared by
Mariya Brigithaa
IV- Year ECE

4G - AN ERA OF DEVELOPMENT

4G which stands for 4th Generation Technology is an extension of the 3G technology and has new advancements including better bandwidth and services added to it. 4G is basically mobile technology which has evolved from the basic 1G technology that came up with cell phones coming into the communication world.4G is considered as future generation technology and its goals are definitely progressive. Technologies like UMTS, SDR, TD-SCDMA, MIMO, WIMAX etc. fall into the category of 4G. 4G is expected to enhance the security measures and provide high data transfer speeds and improve user efficiency. The blips that happen in transmission due to movement of device from one place to another with network changes are expected to reduce with 4G technology. 4G technologies are supposed to use network address in lines with IP addressing system used for Internet. Thus 4G focuses both on mobile communication and Internet access on computers. Communication speeds as high as 100mbps up to 1 Gbps over fixed stations is what 4G promises.

The key applications and services to use the 4G technology include e-readers, mobile marketing, mobile-IPTV, geo-target advertising, on line gaming etc. Another striking feature of 4G is that it will evolve around multi-platform environment. Various wireless technologies like LTE, Wi-Fi etc. will be able to use 4G on devices like cell phones, laptops, digital cameras, printers, e-readers etc. Also, revolutionary new devices are likely to be created and mobile stores set to become key distribution channels for 4G applications.

High data rates are meant to set new trends in the market and give a boom to the technological businesses with 4G coming in. Video blogs will become a reality with 4G networks complementing the high resolution digital cameras built-in the mobile phones. Computing will turn ubiquitous with high speed networks facilitating faultless handoffs across all regions of the geography. High quality audio/video streaming over end to end Internet protocol is a clear expectation from 4G. As WiMAX design will become more visible, the network operators will openly accept several architectures.

With 4G set to revolutionize the technological advancement, the potential will be truly addressed if it can live up to those standards. Privacy and security issues, creating industry standards of excellence and achieving them in all spheres of technology, taking care of handset limitations, provide user-friendly services in order to overcome poor user experiences with people being unaware of the mobile data services at large. In short, 4G is expected to revolutionize the era of advanced development and bring a huge improvement in the communication standards and patterns. The success of 4G will bring many advantages to the communication world and make it a different world altogether.

Prepared by
V.Manju
IV- Year ECE

PARENTS

I could see you change,
In the way, you never would !
The wrinkles on your face,
A kind of little Solace !
Doing your routine, at a slower pace !?
Its difficult for me to retrace !
With intolerant restlessness, Your heart beats fast,
And your Emotions overflow very vast !
The thyroid and Diabetes vary like Crest and Trough,
While the problems in Nerves and the Knees are getting tough !
Your responsibilities end, along the way, but your health descends far far-away !
The hair turns white, while your bones and muscles backbite !
To see you grow old, and walk only with someone to hold !
Ah ! You are in your 50s... We call this Ageing!
Should I Estrange this phase of Life?
No,,
Rather, I should embrace this Change,
And help you get back to pace!

ZENETH OF POSITIVITY

The Tables rotate,
With Reasons you could never Relate !
There are Unexpected Bends,
Before everything in your Route Ends,
Always intend to have the ability to Subtend,
Before things Suspend !
Because, You have your Time to Spend,
Ears to Lend,
And a Mind to Mend!
Seize your Opportunity to Comprehend,
The Reason for your Existence!
Hey, your world is awaiting to Commend,
And see you touch the Horizons of Success!

THE SCAR

I m not the Remains of the darkest past,
But, the wounds of the Brightest pride !
The blisters from the Life Battle !
Not only of sword fights with the rival,
But, out of the unheard Stories of Survival !
I m a Gift of time,
with Deep Life Lessons within !
Oh my Lord,
I m not a sin,
I m the mark of a Glorious win!

THE NERDY INTROVERT

With books and Laptop always in his hands,
With dreams and ambitions shining in his eyes,
His sincere efforts were always high!
But,
Ignored by his behavior around, the nerd gets isolated all along!
He may not groom himself well, with the latest trends!
He may be an Introvert, who never bends!
His mind may always be occupied with no time to spend!
But, he does have a heart to feel bad at the end!
To feel about his Loneliness,
To search for someone to go out for a snack!
To crack a joke, when he feels low!
For a friendly shoulder to lean upon,
For a naughty pat, to grow along!
When his family pressure dominates, the peer pressure escalates!
His fear of failure kills him within!
But His Heart always craves for a small recess around!
The poor boy craves for a company, but, We brand him shy and Moody!
The world goes quiet while the nerd cries all, from the inside!
This is not his nature, but he got used to this!
Oh Poor Soul!
This is how he thinks, This is how he feels!

THE SOCIETY

The fault in our stars,
The twirls in our genes !
The DNA from our Heredity, should never be treated with Pity !
From fair to dark, From tall to short!
To thin to slim, To chubby to fat!
What is meant to be, is to be!
A Change is required!
Not for the Looks,
But for the Mindset of people !
Hey Society,
Grow up !
We are Beautiful in our world !
Never create a negative image,
Your opinions are no less than a Garbage !

THE ANCHORING DREAMS CONQUER

With the Waves of Life Hitting me hard !
With Crests and Troughs pushing me to the Dark !
I know ! I m Drowning !
But, Hang on !
I could see the Light house at the Shore !
With the Bright lights, my deep Eyes could Adore !
The Intense efforts are made to the Core !
To not to be in pain anymore !
Hey World !
I m on my way !
With my strong Anchors, along I slay !
This Majestic Ship with Success at Display !

Prepared by
Kayalvizhi
III year ECE

BIBLIOPHILIA

I m a Girl of Flesh and Bone,
Sitting under the Moon all alone !
You kicked my Phone, Acquiring its Throne !
With a Magical Tone, entering my Comfort zone !
Gushing my Harmone, You are now my Backbone !
Hey Book,
My Swirly Cyclone !
In my life, You have attained a new milestone !

1. Six boys A, B, C, D, E and F play a game of cards. Each has a pack of 10 cards. F borrows 2 cards from A and gives away 5 to C who in turn gives 3 to B while B gives 6 to D who passes on 1 to E. Then the number of cards possessed by D and E is equal to the number of cards possessed by
a. A, B and C
b. B, C and F
c. A, B and F
d. A, C and F

2. A company offered its 350 employees a bonus of Rs.10 to each male and Rs.8.15 to every female. All women accepted however certain percentage of men refused to do so. The total bonus paid was independent of thye number of men. Now what was the total amount paid to females (in rupees)?
a. 1672.50
b. 1222.50
c. 2852.50
d. None of these

3. A shopkeeper was selling rice at a profit of 20%. But he was unaware that his weighing machine was tampered and showed 950gms for 1kg. find his actual profit %?
a. 14.74%
b. 15.79%
c. 26.32%
d. 14.29%

4. What is the least number of digits in the number formed from only zeros and ones such that it is divisible by 225?
a. 4
b. 9
c. 11
d. 7

5. There are 4 big houses in my home town.They are made from these materials: red marbles, green marbles, white marbles and blue marbles.
* Mrs Jennifer's house is somewhere to the left of the green marbles one and the third one along is white marbles.
* Mrs Sharon owns a red marbles house and Mr Cruz does not live at either end, but lives somewhere to the right of the blue marbles house.

* Mr Danny lives in the fourth house, while the first house is not made from red marbles.
Who lives where, and what is their house made from?

6. There are five men, let's say Tarun Harish Lavesh, Manoj, and Manish. All of them have a dot mark in their forehead. They can't see the dot on their own forehead, but can see the ones on others. The owner of WHITE dot is an honest person and will never lie, while the owner of BLACK dot always tell the lie.
This is the statement from Tarun Harish Lavesh, and Manish:
Tarun: 'I see 3 whites and 1 black'
Harish: 'I see 4 black'
Lavesh: 'I see 3 black and 1 white'
Manish: 'I see 4 white'
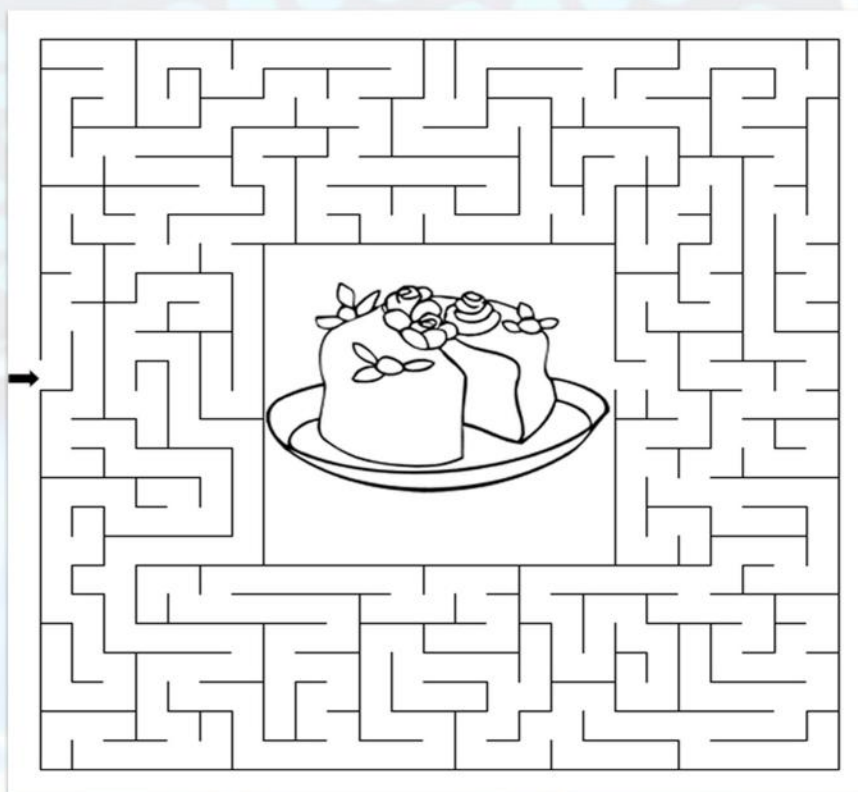What color is the dot on each Tarun Harish Lavesh, Manoj, Manish forehead?

7. Six lovely dolls are standing in a straight line such that
a. X and W are neighbors of Y.
b. V's only neighbor is U.
c. U is at the forth place of Z.
So who two are standing at the 2 corner of the line ?

Hemaleka and her team of final year students have won first prize in CII Innovative project contest.

Painting and poetry competitions were conducted on International day against "DRUG ABUSE".

ROBOTICS competition on MITRONCE'14

Consumer Electronics Expo (MODERN'14)

PROGRAMME EDUCATIONAL OBJECTIVES

PEO1: **Employability:** Our Graduates shall be suitably employed in allied industries/services with professional competency and knowledge of modern tools.

PEO2: **Higher Education:** Our Graduates shall be capable to pursue higher studies/research in the field of engineering and management.

PEO3: **Entrepreneurship:** Our Graduates shall be prepared for a successful career by meeting ever increasing demands required by Electronics and communication profession and enable them to become an entrepreneur.

PEO4: **Ethical:** Our Graduates cultivate professional and ethical attitudes with effective communication skills, team work and multidisciplinary approach related to engineering issues.

PROGRAM OUTCOMES

PO1: **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: **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.

PO3: **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.

PO4: **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.

PO5: **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: **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.

PO7: **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.

PO8: **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: 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.

PO11: 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.

PO12: 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

PSO1: Products Development: Use modern tools to design subsystems for simple applications in Embedded Systems and VLSI.

PSO2: Design Thinking: Apply engineering concepts to find solutions in the fields of Communications, Signal/Image Processing.

STUDENT EDITORS

BRUNTHA.S, IV/A
SESANK.D, IV/A
RAGURAMAN K, IV/B
MARIA BRIGITTA R, IV/B
MOHAMED RIYAZ AHAMED.N, III/A
NAVEENHAA.B, III/A
ABINAYA.A, III/B
DINAKARAN.R, III/B
VELMURUGAN.M, II/A
CLEMENT JOSHUVA .S.N, II/A
RATHI RAJAMONY, II/B
ANANTHA BHANUMITHRA G, II/B
NADHEESH.A, I-YEAR

STAFF INCHARGE

MR. B..ASHVANTH , AP/ECE

Answer:
1.(b),2.(b),3.(c),4.(c),5.(From,left to right),
6.(Tarun, Harish, Manish have black dots,
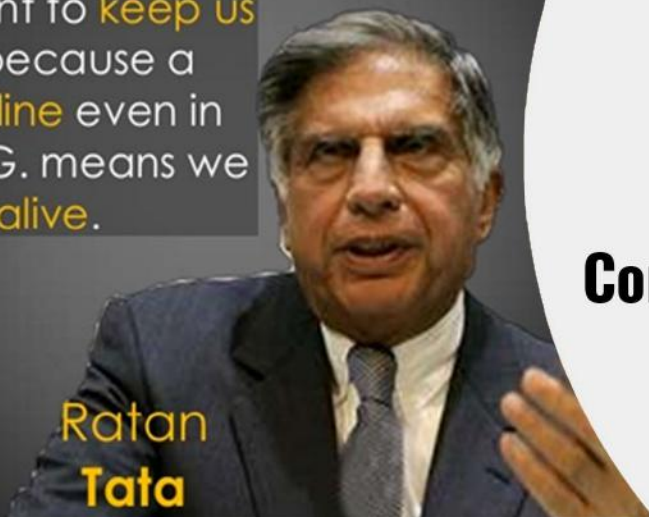while Lavesh and Manoj have white dots.)
7.(V and Z)

There are two great days in a person's life - the day we are born and the day we discover why.

William Barclay

• • •

"Ups and downs in life are very important to keep us going, because a straight line even in an E.C.G. means we are not alive.

Ratan Tata

Department of Electronics and Communication Engineering

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