



RAJ KUMAR GOEL INSTITUTE OF TECHNOLOGY

5KM Stone Delhi -Merrut road ,Nerar Raj Nagar Extension, Ghaziabad



UDGHOOSH

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INDUSTRIAL VISIT TO “ELECTRONICA INDIA-2022”

INDIA EXPO MART, GREATER NOIDA

The Department organized a one day Industrial Visit to Electronica India for the students of 2nd year and 3rd year on 21st September 2022 and 22nd September 2022 respectively.

Mr. Rakesh Kumar conceptualized India’s first state of the art infrastructure for Exhibition and Mart at Greater Noida and currently holding the position of Chairman of the India Exposition Mart Limited popularly known as India Expo centre & Mart. The India Exposition Mart has a spread over of 58 acres and has built up complex of 2.5 million sq. ft. i.e. 25 lakhs sq. ft area. The foundation stone of the same was laid by the then deputy Hon’ ble P.M. Shri L.K. Advani and later it was inaugurated by Shri Manmohan Singh, Hon’ble Prime Minister of India in 2006. Major shows, Exhibitions and conferences like Auto Expo, Printpack, Asian Development bank (ADB) and FDI World Dental Congress are now being organized in this complex.

The Award and Accreditations of Expo Centre are: -

- Winner for The Knowledge HUB Category – Exhibition Excellence Awards 2022.
- The Grand Venue Category – Exhibition Excellence Awards 2022.
- Best MICE VENUE 2021-22 by MICE Affairs in 2022.
- Winner in India’s Leading Exhibition Venue Category at EEA 2020 in 2020.
- Brand Excellence Award in MICE Industry by ET Now in 2019.
- Best Stand-Alone Convention Centre-National Tourism Award 2017-18.
- Best MICE Venue-14th Annual International Hospitality India & Travel Awards-2018.
- Best MICE Venue of India by TravTour MICE Guide in 2018.
- Winner for “Big Venue” Category – Exhibition Excellence Awards 2017.
- Best Exhibition Centre by Safari India South Asia Travel in 2016.

The faculty coordinators of the visit for 3rd year were Ms. Hashmat Usmani and Ms. Farah Naz. The faculty coordinators of the visit for 2nd year were Dr. Vipin Sharma, Mr. Rajneesh Patel and Ms. Arathy Rajeev.



INDUSTRIAL VISIT TO e-ASHWA AUTOMOTIVE PVT. LTD.

A one-day Industrial visit to e-Ashwa Automotive Pvt. Ltd. Meerut Road, Morda, Ghaziabad, Uttar Pradesh was organized for 3rd-year students of ECE department on 12th November 2022.

e-ashwa automotive is one of the leading manufacturers of environment friendly battery operated vehicles. The company specialized in the dealing of e-Rickshaws, e-Loader, e-Auto and e-Scooter, e-Ashwa has a strong team of technical and skilled work force with hands of experience of both automobile as well as the Aviation industry. The company's mission is to dealing e-Rickshaws, e-Loader, e-Auto and e-Scooter of the highest quality offering latest technology, committed customer services and satisfaction. So, that each and every product that rolls out from the plant offers utmost safety, comfort and utility to the driver, as well as the passengers which intern get converted into "Value for Money."

The main objective behind the visit was to make students aware about the:

- Assembly of electronic components in well maintained electric vehicles
- The working of assembly machines
- To know about the efficiency and performance of batteries
- The applications and solution they are using in industries like designing, assembling, cost management are carried out in the company.

Total 35 students went for the industrial visit. They were accompanied by Ms. Hashmat Usmani and Mr. Nitish Vaishishth.





GUEST LECTURE ON “FUTURE SCOPE & JOB OPPORTUNITIES IN ELECTRONICS ENGINEERING”

A Guest Lecture on “Future Scope & Job Opportunities in Electronics Engineering” was organized for students of third year on 13th October 2022. The speaker of the day was Mr. Ziyaul Haque, Senior Engineer and Specialist in Processor Design in Cutting Edge Technology. He is working as a lead engineer in Qualcomm India Private limited.

His working tools involve EDA tools and Software. He apprised the students about Scripting Language, ICC compiler, ICC2, StarRC, Calibre, Primetime, ModelSim, Xilinx, Lab View, Test Stand, Physical Design, Static Timing Analysis etc.

He is the Alumni of ECE Dept from Batch-2015. In this guest lecture, he explained about various career opportunities in the field of Semiconductor and VLSI. The main topics which are important for any Semiconductor Industry were discussed.

The Guest Lecture was very knowledgeable and motivating for all the students.



INDUSTRY INSTITUTE INTERACTION WITH e-ASHWA PVT LTD

An Industry Institute Interaction session was organised on 26th November, 2022 for 3rd year students. A MOU was been signed between Department of ECE and e-Ashwa Pvt Ltd.

The officials from e-Ashwa Pvt Ltd visited the department for the selection of 3rd year students for Paid Internship Program. A written exam was conducted for about 25 students out of which 12 students were shortlisted for the interview.

After the Interview 10 students are of ECE 3rd year were selected for the Paid Internship Program. Congratulations to the selected students!!!



Sudhanshu Yadav



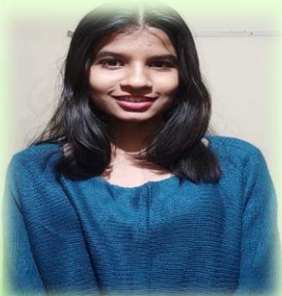
Kaushar Ali Ansari



Sahzad Ansari



Deepak



Soumya Gupta



Angad Chourasia



Anurag



Abhiumanyu Verma



Aditya Kumar



Prashant Choudhary

ONLINE QUIZ ON BIRTH ANIVERSARY OF LATE DR. APJ ABDUL KALAM

An online National Level Quiz was organized by the departmental society AECE (Association of Electronics and Communication Engineers) on the occasion of Birth Anniversary of Late Dr. A.P.J. Abdul Kalam. This quiz was open to all the citizens of India.

The coordinators of this quiz were Ms. Charu Tyagi and Ms. Farah Naz.

Total 740 participants took part in the quiz. E-Certificates were provided to all.

The poster is for an online quiz organized by Raj Kumar Goel Institute of Technology. It features portraits of Dr. A.P.J. Abdul Kalam and a man in a grey shirt. The text includes the institute's name, address, department, and the AECE society. It states the quiz is open for all, held on October 15, 2022, and that e-certificates will be given to those scoring more than 40%. It also lists the coordinators, HOD, and director.

 **Raj Kumar Goel Institute of Technology**
5 km. Stone, Delhi-Meerut Road, Ghaziabad(U.P.)-201003 

Dept. of Electronics & Communication Engineering
(NBA Accredited)

is going to organise a
**Online Quiz in Association with
“AECE” Society**

This quiz is open for all.

 **Date:-15 Oct.,2022**

**E-Certificates will be given to those who score
more than 40%**

Coordinator
Ms. Charu Tyagi
Ms. Farah Naz

HOD
Dr. R.K. Yadav

Director
Dr. D.R.Somashekhar

FACULTY ACHIEVEMENTS

1. Ms. Arathy Rajiv successfully completed Five Days online faculty development program on “Emerging Technologies with applications in Electronics and Communication-2022” during 31 Oct - 4 Nov, 2022, organized by Department of Electronics and Communication Engineering at IMS Engineering College, Ghaziabad, Uttar Pradesh, India.

2. Dr. V. K. Sharma has successfully published two SCI papers. The details are as follows:

(i) **Title of Paper:** FinFET based Low Noise Low Power Chopper Stabilized Capacitively Coupled Amplifier for Biosignal Acquisition System

Journal name: Journal of Nanoelectronics and Optoelectronics

Category: SCI

Month/Year: Oct 2022

(ii) **Title of Paper:** FinFET-based Non-Linear Analog Signal Processing Modules

Journal name: Microelectronics Journal (Elsevier)

Category: SCI

Month/Year: Nov 2022

FACULTY TECHNICAL CORNER

AEROPONICS

The term aeroponics, meaning “working air,” stems from the Greek words for air, “aer,” and labor, “ponos.” This form of hydroponics involves growing plants without the use of soil. Instead, it relies on air to deliver a nutrient-rich mist to the plant’s roots. Plants are held in large vertical grow racks. Essential organic liquid nutrients, such as nitrogen, phosphorus, and potassium, are added to a large water reservoir. These organic nutrients in pure form are more easily digested by the plants, making uptake faster and simpler. Plants do not have to go looking for sustenance as this nutrient-rich mist is delivered directly to the root zone. Indoor grow lights are optimized to fall within certain wavelengths to further promote plant growth. The overall enclosure is kept within certain limits for both temperature and humidity. This system maximizes nutrient absorption while putting less stress on the plant itself, leading to produce that is healthier overall. Plants grown through aeroponics contain higher nutritional value all while having better color, texture, and taste.

Grow it Fast! Grow it Big!

If space, soil quality, and temperature have hindered your gardening ambitions, consider aeroponics!

There are several notable benefits of aeroponic farming.

1. Nutrient uptake: In traditional soil farming, plants compete for nutrients with other organisms in the soil. Since aeroponics is soilless, the roots receive direct nutrient delivery.



Fig: Tomatoes grown by aeroponics



Fig: Onion grown by aeroponics

2. Higher yields: The controlled environment allows nutrient solutions to be tailored to meet the plant's needs. The result is expedient plant growth and higher yields.

3. Low water usage: Aeroponics equipment uses a series of nozzles and sprayers to atomize water into a fine mist inside of a closed-loop system. Compared to other farming methods, aeroponics uses much less water than is typical within food production.

Though aeroponic and hydroponic growing are both soilless growing methods, hydroponic systems submerge the root zone in a soil substitute. This soil substitute can be made out of vermiculite, mineral wool, coconut fiber, peat moss, clay pellets, sand, perlite or other materials. Aeroponic systems suspend the roots of the plants above a water reservoir and use misters to spray a nutrient-rich solution to encourage root growth.

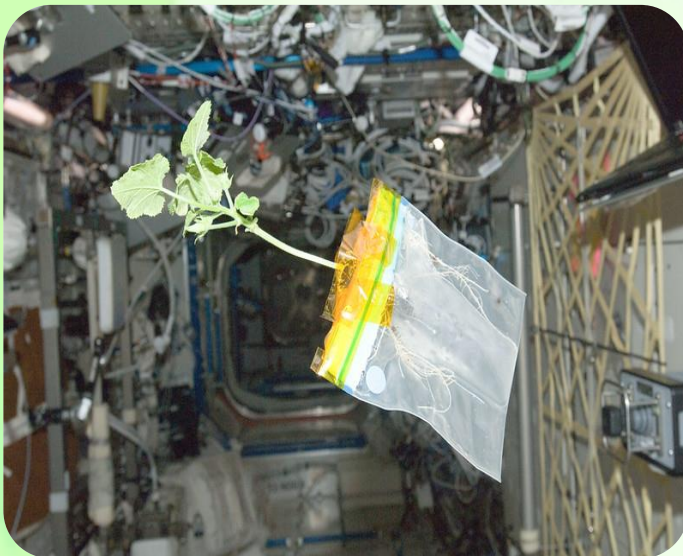


Fig: Aeroponic Farming

Aero-ponics is the modern, innovative and informative technology for plant cultivation without cooperation of the soil. The system is the best plant growing technology in many aspects compared with different cultivation systems. The system is quickly increasing momentum, popularity and is the fastest growing sector of modern agriculture. It would be effectively employed in various countries for vegetable production where natural resources are insufficient.



Ms. Arathy Rajeev
Assistant Professor
ECE

STUDENT TECHNICAL CORNER

5G is the fifth-generation mobile network. It is the new global wireless standard following 1G, 2G, 3G and 4G networks. 5G will enable a new type of network designed to connect virtually anything, including machines, objects, and devices. 5G wireless technology aims to bring fast peak data speeds of several Gbps, ultra-low latency, improved reliability, massive network capacity, increased availability and consistent user experience to more users and Higher performance and improved efficiency enable new user experiences and connect new industries.

Through its ground-breaking 5G economic study, we have determined that the full economic impact of 5G is likely to be realized globally by 2035. This could support a wide range of industries and enable up to \$13.1 trillion in goods and services.

The study found that the 5G value chain alone (which includes OEMs, operators, content creators, app developers and consumers) alone has up to 22.8 million jobs. There are also many new applications that will have to be defined in the future. Only time will tell what the full “5G effect” will be on the economy.

5G is designed to deliver peak data rates of up to 20 Gbps based on IMT-2020 requirements. Qualcomm Technologies' flagship 5G solution, the Qualcomm® Snapdragon™ X65, is designed to achieve peak downlink data rates of up to 10 Gbps.

But 5G is more than just faster. In addition to higher peak data rates, 5G is expected to offer much more network capacity by expanding into new spectrum such as mm Wave.

The 5G is also able to keep data rates consistently high as users move around, while also delivering much lower latency for faster responses and an overall more consistent user experience.

And the new 5G NR cellular network will be supported by a Gigabit LTE coverage base that can provide ubiquitous Gigabit-class connectivity.

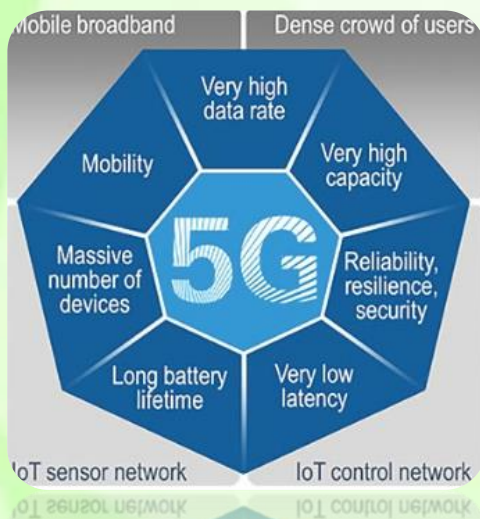
To use the network, you need a new smart phone with 5G. For example, smart phones powered by the Snapdragon 5G mobile platform are 5G ready. Several new mobile phones designed to support 5G are now available, and several network operators around the world support his 5G wireless networks. As the 5G deployment schedule progresses, more smart phones and carrier

subscriptions will become available as 5G technology and his 5G-enabled devices become more mainstream.

In 5G, the ideal "air latency" is of the order of 8–12 milliseconds i.e., excluding delays due to HARQ retransmissions, handovers, etc. Retransmission latency and backhaul latency to the server must be added to the "air latency" for correct comparisons. Verizon reported the latency on its 5G early deployment is 30 ms. Edge Servers close to the towers can probably reduce latency to 10 - 15 ms.

Latency is much higher during handovers; ranging from 50 to 500 milliseconds depending on the type of handover. Reducing handover interruption time is an ongoing area of research and development.

Enhanced Mobile Broadband (eMBB) uses 5G as a progression from 4G LTE mobile broadband services, with faster connections, higher throughput, and more capacity.



This will benefit areas of higher traffic such as stadiums, cities, and concert venues.

Ultra-Reliable Low-Latency Communications (URLLC) refer to using the network for mission critical applications that require uninterrupted and robust data exchange. The short-packet data transmission is used to meet both reliability and latency requirements of the wireless communication networks.



Nikhil Sharma
ECE 4th YEAR

ALUMNI SPEAK

College life is known as one of the most memorable years of one's life. It is entirely different from school life. College life exposes us to new experiences and things that we were not familiar with earlier. For some people, college life means enjoying life to the fullest and partying hard. While for others, it is time to get serious about their career and study thoroughly for a brighter future.

I would take this opportunity to thank RKGIT for putting so much effort into their students and giving them wings to let them fly free in the sky to achieve the height one can ever think of in his/her carrier. The academic culture of ECE dept. was very uniform, which helped me to grow as an individual in all the aspects of life. My journey here in RKGIT was pretty much memorable as well as unforgettable. Thank you RKGIT for the lifetime memories...!!



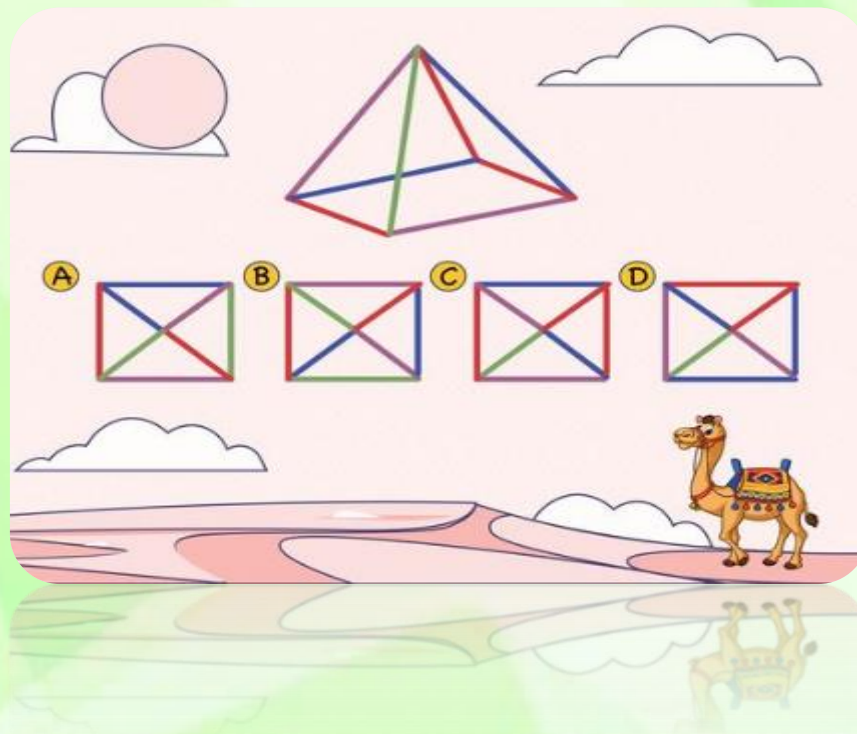
Mr. Abhishek Tyagi
Digicomm Semiconductor Pvt Ltd.
Batch : 2017-2021

BRAIN TEASERS

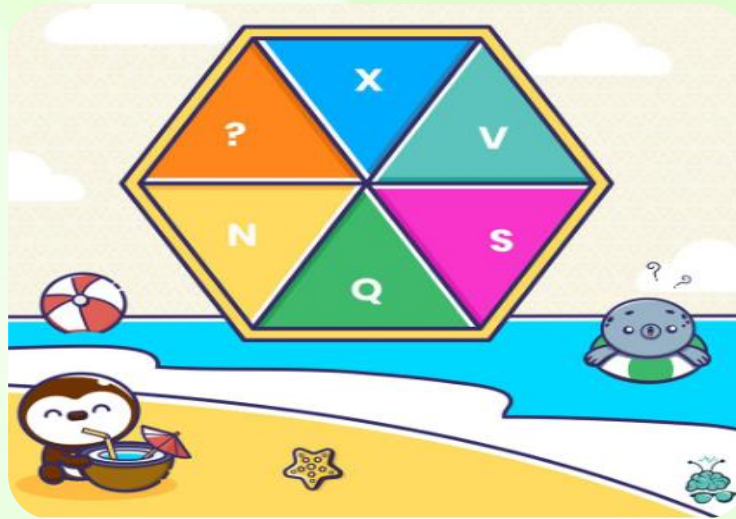
1. Identify the word in the missing space



2. Which one is the TOP VIEW of this Pyramid?



3. Find the character? In pattern below



4. Guess the number?



5. Two trains A and B start from station X and Y towards Y and X respectively. After passing each other they take 4 hours 48 minutes and 3 hour 20 minutes to reach Y and X respectively. If train A is moving at 45 km/hr, then the speed of train B is?

For any suggestion & queries
 Kindly mail us to:
udghoshece@gmail.com