RAJ KUMAR GOEL INSTITUTE OF TECHNOLOGY

5th K.M. STONE , Delhi -Meerut road ,Ghaziabad(U.P.)-201003

UDGHOSH

THE VOICE OF ECE DEPARTMENT

AUGUST 2020 - NOVEMBER 2020

VOLUME-6
ISSUE-5&6

PATRONS

SHRI DINESH GOEL
Chief Patron

DR.D.R SOMASHEKAR
Patron

MR.AKSHAT GOEL
Patron

DR.VIKESH KUMAR
Patron

DR. D.K CHAUHAN
Patron

DR.PUNEET CHANDRA SRIVASTAVA
Patron

DR. LAXMAN PRASAD
Patron

DR. R.K. YADAV
Patron

EDITORS

DR. PAVAN SHUKLA
Editor

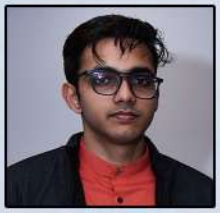
SUMAN KUMARI
Member

MR. KUNAL LALA
Editor

M.S. KIRTANA
Member

MRS.RICHA GUPTA
Editor

SWATI
Member



SHRAYANSH GUPTA
Member

MOHD WASIQ
Member

GARGI VERMA
Member

Contents

- VISION AND MISSION OF DEPARTMENT
- WEBINAR ON OBE
- WEBINAR ON MACHINE LEARNING THROUGH DEEP NEURAL ARCHITECTURES
- QUIZ ON APJ ABDUL KALAM
- NATIONAL LEVEL DIGITAL ELECTRONICS QUIZ UNDER AECE
- FACULTY TECHNICAL CORNER
- STUDENT TECHNICAL CORNER
- ALUMNI SPEAK
- BRAIN TEASERS

VISION OF THE DEPARTMENT

To develop the Department into a full fledged Center of learning in various field of Electronics and Communication Engineering keeping in view the latest development in world.

MISSION OF THE DEPARTMENT

M1: To educate the students in Contemporary Technologies in Electronics and Communication Engineering.

M2: To educate the students in Electronics and Communication Engineering to meet the Industrial needs.

M3: To educate the students in Electronics and Communication Engineering to meet the Societal needs.

WEBINAR ON OUTCOME BASED EDUCATION (OBE)

A webinar on Outcome Based Education was organized by the department on 3rd October 2020. Around 200 participants were present in the webinar.

Outcome-based education will change the course design, the nature of teaching, and the methodology of assessment in today's current context. In this context, the Department of ECE, RKGIT conducted this webinar. The keynote speakers of the program were former professors and ISOs. 9001 Lead Auditor Prof ON Pandey "JSS Academy of Technical Education" Noida.

आरकेजीआईटी में आउटकम बेस्ड एजुकेशन (ओबीई) पर वेबिनार आयोजित

प्रलयंकर संवददाता

गाजियाबाद। आरकेजीआईटी में आउटकम बेस्ड एजुकेशन (ओबीई) पर एक वेबिनार आयोजित किया गया । आउटकम आधारित शिक्षा पाठ्यक्रम के डिजाइन, शिक्षण की प्रकृति, और आज के वर्तमान संदर्भ में मूल्यांकन की पद्धति को बदल देगी। इस संदर्भ में, ईसीई, आरकेजीआईटी विभाग ने इस वेबिनार का आयोजन किया। कार्यक्रम के मुख्य वक्ता भूतपूर्व प्रोफेसर और आईएसओ -9001 लीड ऑडिटर प्रो ओएन पांडे जेएसएस एकेडमी ऑफ टेक्निकल एजुकेशन नोएडा रहे। इस विषय पर बोलते हुए, उन्होंने संकायों का मार्गदर्शन किया और ओबीई के बारे में ज्ञान दिया। संस्थान के निदेशक डॉ डीआर सोमशेखर ने सभी का स्वागत किया। इलेक्ट्रॉनिक्स और संचार विभाग के प्रमुख डॉ आरके यादव ने सभी का धन्यवाद किया। वैभव शर्मा और सचिन त्यागी कार्यक्रम के समन्वयक रहे। स्टेज संचालन कुणाल लाला द्वारा किया गया ।

आरकेजीआईटी के सभी संकाय सदस्य इस वेबिनार के दौरान उपस्थित थे। संस्था के उपाध्यक्ष अक्षत गोयल ने कार्यक्रम की सफलता के लिए सभी को बधाई दी।

Speaking on the subject, he guided the faculties and imparted knowledge about OBEs. The director of the institute, Dr. DR Somasekhar welcomed everyone. Head of the Department of Electronics and Communications Drs. RK Yadav thanked everyone. Mr. Vaibhav Sharma and Mr. Sachin Tyagi were the coordinators of the program.

The event was hosted by Mr. Kunal Lala. The Vice Chairman of the institution Mr. Akshat Goel congratulated everyone for the success of the program

YouTubeLink :https://www.youtube.com/watch?v=7imp41B9tvw

WEBINAR ON MACHINE LEARNING THROUGH DEEP NEURAL ARCHITECTURES

Machine learning (ML) is a type of artificial intelligence (AI) that allows software applications to become more accurate at predicting outcomes without being explicitly programmed to do so. Machine learning algorithms use historical data as input to predict new output values. The Department organized a webinar on "Machine Learning through Deep Neural Architectures" on 22nd September 2020.

आरकेजीआईटी में वेबिनार का आयोजन

एनबीटी न्यूज, गाजियाबाद : आत्मनिर्भर भारत लेक्चर सीरीज के तहत आरकेजीआईटी व एसएसयू ऐन दिल्ली चैप्टर ने वेबिनार का आयोजन किया। वेबिनार के मुख्य वक्ता दिल्ली टेक्नोलॉजिकल यूनिवर्सिटी के प्रफेसर राजीव कपूर थे। उन्होंने मशीन लर्निंग में रिसर्च फील्ड के बारे में जानकारी दी। मुख्य अतिथि प्रफेसर ए.पी. मित्तल, विशिष्ट अतिथि डॉ. एम.सी. कश्यप व समीर कौशिक रहे।

The keynote speaker for the event was Mr. Rajiv Kapoor (Professor, DTU). This webinar was jointly organized by RKGIT and SSUN Delhi Chapter under Aatm Nirbhar Bharat Lecture Series. Total number of participants were around 470. The coordinators of the program were Mr. Kunal Lala and Mr. Anuj Kumar.

QUIZ ON APJ ABDUL KALAM

A Quiz -"Do you know Kalam?" was organised by ECE Dept., RKGIT Ghaziabad. The coordinator of the event was Ms. Farah Naaz. A total number of 1787 Indian Citizens had participated from all over the country.

This quiz was organised on 15 Oct., 2020 on the occasion of 89th Birth Anniversary of our former President Late Dr. APJ Abdul Kalam.

It was open to all the Indian Citizens and includes 20 MCQ questions, which includes some general questions about Dr. APJ Abdul Kalam and those participants who scored 40% or more got Certificate. As we all know that, A.P.J. Abdul Kalam, in full Avul Pakir Jainulabdeen Abdul Kalam was born on October 15, 1931 in Rameswaram, India. scientist and politician who played a leading role in the development of India's missile and nuclear weapons programs. A.P.J. Abdul Kalam served as president of the Republic of India from 2002 to 2007. As president, Kalam promoted the advancement of the national nuclear weapons program. Kalam also devised a 20-year action plan to achieve economic growth through technological development in India.

In 2002 India's ruling National Democratic Alliance (NDA) put forward Kalam to succeed outgoing President Kocheril Raman Narayanan. Kalam was nominated by the Hindu nationalist (Hindutva) NDA even though he was Muslim, and his stature and popular appeal were such that even the main opposition party, the Indian National Congress, also proposed his candidacy.

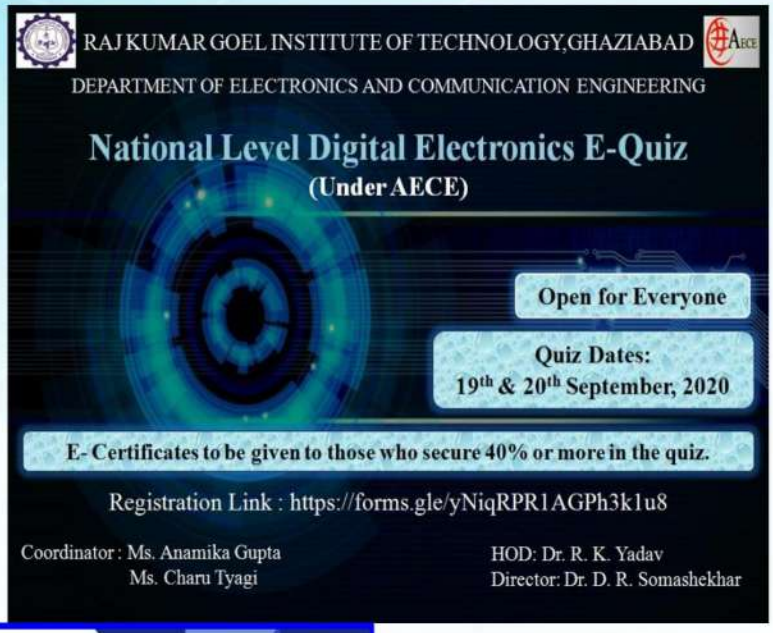
He remained committed to using science and technology to transform India into a developed country.

NATIONAL LEVEL DIGITAL ELECTRONICS QUIZ UNDER AECE

Department of Electronics and Communication Engineering conducted a virtual assessment program on National Level Digital Electronics Quiz under AECE.

E-certificate was given to those who scored 40% or more.Quiz was open for all Faculty Members, Research scholars & UG/PG students.

More than 2000 participants took part in the quiz. The coordinators were Ms. Charu Tyagi and Ms. Anamika Gupta.



Raj Kumar Goel Institute of Technology

(ISO 9001:2015 Certified)

5th - Km. stone Delhi Meerut Road, Ghaziabad (U.P.- 201003) Tel: (0120) 278840

Certificate id- GNBO3W-CE000034

Certificate of Appreciation

This certificate is proudly presented to *Charu Tyagi* from *Rkgit* for the appreciable performance in "*National Level Digital Electronics*" E-quiz under AECE with a score 87% on 19-Sep-2020 organized by Department of Electronics & Communication Engineering, Raj Kumar Goel Institute of Technology Ghaziabad (U.P.), Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow.

Ms. Anamika Gupta
Coordinator

Dr. R.K Yadav
HOD,ECE

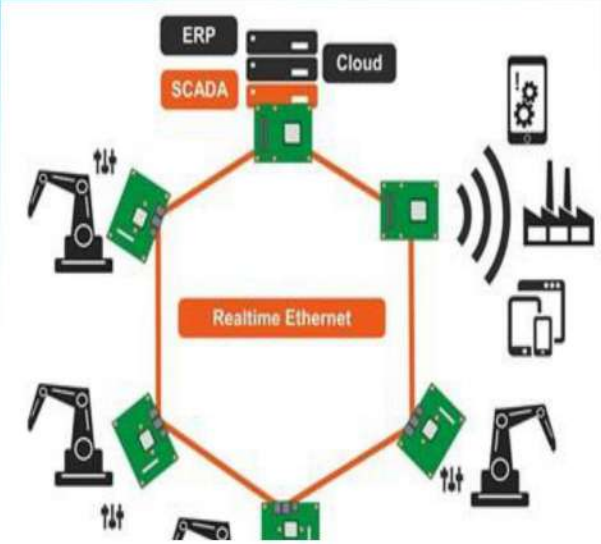
Dr. D.R. Somashekar
Director

FACULTY TECHNICAL CORNER

TIME SENSITIVE NETWORKING

Today, unlike in the past, connected industrial devices are expected to communicate directly with enterprise applications.In order to gain detailed and differentiated insight into their own production operations, some companies are even running these applications directly on industrial end devices.

Whether the purpose is real-time analysis or full-blown AI algorithms, the integrity of these applications is quickly compromised if their components are not optimally matched It is important to guarantee that devices and systems can continue to perform their core functions in real-time. Modern industrial engineers therefore need a concept that allows the integration of IT and OT technologies in a single device. Such a solution platform should ideally take advantage of standard IT networking and data processing while being deterministic, secure and reliable.



An important component for the realization of such real-time data communication networks in the industrial Internet of Things (IIoT) is time-sensitive networking (TSN). TSN technology comprises a number of standards, such as IEEE 802.1q for virtual LANs via Ethernet, time aware shaping (TAS) as standardized in IEEE 802.1Qbv for guaranteed minimum transmission latency, or real-time synchronization via the precision time protocol (PTP) defined in IEEE 1588.

PTP is responsible for time synchronization between nodes. A master sets the time and the individual slaves synchronize their clocks with two-digit nanosecond accuracy. In the case of the I219 Intel Ethernet interface, the clock synchronization is based 100% on this standard component, giving it the dual advantage of being cast in hardware and not requiring any additional proprietary applications or dedicated hardware.

Ms. **Richa Gupta**
AP, ECE

STUDENT TECHNICAL CORNER

NAVIGATING THE PATHWAY TO 5G

Is 2021 set to be the year that 5G delivers? With the construction and upgrading of base stations and other infrastructure and the roll out of mobile 5G devices, are we about to see the realization of the many promises associated with the technology?

Taiwan Semiconductor Manufacturing Co. (TSMC), for example, is gearing up to meet strong demand for 5G mobile devices like Apple's new iPhones and high-performance computing. As the main chipmaker for Apple's iPhones, it has been investing heavily in new equipment, in anticipation of strong demand for 5G smartphones.

"Covid-19 is accelerating digital transformation, while 5G and HPC applications continue to drive demand," said the company's Chief Executive Officer C.C. Wei at a media briefing and he said that, along with Apple, more manufacturers were set to deliver 5G devices going into next year.

Apple recently unveiled its latest iPhone line-up and expects to build at least 75 million 5G iPhones this year. With Apple now entering the 5G handset market there are growing expectations that it will help to drive significant interest and adoption around this next generation of cellular technology.

" Market players have anticipated 5G as being a major growth driver," said GF Securities analyst Jeff Pu and, by 2022, around 750m 5G smartphones are expected to have been shipped.

According to figures from Qualcomm around 2.8bn 5G connections are expected by 2025 as more businesses see the benefits associated with 5G.

Shrayansh Gupta
ECE-4th Year

ALUMNI SPEAK

It is my pleasure to place on record the wonderful years I had under the auspices of ECE Department at Raj Kumar Goel Institute of Technology, Ghaziabad. College life is an important phase in a student's academic journey after the numerous formative years of schooling.

While undergoing graduation, I cherished the feeling of studying at an Institute, which focused on career enhancements along with overall skill development with the seamless mix of academics and extracurricular activities. The professors are dedicated experts in their respective subjects and are talented, committed and genuinely caring. Special thanks to the faculty who supported the most and helped me in every situation Mr.Kunal Lala, thank you for everything.

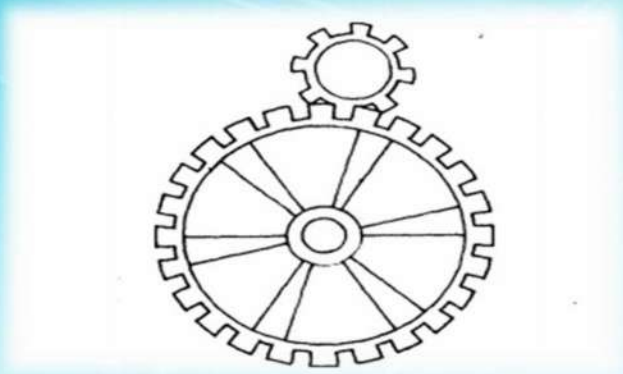
I would always be grateful to RKGIT for giving me a multi-dimensional learning by providing the apt mix of academics, industry exposure, attitude and leadership.

RKGIT made me focused and experiences gained during the course of 4 years have contributed to my professional growth as well in later years. RKGIT has nurtured my aspirations and laid the foundations to realize those aspirations. The peer group at RKGIT was intellectually stimulating, and with some, I have made friends for life.

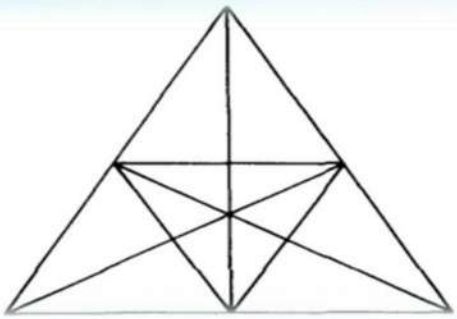
KINJAL SINHA
Engineer-II
Vivo Mobile India Pvt Ltd
Batch: 2016-2020

BRAIN TEASERS

1. A Problem of Cog-wheels Here is a cog-wheel that has eight teeth. It is coupled with a cog-wheel of 24 teeth. Can you tell how many times the small cog-wheel must rotate on its axis to circle around the big one?



2. Count the Triangles:



3. Is this a magic square? If so why?

1	12	10
15	2	4
8	5	3

4. At this moment it is 9 P.M. Can you …. tell me what time it will be 23999 999 992 hours later?

5. What do you think the following pattern is? 6, 24, 60, 120, 210, 336