



ROHINI

COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE and affiliated to Anna University, (An ISO Certified Institution)

RONIX 2K21
(2020-2021)



DEPARTMENT OF

ELECTRONICS AND COMMUNICATION ENGINEERING

This magazine is designed by the Department of Electronics and Communication Engineering for developing and cultivating the students in literary and study habits.

RONIX 2K21

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MESSAGES

From the Desk of the Chairman, RCET

“Learning gives creativity, creativity leads to thinking, thinking provides knowledge, knowledge makes you great” - **Dr.A.P.J.Abdul Kalam.**



These words by - Dr.A.P.J.Abdul Kalam perfectly describe our aim at Rohini College of Engineering and Technology. Our aim is to teach students to LEARN, not just STUDY. Hence, we strive to travel beyond the boundaries of mere books.

I can proudly say that Rohini College of Engineering and Technology is the most modern and sophisticated multidisciplinary institution, imparting quality education and providing a wide and varied arena for the staff and students to showcase their academic and extracurricular talents.

RCET has made a tremendous progress in all areas crossing several milestones within a very short span of time. I feel happy to know that the students and faculty of ECE department of RCET bringing out the technical magazine RONIX 2k21.

The role of a department magazine is therefore vital in promoting what an institution offers. It brings out into the open things hitherto unrevealed. It brings to light the names of the unsung heroes and their mighty deeds.

I am proud to say that once our students step in RCET, they step out with self- confidence and knowledge to face all future endeavors with full conviction. Fly in the plane of Ambition, Land in the Airport of Success, the luck is yours the wish is mine. May your future always shine. Good Luck.

Cordially,
Shri.K.NEELA MARTHANDAN
Chairman Rohini Groups.



PRINCIPAL's MESSAGE



Dear All,

“All thinks are within you”

Good to see an another magazine RONIX 2k21 from the department of electronics and Communication Engineering.

I honor the peoples those who put hardwork to complete the magazine for the successful publication

I greet the Students for their great efforts and contribution in RONIX 2k21. Education does not happen just within the four walls of a classroom, but without too – in the corridors, the playgrounds and every corner of the campus.

I extend my wishes to the diligent Faculties, the backbone of this magazine who spent their time and expertise to make the students believe in themselves.

Best Wishes,

Dr. R. RAJESH, M.E., Ph.D.

Principal

Rohini College of Engineering & Technology
Palkulam, Kanyakumari.

HOD's MESSAGE



Dear All,

Welcome to the Department of Electronics and Communication Engineering at ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY, KANYAKUMARI.

We started our journey in the year of 2009. The primary focus of our department is to impart technical knowledge to students, promote their problem solving and innovative skills in the growing technologies. We have a long history in educating young minds, conducting innovative research, and offering professional services to local and overseas communities.

Our Department provides a healthy environment to students and faculties to carry out inter department collaborative research in areas like VLSI Design, internet of things, robotics, etc. Faculty members have excellent academic credentials and are highly rewarded. Students are also given opportunities to involve in IEEE Student chapter activities, which help students gain confidence and become skilled engineering professionals. Students are provided internship facilities in organizations like BSNL, DRDO, and ECIL etc. The department conducts various workshops, expert talks and additional training programs on recent trends in Electronics and Communication Engineering in collaboration with industries for the benefit of faculty and students. The student projects are conducted in-house with the guidance of department faculty and industrial trainers.

Our college website provides an overview of the academic programs, research activities of our department, research facilities, profiles of faculty members, and details of student activities. Many of our graduates now occupy senior positions in the industry and community.

Each year, we also invite various departmental speakers, academicians and practitioners in a variety of forums, in addition to the numerous and unparalleled public events. With all these inputs one can find our students very hardworking, practical-oriented and highly skilled to work in any environment. We are encouraged to see many industries coming back to our department, which reinforces our belief in the effectiveness of our students and their suitability to the dynamic corporate world.

Best Wishes,

Dr.S.MOHANALAKSHMI, M.E., Ph.D.

HOD / ECE/RCET

FROM THE DESK OF EDITOR



The Creative minds of the Electronics and Communication department of Rohini College of Engineering and Technology have come together to present what they have always wanted to and we congratulate every student who has given their contribution

They can't be appreciated enough and we can't explain how difficult it was to compile all their accomplishments into a single magazine. We take pride in showing you of how our very own Rohini students have imaginations which spread across the horizons.

We would like to thank the Management and all the staffs who have supported the '*RONIX 2K21*' initiative and for having trust in the Editorial board by giving us full freedom to choose the contents and design for our magazine. The magazine should serve as a pillar of motivation for every other student who is yet to emerge as an Achiever and to carry the legacy of *RONIX 2K21*. The students who follow in the next academic years, we advise you to do the same. Go Mad, B.E. productive but at the same time B.E. creative!

Best Wishes,
Mr. BENESH SELVA NESAN, AP/ECE
Associate Editor

INSTITUTION VISSION

To be an academic institute of continuous excellence towards education and research in rural regime and provide service to nation in terms of nurturing potentially higher social,ethical and engineering companion graduands.

INSTITUTION MISSION

To foster and promote technically competent graduands by imparting the state of art engineering education in rural regime.

To enunciate research assisted scientific learning by dissemination of knowledge towards science, agriculture, industry and national security.

DEPARTMENT VISION

To promote Ethical and Innovative Electronics and communication Engineers through excellence in teaching, training and research so as to contribute to the advancement of the rural society and mankind.



DEPARTMENT MISSION

To impart high quality technical education and exposure to recent trends in the industry, to ensure that the students are moulded into competent Electronics and communication engineers.

To inculcate research capabilities and exemplary professional conduct to lead and to use technology in agriculture, industry and national security for the progress of our country.

About



Rohini College of Engineering and Technology-

A temple of learning, is an ISO certified institution was founded by the great Industrialist and Philanthropist, Shri.

K.Neela Marthandan. The main objective of our college is to advance the knowledge base of the engineering professions and to influence the future directions of engineering education and practice.

RCET –

Best Engineering College in Nagercoil, Kanyakumari District. We believe not only in educating the students, but also in grooming characters, with moral and ethical values to build the nation. Since the beginning, the college has been providing world-class facilities & infrastructure in education and learning.

The emphasis is on transformational leadership rather than directional leadership. We aim to establish new trends, introduce innovative training methodologies, and thus guide students towards the road to success.

ABOUT DEPARTMENT

The primary objective of the department is to impart quality education and to deepen the knowledge and skills of the students in the basic concepts and theories in various areas of Electronics and Communication Engineering.

SCOPE :

Electronics is now part of our everyday life, from the mobile phones to televisions, computers and even the high-end advanced satellites that are helping us to lead a smooth life. Ever since the evolution of technology, Electronics and Communication has become an essential discipline which is required by all the industries. Hence, Electronics and Communication engineering is one of the most sought after branches by students. Electronics and Communication Engineering has also penetrated into other areas like healthcare, instrumentation, automation, remote sensing, signal processing etc.

So students pursuing electronics and communication engineering have a lot of scope in varied industries. Taking the educational scope and career choices into consideration, here are the popular areas of study in the field of Electronics and Communication.

- Internet of Things
- Robotics
- Mechatronics
- Embedded System
- Digital Image Processing
- Artificial Intelligence and Machine Learning
- 5G Technology

Engineer-Vs-Manager-Funny-Hot-Air-Balloon-Story



Once a man was flying high in hot air balloon and realized that he is lost. He reduced height of his hot air balloon to see if he can find someone. At a distance he saw a man down below.

Seeing that man, he lowered his balloon more near the ground level and shouted, “Excuse me, can you help me?? I had promised my friend to reach his place half hour ago but now i don’t know where i am going.”

Man standing below replied, “Yes. I can help. I see that you are in hot air balloon, approximately 30 feet above ground. You positioning is about 40-degree latitude and -60-degree longitude.”

Man in balloon interrupted and questioned, “You must be an engineer.??”

Man on ground replied, “Yes. I am but how do you know?”

Man in balloon replied with a smirk on his face, “Well. Everything you said was technically correct but i don’t know what to do with that information as it not going to get me know how i can find my way. More over Fact is that i am still lost.”

Man below questioned, “You must be a Manager.” Man in balloon was surprised and said, “Well. Yes, i am but how do you know that i am a manager?”

Man on ground replied, “See. You were lost. You don’t know where you are and where you going. You made a promise that you have no idea how to keep.

Now when you need help and you expect me solve your problem. The fact was that you were lost and you are still lost but now it is Somehow my Fault.”

By,
ABIRAMI N
IV Yr ECE’A’

Evolution Of Computer

1. FIRST GENERATION COMPUTER: Vacuum Tubes (1940-1956)

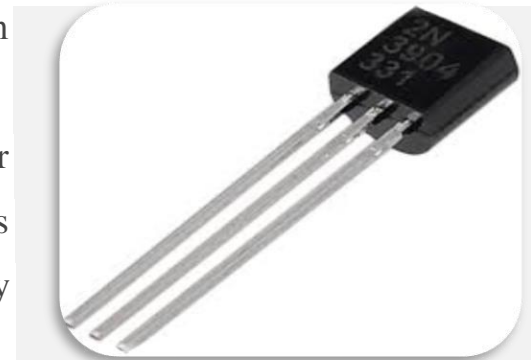
The first generation of computers is characterized by the use of “Vacuum tubes” and it was developed in 1904 by the British engineer “**John Ambrose Fleming**”. A vacuum tube is an electronic device that is used to controls the flow of electric current in a vacuum. It is used in CRT(Cathode Ray Tube) Tv, Radio, etc.



2. SECOND GENERATION COMPUTER: Transistors (1956-1963)

The second generation of computers is characterized by the use of “transistors” and it was developed in 1947 by three American physicists “John Bardeen, Walter Brattain, and William Shockley”.

A transistor is a semiconductor device used to amplify or switch electronic signals or opens or close a circuit. It is invented in bell labs, The transistors become the key ingredient of all digital circuits, including computers.



3. THIRD GENERATION COMPUTER: Integrated Circuits (1964-1971)

The third generation of computers is characterized by the use of “Integrated Circuits” and it was developed in 1958 by “**Jack Kilby**”. The integrated circuit is a set of the electronic circuit on a small flat of pieces of semiconductor that is normally known as silicon. The transistors were miniaturized and placed on silicon chips which are called semiconductors, which drastically increased the efficiency and speed of the computers.



4.FOURTH GENERATION OF COMPUTER: Microprocessor (1971-Present)

The fourth generation of computers is characterized by the use of “Microprocessor”. It was invented in the 1970s and It is developed by four inventors named are “**Marcian Hoff, Masatoshi Shima, Federico Faggin, Stanley major**”. The first microprocessor named was “**Intel 4004**” CPU, it was the first microprocessor was invented.



5.FIFTH GENERATION OF COMPUTERS (Present and beyond)

These generations of computers were based on **AI**(Artificial Intelligence) technology. Artificial technology is the branch of computer science which concerned with making computers behave like humans and allow the computer to take its own decision currently, no computers exhibit full artificial intelligence (that is, are able to simulate human behavior).



By,

ASHIKA K

IV Yr ECE 'A'

The Engineer-Story

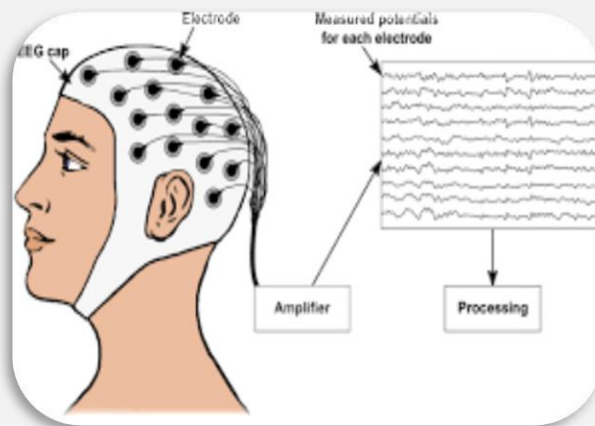
There once was a young engineer, who having worked for several years, decided that he and his family should have a weekend getaway place. He searched the surrounding country, and found a lovely spot with frontage on a small river. They built a cabin, and began spending time there every chance they got. The kids loved it, and friends came for the quiet and fishing.

The engineer, however, wanted something unique for his cabin. He had been an award-winning pole vaulter in college. He therefore built a set of poles with a crosspiece, and a mulched run. He bought a new carbon fiber vaulting pole, new shoes, and was set. He would set off down the run, plant his pole, soar over the crosspiece, and land in the river with a satisfying splash. What a great way to spend a hot afternoon. He tried to teach a few friends to vault, with no success. He enjoyed his cabin for years, and went out early in the spring one year. It had been a very wet winter, lots of rain afterward. When the family arrived, the river was up and flowing at a good clip, with twice the usual current flowing. The engineer was determined to enjoy a few vaults into the water, but his wife didn't think it was safe. But, he was a good swimmer, and proceeded to have a go at it. His run and jump were flawless, he hit the water in good form, but upon surfacing, he was swept downstream and disappeared. His body was found later that day, tangled in streamside debris. It was a sad end for the engineer, and the family sold the cabin, with no desire to return to the scene of such tragedy.

Our lamented engineer was a Civil Engineer. Had he consulted one of his Electrical Engineer brethren, he would have been warned that "It's not voltage that kills you, it's the current!"

By,
HARISH KUMAR V
IV Yr ECE 'A'

EEG (Electroencephalogram)



An electroencephalogram (EEG) is a test used to evaluate the electrical activity in your brain. It can help detect potential problems with brain cell communication.

An EEG tracks and records brain wave patterns. Small flat metal discs called electrodes are attached to your scalp with wires. The electrodes analyze the electrical impulses in your brain and send signals to a computer that records the results.

The electrical impulses in an EEG recording look like wavy lines with peaks and valleys. These lines allow doctors to quickly assess whether there are abnormal patterns. Irregularities may be a sign of seizures or other brain disorders.

By,

GODWIN VINISHA T

IV Yr ECE 'A'

Router



A **router** is a networking device that forwards data packets between computer networks. Routers perform the traffic directing functions between networks and on the global Internet. Data sent through a network, such as a web page or email, is in the form of data packets. A packet is typically forwarded from one router to another router through the networks that constitute an internetwork (e.g. the Internet) until it reaches its destination node.

A router is connected to two or more data lines from different IP networks.¹ When a data packet comes in on one of the lines, the router reads the network address information in the packet header to determine the ultimate destination. Then, using information in its routing table or routing policy, it directs the packet to the next network on its journey.

The most familiar type of IP routers are home and small office routers that simply forward IP packets between the home computers and the Internet. More sophisticated routers, such as enterprise routers, connect large business or ISP networks up to the powerful core routers that forward data at high speed along the optical fiber lines of the Internet backbone.

Routers can be built from standard computer parts but are mostly specialized purpose-built computers. Early routers used software-based forwarding, running on a CPU. More sophisticated devices use application-specific integrated circuits (ASICs) to increase performance or add advanced filtering and firewall functionality.

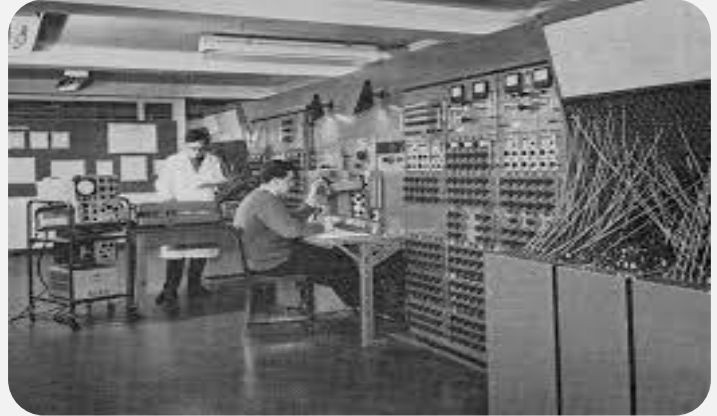
By,

APARNA S

IV Yr ECE 'A'

History of engineering

The first engineer known by name and achievement is Imhotep, builder of the Step Pyramid at Şaqqārah, Egypt, probably about 2550 BCE. Imhotep's successors—Egyptian, Persian, Greek, and Roman—carried civil engineering to remarkable heights on the basis of empirical methods aided by arithmetic, geometry, and a smattering of physical science. The Pharos (lighthouse) of Alexandria, Solomon's Temple in Jerusalem, the Colosseum in Rome, the Persian and Roman road systems, the Pont du Gard aqueduct in France, and many other large structures, some of which endure to this day, testify to their skill, imagination, and daring.



Of many treatises written by them, one in particular survives to provide a picture of engineering education and practice in classical times: Vitruvius's *De architectura*, published in Rome in the 1st century CE, a 10-volume work covering building materials, construction methods, hydraulics, measurement, and town planning.

In construction, medieval European engineers carried technique, in the form of the Gothic arch and flying buttress, to a height unknown to the Romans. The sketchbook of the 13th-century French engineer Villard de Honnecourt reveals a wide knowledge of mathematics, geometry, natural and physical science, and draftsmanship.

In Asia, engineering had a separate but very similar development, with more and more sophisticated techniques of construction, hydraulics, and metallurgy helping to create advanced civilizations such as the Mongol empire, whose large, beautiful cities impressed Marco Polo in the 13th century.

Civil engineering emerged as a separate discipline in the 18th century, when the first professional societies and schools of engineering were founded. Civil engineers of the 19th century built structures of all kinds, designed water-supply and sanitation systems, laid out railroad and highway networks, and planned cities. England and Scotland were the birthplace of

mechanical engineering, as a derivation of the inventions of the Scottish engineer James Watt and the textile machinists of the Industrial Revolution. The development of the British machine-tool industry gave tremendous impetus to the study of mechanical engineering both in Britain and abroad.

The growth of knowledge of electricity—from Alessandro Volta’s original electric cell of 1800 through the experiments of Michael Faraday and others, culminating in 1872 in the Gramme dynamo and electric motor (named after the Belgian Zénobe-Théophile Gramme)—led to the development of electrical and electronics engineering. The electronics aspect became prominent through the work of such scientists as James Clerk Maxwell of Britain and Heinrich Hertz of Germany in the late 19th century. Major advances came with the development of the vacuum tube by Lee de Forest of the United States in the early 20th century and the invention of the transistor in the mid-20th century. In the late 20th century electrical and electronics engineers outnumbered all others in the world.

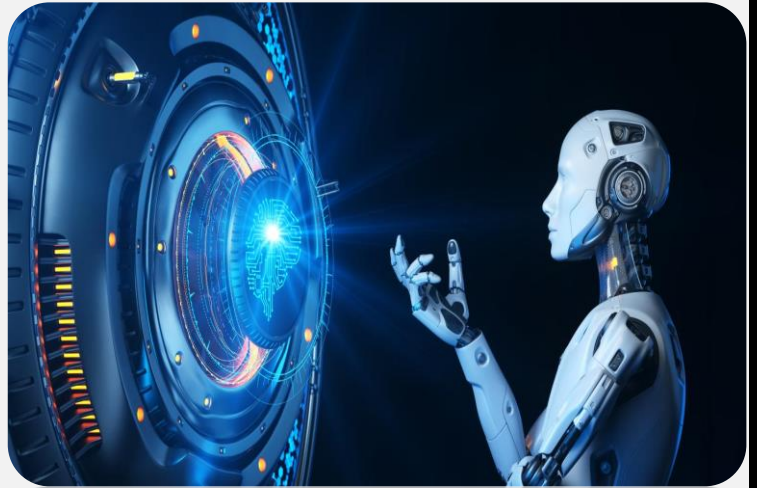
By,
RAMYA
III Yr ECE “B”

ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) is intelligence—perceiving, synthesizing, and inferring information—demonstrated by machines, as opposed to intelligence displayed by non-human animals and humans. Example tasks in which this is done include speech recognition, computer vision, translation between (natural) languages, as well as other mappings of inputs. The Oxford English Dictionary of Oxford University Press defines artificial intelligence as:

The theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

AI applications include advanced web search engines (e.g., Google), recommendation systems (used by YouTube, Amazon and Netflix), understanding human speech (such as Siri and Alexa), self-driving cars (e.g., Waymo), automated decision-making and competing at the highest level in strategic game systems (such as chess and



Go). As machines become increasingly capable, tasks considered to require "intelligence" are often removed from the definition of AI, a phenomenon known as the AI effect. For instance, optical character recognition is frequently excluded from things considered to be AI, having become a routine technology.

Artificial intelligence was founded as an academic discipline in 1956, and in the years since has experienced several waves of optimism, followed by disappointment and the loss of funding (known as an "AI winter"), followed by new approaches, success and renewed funding. AI research has tried and discarded many different approaches since its founding, including simulating the brain, modeling human problem solving, formal logic, large databases of knowledge and imitating animal behavior. In the first decades of the 21st century, highly mathematical-statistical machine learning has dominated the field, and this technique has proved highly successful, helping to solve many challenging problems throughout industry and academia.

By,
SANGEETHA K
IV Yr ECE 'A'

Facts About Engineering, Science and Technology

1. 220 million tons of old computers and other technological hardware are trashed in the United States each year.
2. A diamond will not dissolve in acid. The only thing that can destroy it is intense heat.
3. According to Moore's Law, microchips double in power every 18 to 24 months.
4. Albert Einstein won the Nobel Prize for physics in 1921.
5. Although the famous first flight at Kitty Hawk took place on December 17, 1903, the secretive Wright Brothers did not demonstrate the technology to the broader public until August 8, 1908.
6. As of early 2009, there have been 113 space shuttle flights since the program began in 1981.
7. Bill Clinton's inauguration in January 1997 was the first to be webcast.
8. Chuck Yeager blasted through the sound barrier at Edwards Air Force Base in 1947.
9. Einstein received the Nobel Prize for Physics in 1921 for his explanation of the photoelectric effect, the phenomenon by which electrons are knocked out of matter by electromagnetic radiation such as light.
10. In 1901, the Spanish engineer Leonar do Torres-Quevedo was responsible for the earliest developments in the remote control with his Telekine that was able to do "mechanical movements at a distance."
11. In their Miyagi, Japan laboratories, beginning in 1924, Professor Hidetsugu Yagi and his assistant, Shintaro Uda, designed and constructed a sensitive and highly-directional antenna using closely-coupled parasitic elements. The antenna, which is effective in the higher-frequency ranges, has been important for radar, television, and amateur radio.
12. Marie Curie was the first person to win two Nobel Prizes for Science
13. No one has received more U.S. patents than Thomas Edison – 1,093 to be exact.
14. On 11 July 1962, France received the first transatlantic transmission of a TV signal from a twin station in Andover, Maine, USA via the TELSTAR satellite.
15. On 9 June 1906 the Winnipeg Electric Railway Co. transmitted electric power from the Pinawa generating station on the Winnipeg River to the city of Winnipeg at 60,000 volts. It was the first year-round hydroelectric plant in Manitoba and one of the first to be developed in such a cold climate anywhere in the world.

By,
ANUSHIYA M
IV Yr ECE 'A'

Engineering Poem

It's through lot of pain and hardwork,
Using lathe machine to do metalwork,
Struggles in doing all the piece work,
The individual work and group work,
Before the product gets a trademark.

Day in day out we advance our skills,
As machines cuts, shapes and drills,
We work with passion to pay our bills,
The bad smell when the coolant spills,
Daily we operate a machine that kills.

As we wear the helmets on our heads,
We operate with dirty and oiled hands,
After plain turning we make metal bends,
Cut the metal into pieces 'n' make threads,
And take rest when the whole project ends.

By,
PRIYA DHARSHINI B
IV ECE B

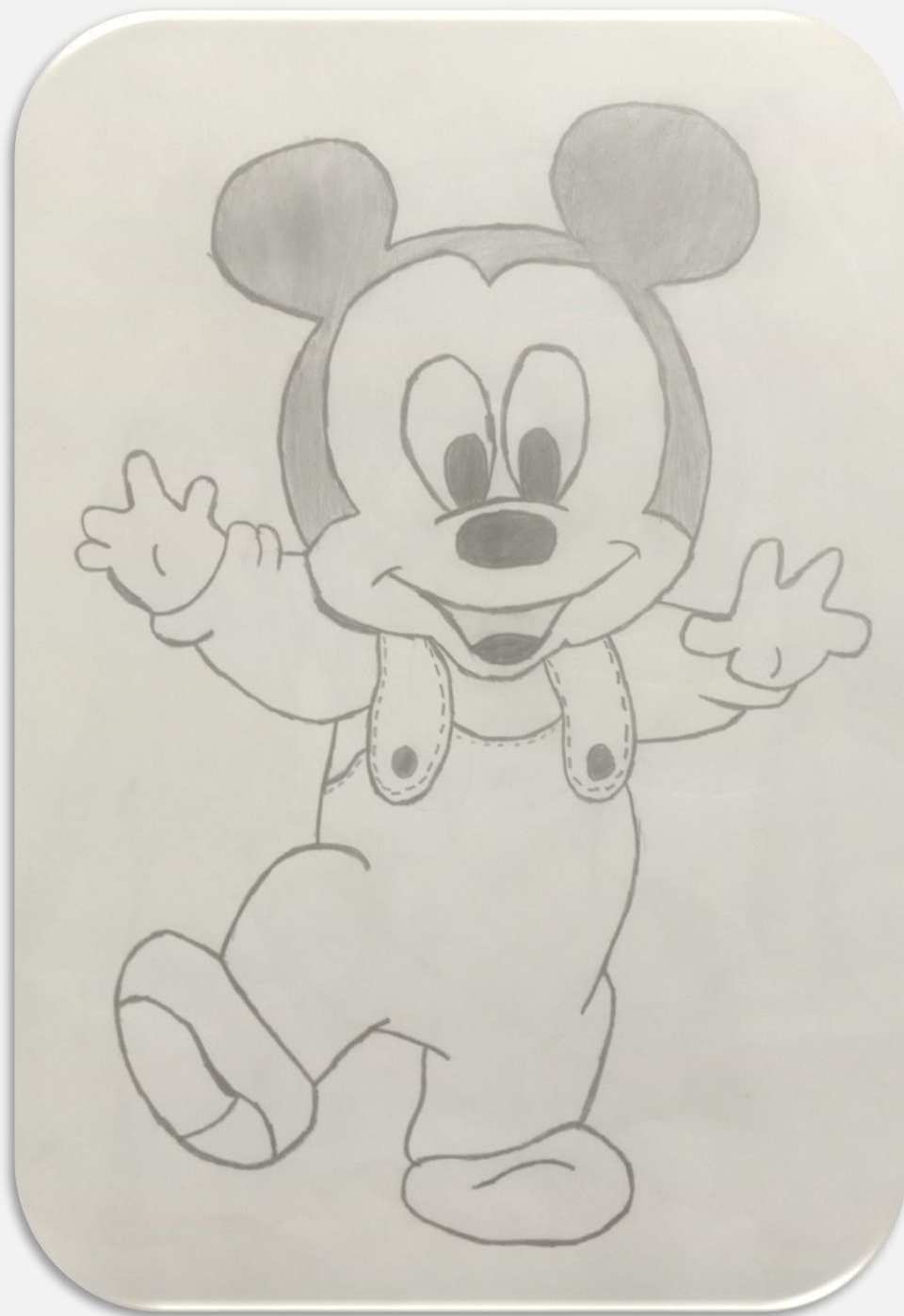
General Knowledge Quiz

1. Which Dutch painter cut off part of his ear?
Vincent van Gogh
2. In which country is the Great Barrier Reef?
Australia
3. What color is chlorophyll?
Green
4. What is the capital of Thailand?
Bangkok
5. How many points are scored for a touchdown in American football?
Six
6. Which soft green egg-shaped fruit comes from New Zealand?
The Kiwi fruit
7. Who was the youngest Beatle?
George Harrison
8. What language do the people of Brazil speak?
Portuguese
9. Who lives at number four, Privet Drive?
Harry Potter
10. In which city is the cathedral of Nôtre Dame?
Paris
11. What color is the middle stripe of the French flag?
White
12. Who wrote a famous diary while hiding from the Nazis in Amsterdam?
Anne Frank
13. Who directed, Jaws, Raiders of the Lost Ark, and ET?
Steven Spielberg
13. Who was the leading actress in Sleepless in Seattle and You've Got Mail?
Meg Ryan
15. What is the family name of JFK?
Kennedy

16. How many players are there in a baseball team?
Nine
17. What is the national sport of Japan
Sumo wrestling
18. In which country was Buddha born?
Nepal
19. What nationality was Picasso?
Spanish
20. Whose nose grew longer every time he told a lie?
Pinocchio
21. On what date did Osama Bin Laden's Al Qaeda organization attack
America?
September 11th
22. In which galaxy do we live?
The Milky Way
23. In which year did the Titanic sink?
1912
24. Who painted The Scream?
Edvard Munch
25. Who directed The Seven Samurai?
Akira Kurosawa
26. What is the smallest breed of dog?
The Chihuahua
27. Which French wine is released every year on the third Thursday of
November?
Beaujolais nouveau
28. What does Alice follow down a hole into Wonderland?
The White Rabbit
29. On what date do the people of England eat Christmas dinner?
December 25th
30. Who sang Yellow Submarine?
The Beatles

By,
JESI T
IV Yr ECE 'A'

VISUAL TREAT



By,
DEEPA M
IV Yr ECE 'A'



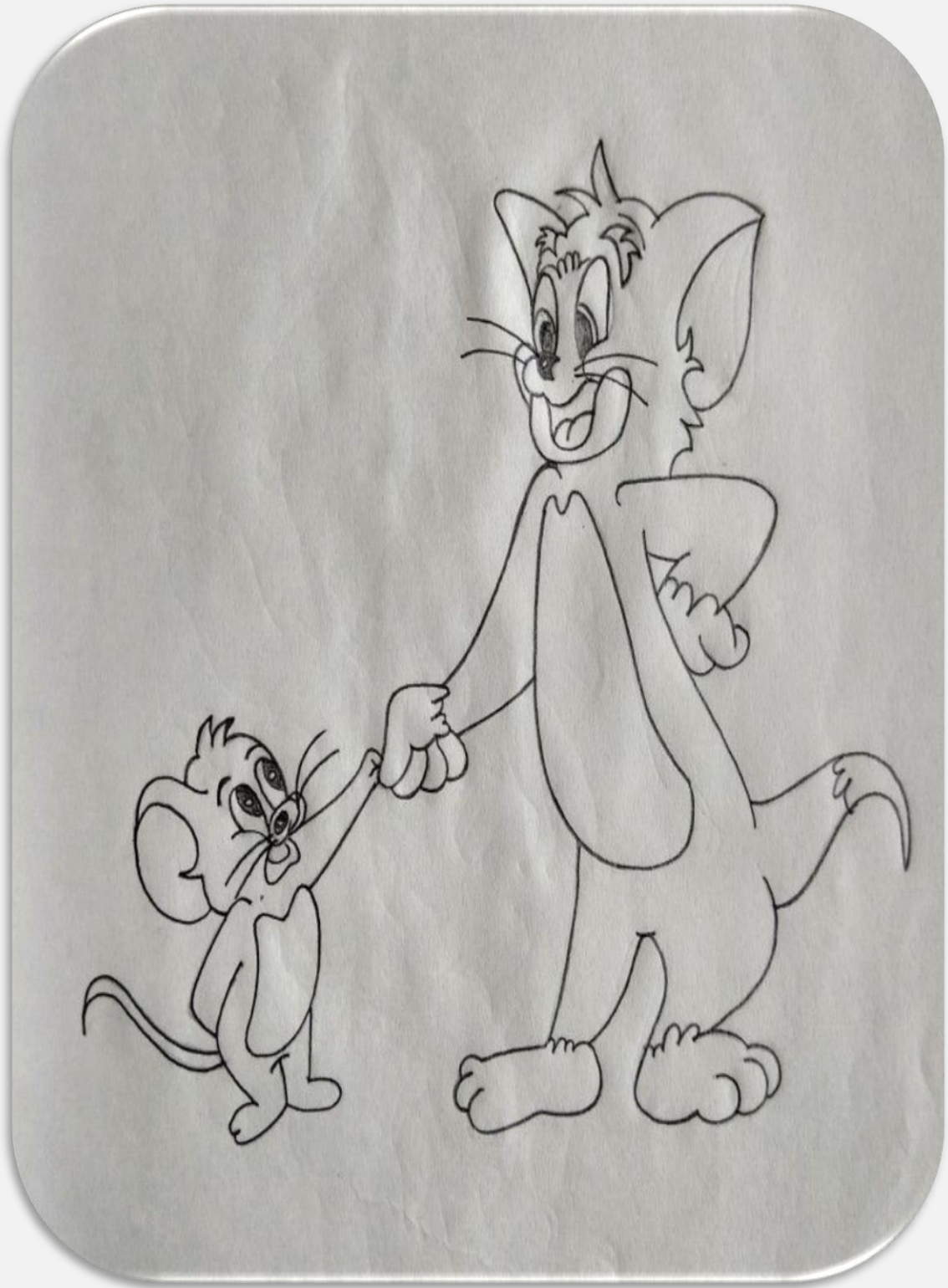
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REHANA K
IV Yr ECE 'B'



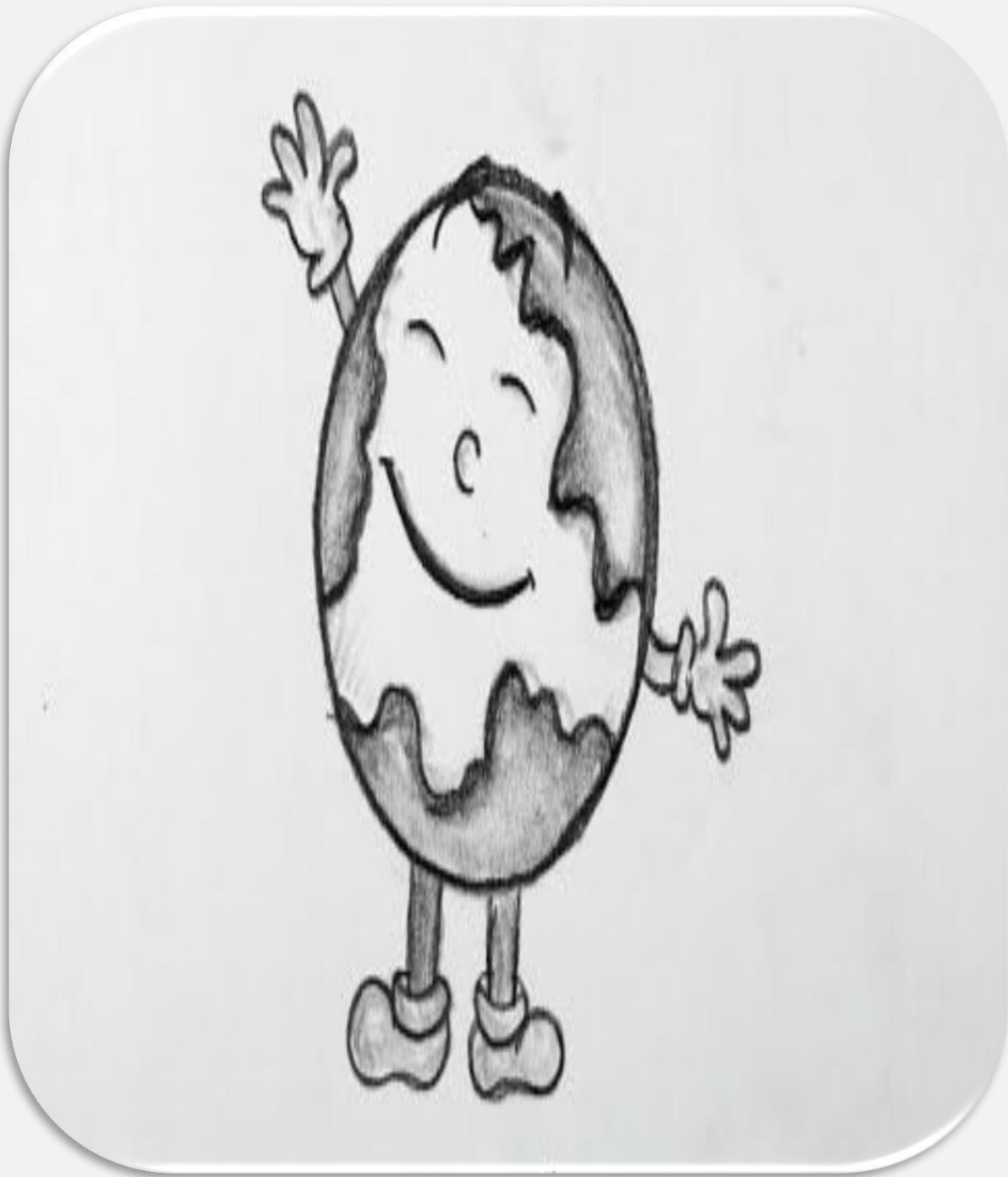
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IV Yr ECE 'A'



By,
BLESSING M
IV Yr ECE 'A'



By,
DEEPIKA V
IV Yr ECE 'A'



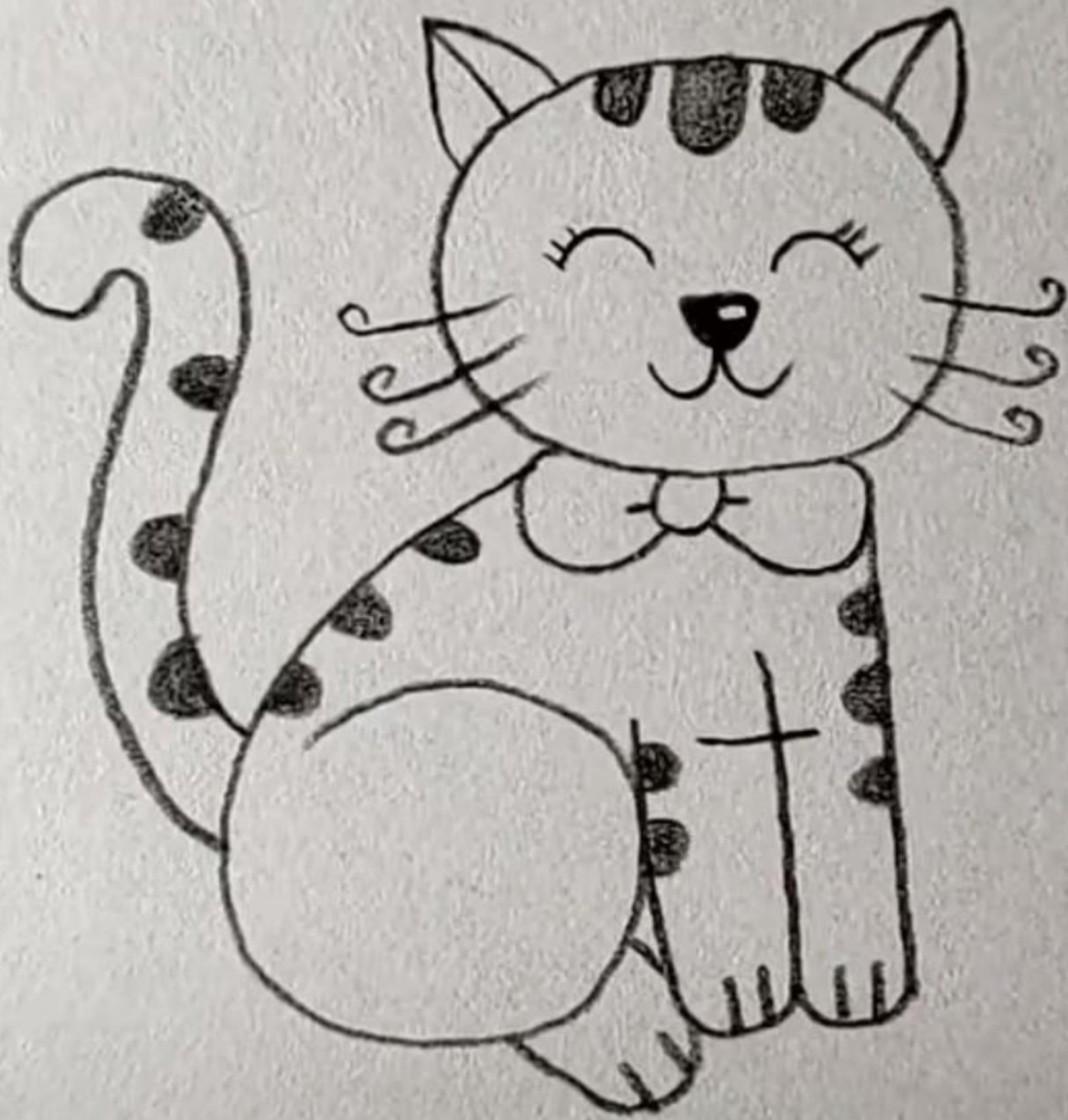
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ANU R
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GANESH N
IV Yr ECE A



By,
ANUSHKA M V
IV Yr ECE 'A'



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ABIRAMI N
IV Yr ECE 'A'