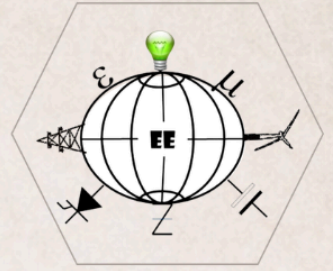




# SPARK



## A Bi-yearly in-House Newsletter of Department of Electrical Engineering

B.P. Poddar Institute of Management & Technology

### **Vision of the Institute**

To emerge as a progressive and premier Institute for Engineering and Technology education with ethical values for creative engineering solutions commensurate with global changes.

### **Mission of the Institute**

- Offer quality education through modern accessible, comprehensive and research oriented teaching – learning process.
- Create opportunities for students and faculty members in acquiring knowledge through research and development.
- Providing effective interface with industry by strengthening Industry-Institute interaction and developing entrepreneurial skills.
- Meet ever-changing needs for the nation through rational evolution towards sustainable and environment friendly technologies.

### **Vision of the Department**

To emerge as a knowledge hub for higher learning and research in Electrical Engineering.

### **Mission of the Department**

- To create a conducive quality teaching –learning environment to make the student assimilate thorough knowledge in Electrical Engineering. To create a platform for building confidence among faculties and students by exchanging their views through research, interactive sessions with industry and by the use of modern tools.
- To adopt a goal driven teaching learning method to foster innovative entrepreneurship skills in student community with expertise in different engineering domain.
- To enable students to become authorities in the field of electrical engineering along with sustainable and environment friendly technologies to meet the societal needs.

### **Program Educational Objectives**

The graduates of Electrical Engineering shall:

- Acquire adequate physical, analytical and technical knowledge of Electrical Engineering and allied fields to curate solutions, which effectively address the challenges posed by dynamic work environments.
- Inculcate self- assurance, collaborative spirit, critical thinking and acumen for innovation towards gaining a competitive edge in research and development as well as in entrepreneurial ventures.
- Imbibe professional ethics and the attitude to bank on sustainable and eco-friendly practices only, for the wellbeing of society at large.

## Remembering Jagadish Chandra Bose: Pioneer of Radio Science

Jagadish Chandra Bose was a pioneering Indian scientist whose work spanned physics, biology, and plant science. Born in 1858, he is best known for his early research in wireless communication. Bose demonstrated the transmission of radio waves over a distance even before Guglielmo Marconi gained recognition, making him one of the earliest contributors to radio science. He later shifted his focus to plant physiology and made ground breaking discoveries showing that plants respond to external stimuli such as light, heat, and sound. His experiments proved that plants have life processes similar to animals, challenging existing scientific beliefs of his time. Bose's work laid the foundation for modern biophysics and plant neurobiology. Despite facing colonial discrimination, he refused to patent many of his inventions, believing that scientific knowledge should be shared freely.



## India's Giant Leap: From Earth to the Lunar South pole

The second half of 2023 reshaped India's position in the world as a deep-tech superpower. On August 23, the Chandrayaan-3 Vikram lunar lander successfully landed on the South Pole of the Moon, making India the first country to overcome this difficult and cratered region. This achievement was made possible through "failure-based design," which came out of the Chandrayaan-2 failure in 2019. ISRO scientists broke out of the "success mentality" by strengthening the legs of the lander to withstand high-speed landings and increasing the landing site from a 500m spot to a huge 4km x 2.4km area. They also eliminated the fifth engine in the centre to make control easier and included a Laser Doppler Velocimeter for better accuracy.



## Advancements in Science & Technology

- ❖ IBM unveiled its latest quantum computer machine and a new quantum chip in early December 2023, marking progress toward larger, faster quantum systems that could eventually model complex processes like protein structures.
- ❖ Scientists successfully navigated the Chandrayaan-3 propulsion module back into Earth's orbit after it helped deliver the lander toward the Moon — an important step in lunar mission logistics and reuse efforts
- ❖ China launched Mengxiang, a deep-sea drilling vessel designed to explore the Earth's mantle and deep-ocean resources, expanding capabilities in ocean science.
- ❖ The rover, Pragyan rover, carried instruments to analyze soil composition and in-situ experiments were conducted, sending real-time data back to Earth.

## EVENT CORNER

### TECH ENQUESTA'23 & IET Session and Campaign

The Institution of Engineering and Technology On-Campus Student Chapter, BPPIMT, in collaboration with the Department of Electrical Engineering, successfully organized a Session and Campaign followed by **TECH ENQUESTA'23** (Technical Quiz Contest) on 8th September 2023. The event witnessed enthusiastic participation from over 150 students. The program was entirely organized by the students of Electrical Engineering, showcasing strong teamwork and event management. Tanushka Joshi and Hena Mahata served as the main coordinators, ensuring the smooth execution of the event. The event was conducted under the guidance of Mr. Aritra Ghosh, whose support and direction contributed significantly to its success, making it an engaging and enriching experience for all participants.



*Volunteers with Faculty of Tech Enquesta'23*



*Participants with the entire time of Tech Enquesta'23*

### One day Seminar: Celebration of “National Mathematics Day”

The Department of Applied Sciences & Humanities, BPPIMT has organized a lecture session on “Ramanujan’s life and work” on December 22, 2023. Mr. Sayantan Roy, Assistant Professor (WBES) and researcher on number theory delivered an enlighten lecture on Ramanujan’s life, his days in Cambridge, London, his relation with Prof G.H. Hardy. Also the student members of Performing Arts Forum, BPPIMT “Kalakriti” staged a play on “Ramanujan’s life and work”.



*Students attending Seminar*



*Principal Mukherjee and Mr. Sayantan Roy*

## ACHEIVEMENT CORNER

Dr. Susmita Dey, professor of Department of Electrical Engineering, receiving her PhD award at 10<sup>th</sup> Annual Convocation organized by, Indian Institute of Engineering Science and Technology, IEST, Shibpur on 22<sup>nd</sup> December 2023.

Dr. Argha Kamal Pal receiving his PhD award at 43<sup>rd</sup> Annual Convocation organized by Indian Institute of Technology, IIT (ISM) Dhanbad on 18<sup>th</sup> December 2023.



*Dr. Susmita Dey receiving award at IEST*



*Dr. Argha Kamal Pal receiving award in IIT Dhanbad*

## PLACEMENT CORNER

The Department is pleased to highlight the recent placement achievements of its students, reflecting their technical competence and industry readiness

**Cognizant Technology Solutions:** Arjun Ghosh, Soumyadeep Mandal, Soumya Ghosh.

**Accenture:** Krittika Majumdar, Rupam Ghosh.

**PricewaterhouseCoopers LLP:** Rupam Bhattacharyya, Purbita Deb Roy.

**Royal Research:** Pratyay Amrit, Krishnendu Chatterjee, Deep Bera.

**CDAC:** Sukanya Sadhu.

**HMB Ispat private limited:** Md Kalimullah.

**Tata Consultancy Services Limited:** Subhranil Saha.

**IBM India Pvt limited:** Ankur Bhowmick

# GAMES CORNER

## BRAIN TEASER

D V Q G R F Z L T Y A L P H V E U P C A V G L S  
 U T U S M C O L O R S E J J X L X V T T N E H V  
 S E E O D G L U E U B S Y D T E Z O S S O B E B  
 S R W O B N I A R P R S Y D H I G Z K Y H M D K  
 T M K Q Q C M Y A D M X S U X D O J U H Y V N B  
 L O N G F P K I J N I M U H S C H O O L K F S V  
 L Q E E F W J A P L N N E K C I H C Y X L B F Q  
 Y L E R P D G W K B T H F J Z Q M A Y H C Z K H  
 E E U O Q V A R T V U Z W E I N V T H U N D E R  
 L M Q M Y E K N O M X P W K V M I G R P U Y A A  
 G Z R H J P J X C K W U Z K A U S T I N E U P C  
 O A I E O Z P P K B A Q E W S U Z C M B F U V Z  
 O S K G D O Y Z X R J C L E L D O O N S P I N A  
 G P B Y B O X E S Q C C F B L I G H T N I N G X  
 H E R P O D A H G Y J E A X I W V J O P O M Z K  
 E N A K W E K S M S R J O D O J Z O L F P K Z Z  
 M V I H N X N U B E K C Q Z F Y J W V F P J W S  
 A T N R C L I P G E E A W O N S D J I L I B T L  
 K S Z T E C A E N R R S O M H V C U M K H B D V  
 A H J X N Q R R W T E P X C C I S U M B U U T U  
 Y P O I H P E M W C X E F G K L T X B O D C I H  
 L O U R L F V A U Y P R A E T U J H N B M A K X  
 A U S O L Q H N E A F X H T E S T U Z A D R L S  
 M Z I C V R R Y W I F V O R E P U S B B T L V Q

QUEEN	MUSIC	ART	SUPERMAN	TERM
LESS	MORE	ASPEN	AUSTIN	BOB
BOXES	BRAIN	CASPER	CHICKEN	COLORS
GOOGLE	HIPPO	LIGHTNING	MAKAYLA	MINT
MONKEY	NOODLE	RAIN	RAINBOW	SCHOOL
SNOW	SUPER	TEST	THUNDER	TREES

**An Engineer is someone who...**

observes and wonders

Discovers and creates new things

shares their curiosity

Asks questions

Explores the world around them

Constructs inventions

uses tools to solve problems

**An Engineer is someone like you!**

### GUESS THE SCIENTIST

“I proposed a rotating magnetic field concept and contributed to polyphase systems.”

Ans: \_\_\_\_\_

### FIND THE ODD ONE OUT

#### 1: Basic Components & Laws

Resistor, Capacitor, Inductor, Transistor

Ans: \_\_\_\_\_

Ohm's Law, Kirchhoff's Voltage Law, Newton's Second Law, Lenz's Law

Ans: \_\_\_\_\_

#### 2: Machines & Power Systems

DC Shunt Motor, Synchronous Motor, Transformer, Induction Motor

Ans: \_\_\_\_\_

Lap Winding, Wave Winding, Concentric Winding, Squirrel Cage

Ans: \_\_\_\_\_

#### 3: Digital & Measurements

AND, OR, NOT, MUX

Ans: \_\_\_\_\_

JFET, MOSFET, BJT, IGBT

Ans: \_\_\_\_\_

Call for Contribution: Students, staff and faculty members of Department of Electrical Engineering are requested to send their contribution for newsletter electronically to the email: [spark.ee18@gmail.com](mailto:spark.ee18@gmail.com).