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EDITORIAL

As technology evolves at an unprecedented pace, we are reminded that learning never stops. Exams are just around the corner, and we know how overwhelming it can feel. The pressure to perform, and the fear of the unknown can make even the most confident students anxious. But remember—exams are not just a test of your knowledge, they are a test of your perseverance, discipline, and ability to rise to the challenge and it's time to step up. Those tough problem sets, tricky equations, and late-night study sessions. They're all part of your journey to becoming an outstanding engineer. Exams are your chance to show the world what you've got.

Engineering projects succeed with careful planning, and so will your exam preparation. Start by mapping out your study terrain. Assign priorities based on weightage and your comfort level, but don't shy away from weaker areas.

Engineering problems demand a sharp mind, and your brain is your most critical asset. Exams aren't just a test of your technical knowledge; they're a proving ground for the problem-solver, innovator, and future engineer within you. You have to tackle your exams with confidence, purpose, and a mindset tailored to the unique demands of engineering. "Remember, success isn't just about the destination—it's about the growth that happens along the way."

So take a deep breath, believe in yourself, and give it your best shot. All the best!

EDITOR
SAIMA FARZEEN
Assistant Professor
Mechanical Department

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3D PRINTING IN CONSTRUCTION: REVOLUTIONIZING THE FUTURE OF BUILDING

Zeeshan Farooque, CE, MACET

The construction industry is witnessing a profound transformation with the advent of 3D printing technology. Also known as additive manufacturing, 3D printing involves constructing structures layer by layer based on a digital design. This innovative method is not only changing the way buildings are made but also offering substantial benefits like reduced costs, faster construction timelines, and more sustainable building practices. As the technology advances, 3D printing is poised to revolutionize the future of construction.

The process of 3D printing in construction begins with a digital model created using Building Information Modeling (BIM) software. Once the design is complete, it is divided into thin horizontal layers, and the 3D printer extrudes materials such as concrete, cement, or recycled plastics to build the structure. The printer precisely lays down one layer at a time, gradually forming walls, floors, and other components. This additive process allows for intricate designs that would be difficult or expensive to achieve using traditional construction techniques.

One of the most significant advantages of 3D printing in construction is speed. Traditional construction projects can take months or even years to complete, but with 3D printing, buildings can be printed in a matter of days. For example, homes can be printed in less than 48 hours. This faster construction timeline leads to reduced labor costs and allows for quicker occupancy, which is especially important in areas where rapid housing solutions are needed, such as in disaster relief situations or developing urban centers.

Another key benefit of 3D printing is its potential for cost savings. By reducing material waste and minimizing the need for manual labor, the overall cost of construction can be significantly lowered. Traditional building methods often result in excess materials and expensive labor for tasks like bricklaying. In contrast, 3D printing uses only the exact amount of material needed, resulting in less waste and reduced costs for both materials and labor.

Furthermore, sustainability is a major advantage of 3D printing. The technology promotes eco-friendly practices by allowing for the use of recycled or sustainable materials. Since 3D printers work on-site, they also eliminate transportation costs and the carbon emissions associated with moving construction materials over long distances.

As 3D printing technology evolves, its potential in the construction industry is immense. It is already being used to create affordable housing, bridges, and emergency shelters, with the promise of reshaping the way we build in the future. With faster, cheaper, and more sustainable methods, 3D printing is truly revolutionizing the construction industry.

CULTURAL EXPRESSIONS: HOW NATIVE INDIAN DIALECTS ENRICH ENGLISH WITH UNIQUE METAPHORS

Dr.Sana Firdos Khan,
Science & Humanities (English), MACET

Language is a living entity, shaped by the cultures that use it. Language evolves, reconstructs and recreates existing ideas to fuse into a new one. Native Indian dialects contribute a wealth of unique metaphors that enrich English, offering fresh perspectives and deeper meanings. By exploring these expressions, we can uncover the wisdom and worldviews inherent in Native Indian cultures.

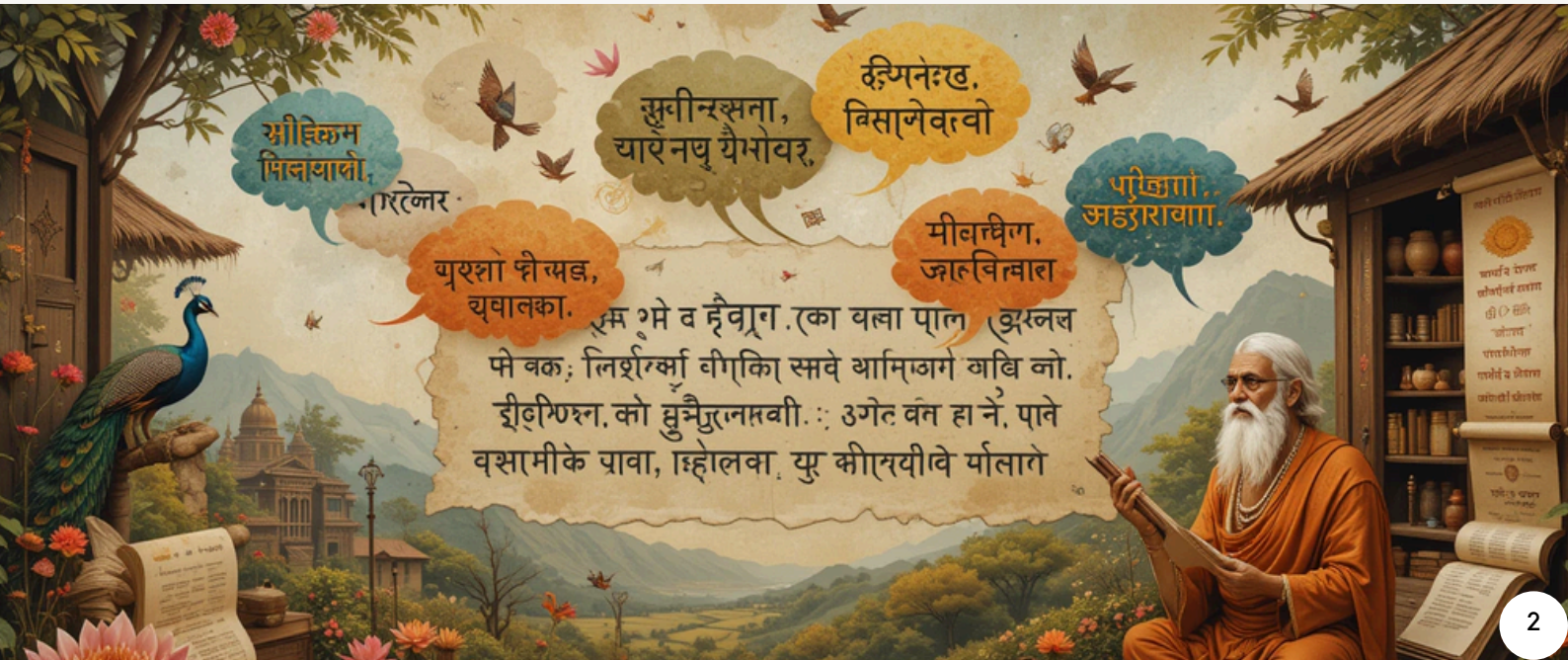
English in India is no longer the colonisers' language only. From its long association with the imperialist and colonialist enterprise, English in India has now become the language of official communication and decision making, and hence, the language of the upwardly mobile, modernized, urban masses. As India continues to emerge as an independent, postcolonial nation, its relationship with English as a language continues to evolve and develop, paradoxically leaving behind its status as the master's language and entering the domain of everyday affairs.

One area to delve into is the connection between nature and language, where metaphors such as "walking in two worlds" reflect the balance that many Native cultures maintain between modern life and tradition.

Additionally, phrases rooted in animal behaviour or celestial phenomena can illustrate complex human emotions and relationships, bridging the gap between the material and the spiritual.

Highlighting these expressions allows us to appreciate the nuances they bring to English, fostering a greater understanding of how language can mirror cultural identity. This exploration not only enhances our vocabulary but also encourages respectful engagement with the rich linguistic heritage of Native Indian communities. Many Indian origin writers like Mulk Raj Anand, Raja Rao, R.K. Narayan, V.S. Naipaul, Kamala Markandaya, and Arundhati Roy have used native idioms and phrases to imbibe the readers with a rich linguistic tradition of Indian communities and infuse them with a spirit of nationality and cultural identity.

By embracing and sharing these metaphors, we can cultivate a more inclusive dialogue that honours the wisdom and artistry of Native Indian storytelling traditions.



MARCH 2025

Placement

DHOOT TRANSMISSION PVT. LTD.

Fourteen students from MACET 2021(B) batch have been selected in Dhoot Transmission Pvt. Ltd.(Maharashtra based company) in an online campus placement drive 25 March 2025.

- MD.Sohail Ansari (EEE)
- MD.Murshid Alam (ME)
- Asad Ismail (EEE)
- MD.Asif Hussain (ME)
- Hamid Raza (EEE)
- Ali Ahma (EEE)
- Nawazish Karim (EEE)
- Md. Azam Iqbal(ME)
- Ovais Pervez(ME)
- Homaira Razeeque(EEE)
- MD. Sadikh Imam(EEE)
- Iqubal Ahmad Khan(EEE)
- Sajar Alam Khan(ME)
- Saba Karim(ME)

QSPIDER (PAN-INDIA LOCATED)

Nine students from MACET 2021(B) batch has been selected in Free Incubation Training & Placement Program (Under CSR Project) in QSpider (Pan-India Located) in an online campus placement drive on 25 March, 2025.

- Kaenat Afzal(CS)
- MD. Ehtesham Mazhar(CS)
- MD. Arzan Nawaz(CS)
- MD.Azam Alam(CS)
- Inzamam Ul Haque(CS)
- Shahudul Haque Faraz(EEE)
- MD. Haris(CE)
- Syed Zaid Hasan(CS)
- Ilsa Hasan(CS)

MARQUE IMPEX

Three students from MACET of Mechanical engineering department has been selected in Marque Impex (Moradabad, UP based company) in online campus placement.

- Ovais Pervez
- MD. Shahbaz Alam
- Umar Ahmad

CONGRATULATIONS

APRIL 2025

Placement

MINTWAYS TECHNOLOGIES

Five students (4:confirm 1:waiting) from MACET 2021(B) batch have been selected in Mintways Technologies in offline campus placement drive on 20 April, 2025.

- Rishav Kumar (EEE)
- MD.Ehtesham Mazhar (CSE)
- MD.ArzanNawaz (CSE)
- Azam Alam (CSE)
- Abdullah Faridi (CSE,Waiting)

MINTWAYS TECHNOLOGIES

Seven students (3:confirm 4:waiting) from MACET 2022(B) batch have been offered for the intern role in Mintways Technologies in offline campus placement drive on 19 April, 2025.

- MD.Alkama (CSE)
- Shivangi Gupta (CSE)
- MD. Al Fahad Ahmad (CSE)
- Sana Azad (CSE,Waiting)
- Sama Akil (CSE,Waiting)
- Sania Kashish(CSE-AIML ,Waiting)
- Nameera Ahmad (CSE-AIML,Waiting)

RINEX TECHNOLOGIES

Five students from MACET 2021(B) batch has been selected in Rinex Technologies (Bengaluru based company) in an online campus placement drive on 13April, 2025.

- MD. Asif Hussain
- MD.Haris
- Ahsan Raza
- Mohammad Zeeshan Abul
- Saniyea Zehra

AMBUJA CEMENT LIMITED

'Two students from MACET has been selected in Ambuja Cement Limited on 13 April, 2025.

- Aman Shabbir (CE,2020B)
- MD. Munna Alam (CE.2019B)

WAYSPIRE ED-TECH

'Two students from MACET 2021(B) batch has been selected in Wayspire Ed-Tech (Bengaluru based company) in an online campus placement drive on 17 April, 2025.

- Simba Jawed (CSE)
- Saniyea Zehra (CSE)

CONGRATULATIONS

Faculty Corner

Civil Engineering Department

Accolades

Prof. (Dr.) Md. Masood Ahmad, Dean Academic of Maulana Azad COllege of Engineering & Technology, of Civil Department has been appointed as a Member of the Board of Studies at Aryabhatta Knowledge University, Patna in **School of River Studies Post Graduate (PG) Program**

Faculty Development Programs (FDP)

Dr. MOHD KHALID

- Participated in FDP on “Application of computation intelligence in civil Engineering” from 17–28 February 2025, organized by the Polytechnic of Maulana Azad National Urdu University, Hyderabad, India.
- Attended one day webinar on “Water Security and Sustainable development; A case of NCT of Delhi” on 18 February 2025 organized by Department of Civil engineering, Amity School of Engineering & technology, Amity University, Patna.

Manuscript published in a Scopus Index Journal Khalid, M. , Muzzammil, M., & Alam, J. (2025). "Deterministic and Probabilistic Analysis of Local Scour in Alluvial Bed". Water & Energy International Journal, Vol. 67/RNI(12), pp. 32–39. ISSN: 0974-4711

Mr. SHAFI QUEUZZAMAN

- Successfully Completed online Faculty Development Program on "Concrete Technology", organized by NITTTR Bhopal, conducted from 10th March to 14th March, 2025.

Faculty Corner

Mechanical Engineering Department

Faculty Development Program (FDP)

Innovation and Entrepreneurship organised by BIT, Patna from 24-03-2025 to 28-03-2025

- **Dr. Shahbaz Anjum**
- **Dr Md. Reyaz**
- **Md. Aon Ahmad**
- **Mr. Md.Shabbeer Ansari**
- **Dr. Naushad Hasin Khan**
- **Mrs. Saima Farzeen**
- **Mrs. Mamta Kumari**
- **Mr. Firoz Alam**
- **Mr. Md. Irshad Alam Ansari**

Advance Excel with Data Analytics organised by EICT ACADEMY-IIT Kanpur from 03-02-2025 to 08-02-2025

- **Mr. S. Moazzam Hussain**
- **Mr. Ali Nezam**
- **Mr Kashif Faridi**

Three days international Faculty Development Program on Advances in New Age Alloys and Composites with the advent of AI/ML and 3D Printing organised by Bearys Institute of Technology, Mangalore from 7th April to 9th April 2025 .

- **Mrs. Saima Farzeen**
- **Mrs. Mamta kumari**

Faculty Corner

Electrical and Electronics Engineering Department

Faculty Development Program (FDP)

Mr. MD. Raza

- Successfully completed the three day faculty development program on ICT Tools for Teaching Learning and Assessment organized by NITTTR Kolkata from 16th to 18th April, 2025.

Successfully Completed four week course on “System and Usable Security” organized by Indian Institute of Technology Indore from January - February 2025.

- **Mr. Ozair Ahmad**

Successfully completed the one week faculty development program on "Leadership and Professional Growth for Teachers "organized by Association of Muslim Professionals held from 21st to 25th April, 2025

- **Dr.Tajuddin Ali Ahmad**
- **Mrs. Meena Prasad**
- **Mr. Lal Babu Singh**
- **Mr. MD. Zikrullah**
- **Mr.Vinod Kumar**

Successfully completed the one week faculty development program on **"Innovation and Entrepreneurship"** organized by AICTE and Ministry of Education’s Innovation held from 24th to 28th March, 2025 at BIT Patna

- **Mr. Intesar Hasan**
- **Mrs. Aaisha Tasneem**

Mr. Md. Nadeem Enam

- Successfully completed the one day National Symposium on Developing Innovation, Incubation and IPR Ecosystem (NSDIIIE)-2025 held on March 08, 2025 by C-DAC Patna.

Mr. Nadeem Anwar

- Successfully completed three day’s International faculty development program on “Advances in New Age Alloys and composites with the advent of AI/ML and 3D printing organized by Bearys Institute of Technology, Mangalore in association with Visvesvaraya Technological University, Belagavi held on 7th to 9th April, 2025.

Faculty Development Program (FDP)

Successfully completed the one week faculty development program on "Leadership and Professional Growth for Teachers "organized by Association of Muslim Professionals held from 21st to 25th April, 2025

- **Mr. Hasibul Hasan Mansoori**

Successfully completed the one week faculty development program on "**Software & Network Security Fundamentals**" conducted by Electronics & ICT Academy, CDAC, Hyderabad from March 3rd to 7th March, 2025

- **Mrs. Shabab Zahra**

Students Corner

Acvievements

Yusuf Abdullah and Faizan Raza of Computer science department of 2021 batch has presented AQI MONITORING Project at Innovation festival-2025 organised by Shri Krishna Scince center. There project has been appriciatede very much and they also got consultation prize for the same.It is a great achievement for the boys ,the college administration appreciate their work and wish them all success in life.

MD. Intekhab Alam and **Purushottam Kr. Gupta** has been selected as 1st & 2nd winner in Slogan Writing Competition conducted by AISU (All India Student Union) under the aegis of National PanchayatiRaj Competition-2025

The Great Shift

Md Saif | CSE | 2023

In a world overflowing with knowledge, tools, and possibilities, it is paradoxical that so many still remain bound by a blueprint of the past. Today, humanity stands at a historic crossroads—equipped with the means to learn anything, connect with anyone, and build solutions of revolutionary scale. The walls that once separated aspiration from execution have collapsed. And yet, the dominant societal compass continues to point toward stability—a concept that now risks becoming obsolete, especially in a country like India, where competition has grown more intense than opportunity itself.

This dissonance is not due to a lack of potential. Rather, it stems from a mismatch between available resources and outdated mental models. Education, once a rare privilege, is now abundant in digital form. Learning is no longer confined to the classroom; it has transcended geography, institution, and gatekeeping. But the collective mindset has yet to make that leap. The traditional chase for a 'secure job' persists as a default goal, even as the economic and technological terrain transforms radically around it.

India illustrates this phenomenon with particular sharpness. Every year, millions of students strive to occupy a narrow set of predefined roles—engineering, medicine, civil services—believing these paths ensure security and respect. But in an ecosystem overwhelmed by saturation, stability has begun to lose its meaning. It is no longer the anchor it once was; in fact, it is increasingly becoming a mirage—visible, alluring, but ultimately unattainable for many.

What makes this situation more tragic is that it exists at a time of immense empowerment. Never before in human history have individuals had access to such a dense web of global knowledge and open innovation. From AI and cloud computing to open-source software and decentralized platforms, today's tools are not just supportive—they are transformative. They are capable of turning curiosity into mastery, and ideas into scalable systems. Yet, despite these advancements, a significant portion of talent remains locked in survival mode, not because of inability, but because of inherited narratives.

The real breakthrough lies not in resisting change, but in redesigning the very definition of growth. The future does not reward those who merely comply—it rewards those who create, those who observe invisible patterns and connect them into visible solutions. In this new landscape, value is not extracted from repetition, but from originality. And progress is not measured by how closely one follows the script, but by how bravely one rewrites it.

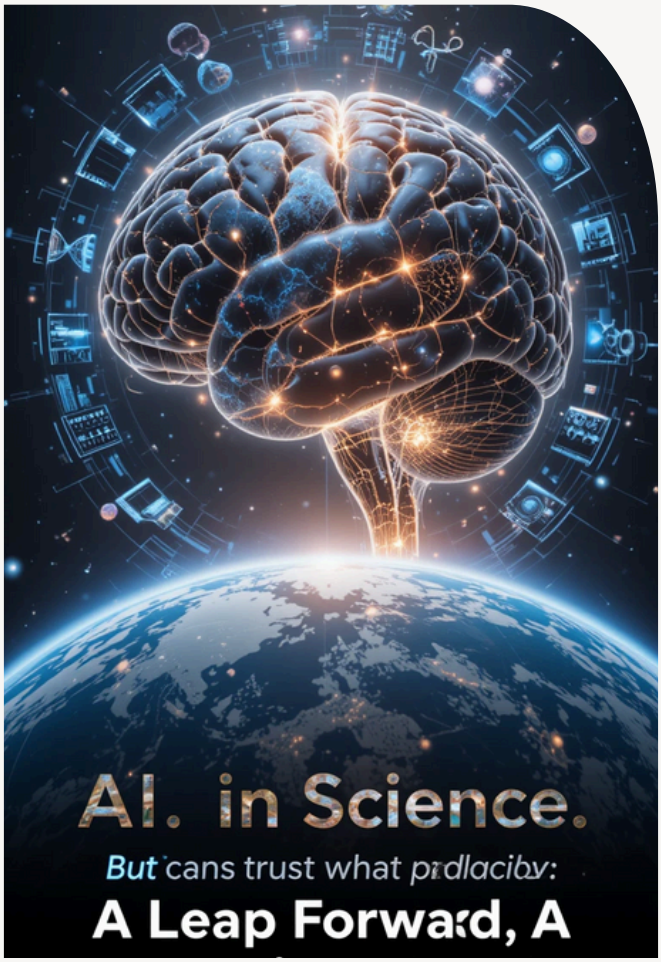
India, with its massive youth population and deep intellectual reservoir, is uniquely positioned to lead this transition. However, this potential can only be realized if individuals begin to treat learning not as a means to pass examinations, but as fuel for meaningful construction. If knowledge is seen as raw material, then creation must be its natural outcome.

The time has come to think beyond the treadmill of traditional competition. The modern world does not lack opportunities—it lacks builders with the courage to seize them. By engaging deeply with available resources in a cohesive and purposeful way, and by shedding the fear of deviation, individuals can not only achieve personal fulfilment but also contribute to societal transformation.

The age of passive ambition is over. This is the era of deliberate innovation. And those who rise to this moment—those who dare to learn, build, and redefine—will not just succeed; they will set the tone for the world ahead.

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON MODERN SCIENTIFIC DISCOVERY

Sana Azad| CSE | 2022



In today's era of advanced technology, artificial intelligence (AI) plays a pivotal role in revolutionizing scientific discovery. Its impact spans across various fields, offering both unprecedented advantages and posing significant challenges that shape its integration into research. In fields such as medicine and genetics, AI algorithms are adept at processing massive amounts of information to uncover intricate patterns and correlations. This capability not only accelerates research timelines but also reduces costs associated with traditional methods. Furthermore, AI-powered simulations are revolutionizing our understanding of complex systems. For example, in climate science, AI models can simulate various climate scenarios based on historical data, providing more precise predictions of future climate patterns. Similarly, in astrophysics, AI algorithms help simulate how galaxies form and evolve, offering profound insights into the universe's mysteries.

Despite these advancements, integrating AI into scientific research presents challenges. A major concern is the interpretability of AI-generated results. While AI can detect correlations, understanding the underlying reasons often requires human expertise to ensure accurate interpretation and decision-making. Additionally, bias in AI algorithms remains a significant issue. If AI systems are trained on biased data, they may inadvertently perpetuate or amplify existing biases, leading to unfair outcomes, especially in critical areas like healthcare and social sciences.

In conclusion, while AI offers tremendous potential to advance scientific discovery through faster data analysis and enhanced simulations, addressing interpretability challenges and mitigating bias are crucial for maximizing its benefits responsibly. By doing so, we can ensure that AI continues to drive groundbreaking discoveries while upholding ethical standards and reliability in scientific research.

Green Concrete: A Sustainable Revolution in Construction

Ahsan Raza| CE | 2021

As the global construction industry continues to expand, so does its impact on the environment. Traditional concrete production is responsible for a significant portion of carbon dioxide emissions—contributing nearly 8% of global CO_2 emissions, primarily due to the energy-intensive process of cement manufacturing. In response to growing environmental concerns, the concept of green concrete has emerged as a sustainable and innovative alternative to traditional concrete.

Green concrete is a type of concrete that uses eco-friendly materials in place of conventional components, especially Portland cement. It is designed to minimize the environmental footprint of construction without compromising strength or durability. This is achieved by incorporating industrial by-products such as fly ash, blast furnace slag, silica fume, and recycled aggregates into the concrete mix.

One of the major advantages of green concrete is its reduction in carbon emissions. By replacing a portion of cement with materials like fly ash or slag, the production process uses less energy and generates fewer greenhouse gases. Additionally, using recycled aggregates helps reduce the amount of construction waste sent to landfills and lowers the demand for natural resources like gravel and sand.

Beyond its environmental benefits, green concrete also offers technical advantages. It often has improved workability, better resistance to heat and corrosion, and enhanced durability under certain conditions. Some types of green concrete can even improve indoor air quality by reducing emissions of volatile organic compounds (VOCs).

Recent innovations have taken green concrete a step further. Self-healing concrete, for example, includes bacteria or encapsulated healing agents that can seal cracks automatically, extending the life of structures and reducing maintenance costs. Geopolymer concrete, made from aluminosilicate materials, is another promising development that offers high compressive strength and chemical resistance, while producing up to 80% less CO_2 compared to traditional concrete.

Despite its advantages, green concrete still faces challenges. Standardization, long-term performance data, and public awareness are areas that need further development. However, with continued research and increased demand for sustainable solutions, green concrete is rapidly gaining popularity among engineers, architects, and developers.

In conclusion, green concrete represents a significant step toward sustainable construction practices. By reducing environmental impact while maintaining performance, it paves the way for a more eco-conscious and resilient built environment.

Celebrating Knowledge, Creativity, and the Spirit of Inquiry

Maulana Azad College of Engineering & Technology

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