Topics - MINDS MAPS included (Daily current affairs 1st January 2025

- Target UPSC CSE Prelims 2025
- The POEM-4 Module (PSLV Orbital Experimental Module (POEM-4).
- Willow
- Climate Finance
- The Power of Dissent: A Comparative Analysis of Judicial Opinions in India and the U.S.
- Former Prime Minister Manmohan Singh's Cremation and Memorial Controversy
- Exercise Surya Kiran:
- Mains

By saurabh Pandey

THE HINDU

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Target Mains -2025/26 -

Q "Dissent not disruption is the basis for democracy " Discuss

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Q. Kaith, Baink, Kopra recently seen in news are tributaries of which among the following River. (Tol)

A) Betwa River

B) Chambal River

C) Yamuna River

D) Ken River

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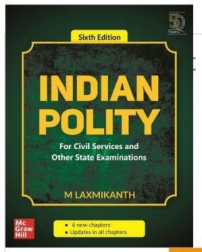

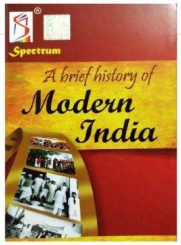

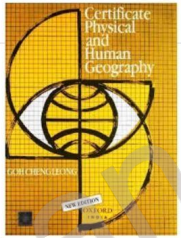

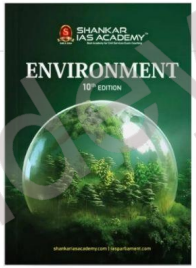

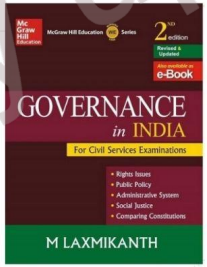

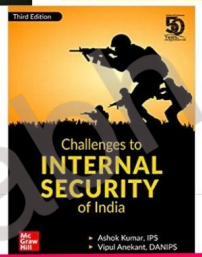

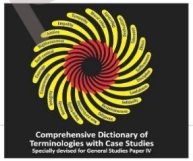

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10 payloads of ISRO's POEM-4 module deployed successfully

Hemanth C.S.
SRIHARIKOTA

ISRO's SPADEX Mission successfully lifted off from Sriharikota on Monday.

The Indian National Space Promotion and Authorization Centre (IN-SPACe) on Tuesday said that it had facilitated the successful establishment and operationalisation of 10 hosted payloads from non-government entities (NGEs) on board the POEM-4 module of the PSLV-C60/SpaDeX mission.

The mission was launched by the Indian Space Research Organisation (ISRO) on Monday.

"The mission that launched today, carried out in-orbit scientific experiments at an altitude of 350 km with a 55-degree inclination, utilizing the spent PS4 stage repurposed as the PSLV Orbital Experimental Module (POEM-4)," said IN-SPACe, which is the autonomous nodal agency under Department of Space to promote NGE's undertake space activities.

Reducing entry barriers

"The PSLV Orbital Experiment Module is a practical solution deployed by ISRO that allows Indian start-ups, academic institutions, and research organizations to test their space technologies without the need to launch entire satellites. By making this platform accessible, we are reducing entry barriers and enabling a wider range of entities to contribute to the space sector," Pawan Goenka, Chairman, IN-SPACe, said.

"At IN-SPACe, our role is to create opportunities for such collaborations and ensure that India's private sector can grow alongside advancements in space technology. Missions like these will be instrumental in capacity building by enabling NGEs to get their payloads space qualified, thus augmenting their future satellite launch missions," he added.

In total, 24 PS4-Orbital Experiment Module payloads were deployed on board the PSLV-C60 SpaDeX mission to support a wide array of scientific and technological endeavours.

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Topic → The POEM-4 Module (PSLV Orbital Experimental Module (POEM-4),"

Overview

Definition: POEM-4 is a module launched by ISRO (Indian Space Research Organisation).

Purpose: To conduct cutting-edge experiments in space.
Significance: Advances India's space technology and research capabilities.

Key Features

Payloads:

10 payloads from non-government entities.
Includes experiments from startups and universities.

Mission Type:

Part of the PSLV-C60 Mission.
Focus on space docking and technology demonstration.

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Applications

Research Areas:

AI in Space: Integration of artificial intelligence for autonomous systems.

Biological Studies: Experiments related to life in space (e.g., growing plants).

Technological Advancements:

Robotic Arms: Deployment for various tasks.

Advanced Sensors: For data collection and analysis.

Recent Developments

Successful Launch:

Achieved a significant milestone with successful deployment of payloads.

Future Projects:

Expansion of research capabilities with more experiments planned.

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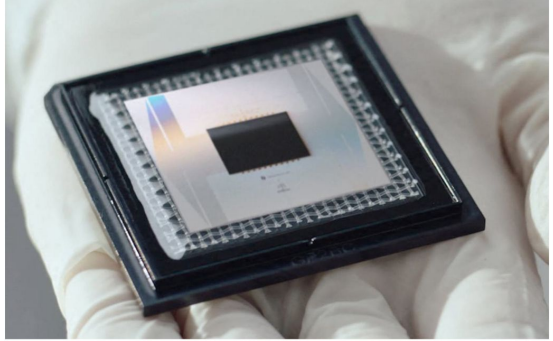


Google Quantum AI's Willow chip. GOOGLE/REUTERS

Willow is a small chip for Google but a quantum leap for computing

A major impediment to realising quantum computers is the fragility of quantum states. Qubits collapse at the slightest disturbance. This limits the amount of time for which qubits can hold information, how error-free a quantum computer can keep its calculations, and how well it can be scaled

S. Srinivasan

Google recently unveiled its latest quantum processor, named 'Willow.' The research team that built it also tested it, and the results were published in *Nature*.

They created a great level of buzz about the realisability of quantum computers that could tackle many practical problems.

The results also kicked up intriguing debates about explaining the power of quantum information processing and how they could solve problems that even the most powerful classical computers struggle with.

Bit versus qubit

Computers process information stored in an array of 0s and 1s. In classical computers, some physical system with two possible states is used to represent these 0s and 1s. These physical systems are called bits. A common example is an electric circuit that allows two levels of voltage; one called 0 and the other called 1. A classical computer is a collection of bits together, and the information flowing in and out of bits is controlled and manipulated by physical operations called gate operations. For example, an 'AND' gate accepts two inputs, each either 0 or 1, and outputs 1 if both inputs are 1 and 0 for any other combination of inputs.

A quantum bit, or qubit, has two distinct states representing 0 and 1. More importantly, a qubit can be in states that are also combinations of 0 and 1. This feature is called quantum superposition. Classical bits can't do this. Because of this ability, each qubit needs two distinct numbers to represent the contributions of 0 and 1 respectively, in the qubit's state. If we have two bits, we need two numbers, one for each bit, to represent the state of the collection. With two quantum bits, we need four numbers to represent the state. For 10 bits, we need 10 numbers to represent the state of the collection. For ten qubits, we need 2^{10} (1,024) numbers.

This exponential growth in the information required to represent qubits' states and the superposition of states are the major reasons why quantum computers could be more efficient and powerful than classical computers. Like a classical computer, a quantum computer is also a collection of qubits and a host of physical operations called quantum gates that change the states of qubits to perform calculations.

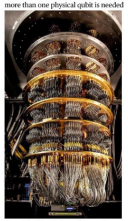
Difficult to isolate

A major impediment to realising quantum computers is the fragile nature of quantum states. Specifically, while classical bits are robust and long-lasting, qubits are fragile and collapse quickly at the slightest disturbance. This in turn limits the amount of time for which qubits can hold information, how errors-free the quantum computer can keep its calculations, and how well a quantum computer can be scaled.

It is difficult to isolate a physical gadget to avoid perturbations due to external noise. Therefore, computations are prone to errors. For example, when a bit is expected to represent 0, there is a small chance it may be in the state representing 1. This is called the bit flip error. Methods to identify and fix these errors are called error-correction protocols.

A single 0 is represented by three bits in the state 000 (corresponding to each bit in the state 0). If there is a bit flip error, the resulting state could be 100, 010, or 001 (depending on whether the first, second, or third bit is flipped). Similarly, 1 is represented as 111. If we need to encode 01 as the basic information, its true representation is 000111. Looking at the concatenated sequence in groups of three bits, the occurrence of 100, 010, 001, 011, 101, or 110, will mean an error has crept in. When three physical bits represent one logical digit, it is easy to figure out which bit has flipped and correct it suitably before the next step in the computation.

Similarly, one way to mitigate the effect of errors in a quantum computer is to correct them using additional qubits that keep track of errors creeping in during computations. This is a logical answer to the error problem; it is, however, unsuitable for qubits in superposed states. Creating exact copies of unknown superposed states is prohibited by the no-cloning theorem of quantum physics. On the other hand, error correction often requires redundancy, i.e., providing more qubits than what is needed to encode information. This makes it clear that more than one physical qubit is needed to represent a single logical qubit. (Qubits also have another type of error called phase flip error, which presents similar challenges to error correction.)



A cryostat refrigerator for cooling quantum computing chips at Google's Quantum AI lab in Santa Barbara, California. VIA REUTERS

One effective method to detect and correct errors in a quantum computer without also violating the no-cloning theorem is called surface code. Here, engineers arrange an array of qubits on a grid. The qubits are grouped into two categories, namely data qubits and measurement qubits. While the error in data qubits is what we wish to identify and correct, any attempt to measure them will force them out of superposition, and whatever information they encode will be lost.

To avoid this, the surface code method provides the set of measurement qubits. These qubits are entangled with data qubits through suitable gate operations. (If two qubits are entangled, any measurement of one particle will instantaneously cause the other particle to lose its superposition state.) In this setup, the presence of errors in the data qubits is inferred by making suitable measurements of the measurement qubits while using the gates to prevent the data qubits from being affected, and thus correcting inconsistencies in data qubits.

The error rate

According to Google, its new quantum processor, Willow, has significantly better error correction and is thus significantly faster than other quantum computers, not to mention classical computers as well. The researchers who developed it tested it by using it to solve a computationally hard problem.

Willow houses 105 physical qubits and operates at temperatures close to the theoretically possible lowest temperature (0 K, -273.15° C). Nearly half of these are data qubits, and the remaining are measurement qubits. The superconducting qubits are not strictly two-state systems. When performing gate operations, the physical system can get excited or 'leak' to states other than 0 and 1. These excited states can subsequently interfere with the computations and introduce errors. So a few qubits – i.e. the measurement qubits – are reserved to correct such leakage errors.

Coherence time is the duration over which an intended state (typically, superpositions) of a qubit can survive without being changed due to interactions with the environment or with other parts of the computer. The coherence time of data qubits on Willow is about 100 microseconds, which is more than the coherence time of the physical qubits. This is a consequence of the error correction protocols used. This in itself is an interesting result because it means the information-holding time can be improved by external manoeuvering.

The next milestone for researchers to achieve is to lower the error rate – calculated as the ratio of the number of qubit errors to the number of gate operations – as they build ever-larger quantum computers with more physical qubits and more error correction operations. Google alone has progressed from 3-by-3 to 5-by-5 to 7-by-7 arrays of data qubits, and the error rate has decreased by more than half in each step.

Willow houses 105 physical qubits and operates at temperatures close to the theoretically possible lowest temperature. Nearly half of these are data qubits, and the remaining are measurement qubits

What one expects for a collection of qubits on a circuit is that the error rate either remains the same or increases as the number of qubits is increased. That the error rate becomes smaller as more qubits are added is the below-the-threshold capability of Willow's architecture and operation. This is vital to achieving quantum processors with enough qubits that perform almost error-free computations of problems of practical relevance – the ultimate goal.

No dead ends

The particular computationally difficult task with which Google tested Willow is called random circuit sampling (RCS). In the RCS task, Willow has to calculate the probability of occurrence of possible strings of 0s and 1s in the output when the quantum gates that act on the qubits are chosen randomly. If there is no noise, RCS is a computationally hard task, meaning that the number of calculations required to make the prediction increases exponentially with the input size.

Willow completed the RCS task for random gate operations realisable on Willow in a few minutes. The researchers estimated that the same task on the most powerful classical computer available today would take 10 septillion years (i.e., 1 followed by 24 zeroes). To compare, the universe's age in years is approximately 1 followed by 10 zeroes. It is plausible that classical computers running better algorithms may eventually match Willow's feat, although researchers are not aware of such improvements today.

Researchers are still a long way away from realising quantum processors of reasonable size to be useful in practical contexts. This said, it's only natural that Willow created the sort of buzz that it did: it has shown that the major issues in realising a reliable quantum computer can be addressed and surmounted, that they are not dead ends. The work of the Google team provides hope that quantum computers may soon help us unravel nature's mysteries and also solve computationally difficult problems in drug design, materials science, climate modelling, and optimisation, among others – all with deep societal impact.

(S. Srinivasan is a professor of physics at Krea University. shaikumar.srinivasan@krea.edu.in)

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Topic → Willow

Introduction

Quantum computing is on the brink of revolutionizing the technology landscape, and Google's latest innovation—Willow—is at the forefront of this transformation.

This state-of-the-art quantum processor promises not just to enhance computational power but to redefine our understanding of what is possible with quantum technology.

Key Highlights:

Introduction of Willow, Google's new quantum processor.
Potential to tackle complex problems beyond classical computers.
Significant advancements in error correction techniques.

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Understanding Quantum Bits (Qubits) vs. Classical Bits

Computers have historically relied on bits—fundamental units of information represented by 0s and 1s. However, quantum computers employ qubits, which are capable of existing in multiple states simultaneously due to a phenomenon known as quantum superposition. This allows quantum computers to perform calculations that are currently infeasible for classical systems.

Classical Bits:

Represented as 0 or 1.

Stable and long-lasting.

Qubits:

Can represent both 0 and 1 at the same time.

Exhibit properties of superposition and entanglement.

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The Challenges of Quantum Computing

While the capabilities of qubits are promising, they also face substantial challenges. Qubits are notoriously fragile, and their states can collapse under slight disturbances, leading to errors in computations.

Major Challenges:

Fragility of Qubits: Qubits can easily lose their state due to environmental noise.

Error Correction: Developing methods to reliably correct errors without compromising the qubit's superposition states.

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Willow: A Game-Changer in Quantum Processing

Google's Willow quantum processor boasts 105 physical qubits, equipped with advanced error correction protocols. It operates at near absolute zero temperatures to maintain coherence and minimize errors.

Key Features of Willow:

High coherence time of approximately 100 microseconds.
Efficient error correction mechanisms that outperform previous models.
Ability to solve complex problems like random circuit sampling exponentially faster than classical computers.

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Real-World Applications and Future Prospects

The implications of Willow extend beyond theoretical realms. Its ability to perform complex calculations in seconds opens doors for advancements in various fields, including cryptography, artificial intelligence, and drug discovery.

Future Possibilities:

- Revolutionizing cybersecurity protocols.
- Enhancing machine learning algorithms.
- Potential breakthroughs in materials science and pharmaceuticals.

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COP29, climate finance and its optical illusion

Anwar Sadat

teaches international environmental law at the Indian Society of International Law

Finance has been a major point of climate change negotiation since the launching of the United Nations-led climate change negotiations in 1991, producing the United Nations Framework Convention on Climate Change (UNFCCC) 1992. Article 4 (7) of the UNFCCC clearly says "that the extent to which the developing country Party will be fulfilling their climate action commitments is contingent on how much finance and technology they get from developed country Parties".

The Paris Agreement retains, in Article 9(1), the provision relating to finance, binding the developed countries to mobilise finance for the developing countries. The sixth assessment report of the Intergovernmental Panel on Climate Change (IPCC) has described finance, capacity-building and a transfer of technology as critical enablers of climate action in developing countries in the backdrop of anthropogenic greenhouse gas emissions responsible for 1.1° Celsius of warming (above what it was in 1850-1900) in 2011-20.

Falling short

In pursuance of their responsibility, the developed countries agreed in 2009 that they would collectively mobilise $100 billion a year by 2020. The $100 billion mark, met by the developed countries only in 2022, does not match the growing needs of climate finance corresponding to the developing countries' nationally determined contributions (NDCs).

Second, the mark has been considered in many reports to be well-short of estimated finance to fund the actions needed across different sectors to keep the average global temperature rise within 1.5° Celsius by the end of this century. The 29th Conference of the Parties (COP 29) meeting at Baku, Azerbaijan, in November 2024, was meant for the Parties to the Paris Agreement to have a New Collective Quantified Goal on Climate Finance (NCQG), replacing a $100 billion floor and laying a new floor taking into account the needs and the priorities of developing countries to tackle the climate crisis.

In response to persistent demand by all the major negotiating groups belonging to the developing south that the developed north mobilise $1.3 trillion by 2030, the developed north agreed to release only $300 billion per year by 2035.The $300 billion mark ignores the estimation by the UNFCCC's Standing Committee on Finance (SFC) relating to the annual financial needs of developing countries, which it derived from their NDCs. As in the SFC's estimation, the financial needs stand at between $455 billion-$584 billion. Even these figures cover around half of the 5,760 costed and non-costed needs identified by 98 developing countries in their NDCs (Third Report of the Independent High-level Expert Group on Climate Finance, November, 2024).

The decision on the NCQG makes reference to the financial needs of those particularly vulnerable to the adverse effects of climate change such as the least developed countries (LDC) and small island developing states (SIDS). But the NCQG does not make minimum allocation floors for the LDCs and SIDS.

During the meeting, the Alliance of Small Island States demanded the allocation of $39 billion for SIDS while the LDC demanded at least $220 billion for them. It appears that the first-ever Global Stocktake (GST) in consonance with the Paris Agreement in 2023 also failed in influencing the cause of loss and damage concern in the NCQG. In the GST estimation, economic costs are estimated to reach $447 billion-$894 billion per year by 2030.

India and the NCQG

India's perspective on the delivery of climate finance from the developed north to the developing south is derived from equity frame expressed in the principle of common but differentiated responsibility and respective capability. It is notable that India joined the Montreal Protocol to protect the ozone layer from further depletion, which led to setting up of a multilateral fund of $240 million, including an additional $80 million for use in India, China and other eligible low-income Parties. During COP29, India specified that the new floor should mobilise $1.3 trillion by 2030, of which at least $600 billion should come in the form of grants and concessional resources. On other major agenda items, mitigation work programme, just transition work programme and GST, India's representative called for an adequate provisioning of finance and other means of implementation to fulfil them. India's submission of NDC next year is contingent on a decision relating to finance (Earth Negotiations Bulletin–, November 22, 2024).

India has expressed its extreme disappointment on the adoption of the NCQG in its present form, shape – which was without its consultation. It made serious objections against the COP29 presidency and the Secretariat in the way it was finalised – which is at the expense of trust, collaboration and in contravention of the UNFCCC's norm, on an issue which is a creation of the developed north but which affects developing countries more. India outrightly rejected the NCQG. It also added that this NCQG expects the developing world to mobilise resources. In India's view, the paltry sum will influence the ambition and the implementation of its NDC.

What the developed north must do

The pith and substance of the Paris Agreement are the NDCs. In expecting the developing south to bring out more ambitious NDCs relating to the mitigation of greenhouse gases and implementing the same effectively, it is equally important on the part of the developed north to raise their scale and quality of climate finance and also make sincere efforts in putting in place a coherent climate finance architecture.

This will ensure adequate, directly accessible and affordable climate finance to the developing countries.

The scale and the quality of climate finance need to be raised, with sincere efforts being made to have a coherent climate finance architecture in place

Saurabh Pandey

Topic → Climate Finance

Climate Finance and Its Role in Climate Change Negotiations

Climate finance has become a pivotal topic in climate change negotiations since the United Nations initiated discussions back in 1991. The urgency of addressing climate change has only intensified, making financial support for developing countries a critical component of these negotiations.

Introduction to Climate Finance

So, what exactly is climate finance? In simple terms, it refers to the financial resources provided to support climate action, particularly in developing countries. This includes funding for mitigation and adaptation efforts, technology transfer, and capacity-building initiatives.

Historical Context of Climate Negotiations

The journey began with the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, which laid the groundwork for international climate agreements. Article 4(7) of the UNFCCC emphasizes that developing countries' ability to fulfill their climate commitments hinges on the financial and technological support they receive from developed nations.

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The UNFCCC and Its Financial Provisions

The UNFCCC established a framework for climate action, but it also highlighted the financial disparities between developed and developing countries. This imbalance has been a recurring theme in climate negotiations, as developing nations often lack the resources to implement necessary climate actions.

The Paris Agreement and Financial Commitments

Fast forward to the Paris Agreement, which was adopted in 2015. This landmark agreement retained the financial provisions from the UNFCCC, specifically in Article 9(1), which binds developed countries to mobilize finance for developing nations.

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Article 9(1) Explained

Article 9(1) is crucial because it acknowledges the responsibility of developed countries to provide financial support. This commitment is essential for enabling developing countries to pursue their climate goals effectively.

The Importance of Finance for Developing Countries

Without adequate financial resources, developing countries struggle to implement their Nationally Determined Contributions (NDCs) and adapt to the impacts of climate change. This financial support is not just a nice-to-have; it's a necessity for survival.

The $100 Billion Commitment

In 2009, developed countries pledged to mobilize $100 billion annually by 2020 to support climate action in developing countries. However, this commitment has faced significant challenges.

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The Shortfall in Climate Finance

Unfortunately, the $100 billion target was only met in 2022, and even then, it fell short of the growing financial needs of developing countries. Reports indicate that the actual financial requirements are much higher, especially to keep global temperature rise within 1.5°C.

The Need for a New Collective Quantified Goal (NCQG)

The upcoming COP 29 meeting in Baku, Azerbaijan, in November 2024, aims to establish a New Collective Quantified Goal (NCQG) to replace the $100 billion floor. This new goal must consider the pressing needs of developing countries in tackling the climate crisis.

The Financial Needs of Developing Countries

The financial needs of developing countries are staggering. The UNFCCC's Standing Committee on Finance estimates that these nations require between $455 billion and $584 billion annually to meet their climate goals.

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The Role of NDCs in Climate Finance

NDCs outline the climate actions that countries intend to take, but many developing nations struggle to fund these initiatives. The financial gap is evident, as the $300 billion per year proposed by developed countries falls short of the actual needs.

The Disparity in Financial Estimates

The disparity between the financial commitments made by developed countries and the actual needs of developing nations is alarming. The NCQG must address this gap to ensure that vulnerable countries receive the support they need.

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The Response from Developing Countries

Developing countries, particularly India, have voiced their concerns regarding the adequacy of climate finance. India has called for a mobilization of $1.3 trillion by 2030, with a significant portion coming in the form of grants.

India's Perspective on Climate Finance

India’s stance is rooted in the principle of common but differentiated responsibilities. The country has expressed disappointment with the current NCQG, arguing that it lacks adequate consultation and fails to meet the needs of developing nations.

The Call for Increased Financial Support

India’s rejection of the NCQG highlights the urgent need for developed countries to step up their financial commitments. The current proposals do not align with the ambitious climate goals set forth in the Paris Agreement.

Conclusion

In conclusion, climate finance is a critical element in the fight against climate change. The commitments made by developed countries must be met with sincerity and urgency to ensure that developing nations can effectively address the climate crisis. Without adequate financial support, the goals of the Paris Agreement remain out of reach.

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The nature of dissent in the Indian judiciary

The dissents of the U.S. Supreme Court are largely based on the political inclination of judges, who are direct appointees of the President, confirmed by the Senate. Indian judicial dissents have, however, varied from political, to social to purely intellectual disagreements

LETTER & SPIRIT

Shivani Vij

Dissent is an important facet of a true democracy. While this is true for citizens in the republic, or parliamentarians in the legislature, it is also true for judges of a constitutional court. India and the U.S. are two strong democracies with opinionated judiciaries. Though dissents in the Indian Supreme Court (SC) are as powerful as the U.S. Supreme Court (SCOTUS), their reasons differ.

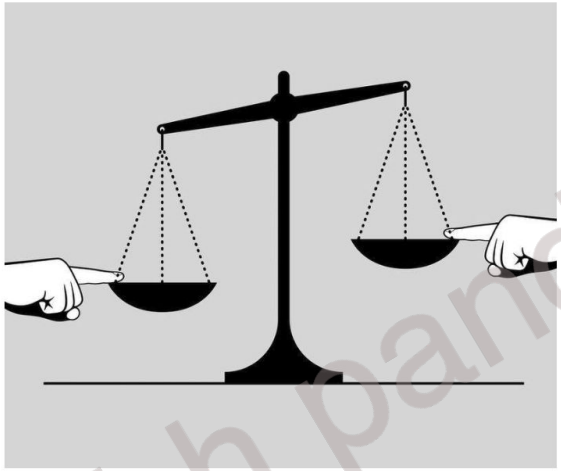
The dissents of SCOTUS are largely based on the political inclination of judges, who are direct appointees of the President, confirmed by the Senate. Justice Stephen Breyer, for instance, an appointee by the Democrats, has shown himself to be pro-affirmative action, pro-abortion and against capital punishment. His dissent in *Glossip versus Gross* (2015) held that capital punishment violated the Eighth Amendment of the Bill of Rights, which prevented inhumane and degrading punishment. Justice Samuel Alito, on the other hand, a Republican appointee, is both anti-abortion and anti-gay rights. His dissent in *Obergefell versus Hodges* (2015) reasoned that the Constitution did not address the right to marry of same-sex couples and therefore, the courts could not grant it.

Indian judicial dissents have, however, varied from political, to social to purely intellectual disagreements.

Political dissent

Unlike the U.S., Indian judges are not appointees of the ruling party and are selected through a collegium of senior judges. Their decisions do not have a similar political undertone and may or may not associate with the view of the ruling party that was in power when they were appointed.

In the case of *ADM Jabalpur* (1976), four out of five judges held that the enforcement of fundamental rights, including Article 21, remained suspended during the national emergency under Article 359. The majority judgment was the politically sound one at the time. Justice H.R. Khanna, however, withstood the political pressure of the time, dissented and reasoned that if Article 21 remained suspended, there would be no recourse to deprivation of life and liberty, albeit in emergency. His resolve to keep 'rights' intact amidst a turbulent India, strengthened his voice on the Bench and also became the law later by a constitutional amendment to Article 359.



ISTOCKPHOTO

Another example of this could be found in the *P.V. Narasimha Rao* (1998) case, where the question was if accepting bribes for voting in Parliament was covered under parliamentary privilege, and whether it enjoyed immunity from prosecution. The majority said yes, but Justices S.C. Agarwal and A.S. Anand dissented. The majority view reflected the political atmosphere at the time and was favourable to the ruling Congress party. However, the dissent endured and later became the view of the court in *Sita Soren* (2023), where the SC overruled such an expanded view of immunity.

Dissent which is social

A dissent could also reflect a different social understanding or implication of a legal issue. In *Shayara Bano* (2017), the SC dealt with the constitutionality of the 'triple talaq' as a form of divorce among the Sunnis in Islam. Justices J.S. Khehar and Abdul Nazeer dissented with the majority, which struck down triple talaq for violating the rights of life of Muslim women. The two judges reasoned that the triple talaq was an integral part of the Sunni personal law and not violative of constitutional rights. Further, it was not for the courts to determine its constitutionality, since it is only the legislature that can intervene in socially unacceptable practices in different religions.

The decision in *Aishat Shifa* (2022) also displayed a discordant understanding of religion. This case did not have a dissent but had two separate opinions. The question was whether the State could prohibit Muslim girls from wearing a hijab to school by enforcing a universal dress code. Justice Hemant Gupta was of the view that secularism permitted the State to do so since religion was a private affair, which had no space in classrooms of a State-run school. Justice Dhulia, on the other hand, disagreed and considered 'diversity', 'plurality' and 'tolerance' as values underpinning the Constitution. This disagreement stemmed from different understandings of secularism.

Intellectual critique

A dissent could also be plainly intellectual, like that of Justice B.V. Nagarathna in *Lalta Prasad Vaish* (2024), the industrial alcohol case. Here nine judges of the SC determined whether States have the legislative competence to tax 'industrial alcohol', or does only the Centre have the authority. Disagreeing with eight judges, Justice Nagarathna said that States could not tax industrial alcohol. The disagreement was on the interpretation of the term 'intoxicating liquor' under Entry 8 of List 2 in the Seventh Schedule of the Constitution. The majority believed that this legislative entry was broad enough to include liquor unfit for human consumption, and therefore industrial alcohol. States could therefore tax it. This reasoning did not sit well with Justice Nagarathna, who opined that industrial alcohol is used for manufacturing purposes and cannot be subsumed within 'intoxicating liquor', which is liquor for human consumption. The difference of opinion was solely on the interpretation of the text of the Constitution –an intellectual one.

Shivani Vij is a lawyer practising in Delhi.

THE GIST

- Unlike the U.S., Indian judges are not appointees of the ruling party and are selected through a collegium of senior judges.
- In *Shayara Bano* (2017), the SC dealt with the constitutionality of the 'triple talaq' as a form of divorce among the Sunnis in Islam. Justices J.S. Khehar and Abdul Nazeer dissented with the majority, which struck down triple talaq for violating the rights of life of Muslim women.
- A dissent could also be plainly intellectual, like that of Justice B.V. Nagarathna in *Lalta Prasad Vaish* (2024), the industrial alcohol case.

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Topic →The Power of Dissent: A Comparative Analysis of Judicial Opinions in India and the U.S.

Introduction

Dissent is a vital cog in the machinery of democracy, serving as a bulwark against tyranny and a harbinger of change. In the judicial context, dissenting opinions play an essential role in shaping legal precedents and reflecting the diversity of thought in a society.

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Political Dissent in the U.S. Supreme Court

The U.S. Supreme Court, often seen as the arbiter of constitutional interpretation, has a history steeped in political dissent. The justices' affiliations significantly influence their opinions, with appointees reflecting the ideologies of the presidents who nominated them.

Case Studies:

Glossip v. Gross (2015): Justice Stephen Breyer, a Democratic appointee, argued that capital punishment violated the Eighth Amendment, highlighting concerns over inhumane treatment.

Obergefell v. Hodges (2015): Conversely, Justice Samuel Alito, a Republican appointee, contended that the Constitution did not guarantee the right for same-sex couples to marry, reflecting a more conservative interpretation.

The political underpinnings of these cases illustrate how dissent can be a mirror of the societal and political climate, influencing public policy and legal standards.

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Political Dissent in the Indian Supreme Court

In stark contrast, the Indian Supreme Court's dissent is less politically driven due to the method of appointing judges through a collegium system, which aims to insulate them from political pressures.

Landmark Cases:

ADM Jabalpur (1976): Justice H.R. Khanna dissented against the majority's ruling that suspended fundamental rights during a national emergency, emphasizing the inviolability of life and liberty.

P.V. Narasimha Rao (1998): The majority's ruling favored the ruling party, but dissenting justices reinforced the importance of accountability in governance, which later influenced subsequent judgments.

These examples highlight how Indian judicial dissent often reflects a commitment to constitutional principles rather than political affiliation.

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Social Dissent: Reflections on Society’s Changing Norms

Judicial dissent also serves as a lens through which societal norms and values can be examined and challenged. In both the U.S. and India, dissenting opinions can bring to light issues that resonate with the populace.

Case Studies:

Shayara Bano (2017): The Supreme Court's ruling against triple talaq was contested by dissenting justices who argued for cultural practices' preservation, illustrating the tension between modernization and tradition.

Aishat Shifa (2022): In a divided opinion, justices displayed conflicting views on secularism and religious rights, presenting a broader debate on the role of religion in public life.

Such dissents not only reflect differing judicial philosophies but also engage with the evolving social fabric of both nations.

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Intellectual Dissent: Legal Interpretations and Doctrinal Disagreements

Intellectual dissent underscores the importance of robust legal discourse, often leading to significant shifts in interpretation and understanding of the law.

Case Study:

Lalta Prasad Vaish (2024): Justice B.V. Nagarathna's dissent focused on the definition of ‘intoxicating liquor’ and the scope of states' taxing authority, revealing the nuanced interpretations that can arise from constitutional text.

This intellectual rigor enriches the judicial process, prompting discussions that can alter the trajectory of legal understanding.

Conclusion

Judicial dissent, whether politically motivated or socially driven, plays an indispensable role in both the U.S. and Indian legal systems. It fosters a culture of critical engagement, ensuring that diverse perspectives are considered, ultimately strengthening the foundations of democracy.

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Are former Prime Ministers mandated memorials?

What was the Congress party's demand with respect to the funeral and memorial of former Prime Minister Manmohan Singh? Is there any rule regarding memorials for former PMs?

Vijaita Singh

The story so far:

Former Prime Minister Manmohan Singh passed away on December 26. The Union Ministry of Home Affairs (MHA) declared seven days of State mourning and announced a state funeral for the dignitary. Mr. Singh was cremated at the Nigambodh Ghat in central Delhi, a first for any former PM. The Congress party said it was an "insult" that a separate place was not allocated by the government for the funeral of the former PM. The Congress party demanded that a memorial be built at the designated place where the cremation took place.

Is there a rule related to memorials?

While guidelines exist for State funerals, there is no specific rule or government order regarding allocation of space for memorials for former PMs. According to constitutional expert P.D.T Achary, there was a departure in the case of Mr. Singh. "As far as I know, there is no such rule. The convention is that former PMs have been cremated at designated places and in this case there is a departure. They cremated him at a place where anybody can be cremated even a common man. In our country though everyone is equal before the law, in society, a former PM has a status and especially a person like Manmohan Singh who was also globally respected," Mr. Achary said.

What has been the trend in the past?

Except PM Vishwanath Pratap Singh, all other former PMs have memorials dedicated to them, majorly in Delhi and other parts of the country.

P. V. Narasimha Rao got a memorial in his name at Ekta Sthal in Delhi in 2015, 10 years after his death in 2004. In Delhi, the samadhi of Jawaharlal Nehru is known as Shanti Vana, Lal Bahadur Shastri's memorial is known as Vijay Ghat, that of Charan Singh's is Kisan Ghat, Indira Gandhi's memorial is at Shakti Sthal, and Rajiv Gandhi's memorial is known as Vir Bhumi. In 2013, due to paucity of space, the Congress government decided that all memorials will be built at Smriti Sthal.

Who maintains the memorials?

According to a reply furnished by the Culture Ministry on December 11, 2012 in Lok Sabha, the memorials of various personalities are maintained by the respective State Governments and local municipalities. "However, the Central Government through the Ministry of Urban Development is looking after the upkeep and maintenance of the Samadhis adjacent to Rajghat, New Delhi, Morarji Desai's Samadhi at Abhay Ghat at Ahmedabad and the Rajiv Gandhi Memorial at Sriperumbudur (Tamil Nadu)," the reply stated.

What is the Congress's demand?

On December 27, Congress president Mallikarjun Kharge wrote to Prime Minister Narendra Modi, requesting the Union Government to identify a designated place where the last rites of the departed leader could be held and a memorial built thereafter. Despite the request, the cremation was held at Nigambodh Ghat on December 28. Following an uproar, the MHA released a press statement on December 27 at 11.45 pm. It stated that the government received a request to allocate space for a memorial for the former Prime Minister. "Immediately after the Cabinet meeting, Home Minister Amit Shah communicated to Congress President Kharge and the family of Late Dr Manmohan Singh that the Government will allocate space for the memorial. In the meanwhile cremation and other formalities can happen because a Trust has to be formed and space has to be allocated to it," the statement said. Till December 30, the memorial for Mr. Singh had not been announced. Atal Bihari Vajpayee who passed on August 16, 2018 was cremated at Smriti Sthal, and a memorial came up at the same place within 45 days. The memorial was funded by the "Atal Smriti Nyas Society". It was built at a total cost of ₹10.51 crore which was borne entirely by the society.

THE GIST

- While guidelines exist for State funerals, there is no specific rule or government order regarding allocation of space for memorials for former PMs.
- On December 27, Congress president Mallikarjun Kharge wrote to Prime Minister Narendra Modi, requesting the Union Government to identify a designated place where the last rites of the departed leader could be held and a memorial built thereafter.
- According to a reply furnished by the Culture Ministry on December 11, 2012 in Lok Sabha, the memorials of various personalities are maintained by the respective State Governments and local municipalities.

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Topic →Former Prime Minister Manmohan Singh's Cremation and Memori Controversy

Key Events and Reactions

🕊️ Passing of Manmohan Singh: Former Prime Minister Manmohan Singh passed away on December 26, leading to a period of seven days of State mourning and a state funeral.

🔥 Cremation Details: Mr. Singh was cremated at Nigambodh Ghat in central Delhi, a first for any former Prime Minister.

🏛️ Political Criticism: The Congress party criticized the government for not allocating a separate place for Mr. Singh's funeral, labeling it an "insult."

📜 Constitutional Insights: According to constitutional expert P.D.T Achary, there are no specific rules regarding the allocation of space for memorials for former Prime Ministers.

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⚖️ Traditional Practices: Traditionally, former Prime Ministers have been cremated at designated places, but Mr. Singh's cremation took place at a location accessible to the public.

🏛️ Memorial Management: Memorials for various personalities are maintained by state governments and local municipalities, while the Central Government oversees specific memorials in New Delhi and Tamil Nadu.

🏗️ Demand for Memorial: The Congress party has demanded that a memorial be built at the site of Mr. Singh's cremation.

Summary: Former Prime Minister Manmohan Singh's cremation at a public site sparked controversy, with calls for a memorial and discussions on the lack of specific rules for such memorials.

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India-Nepal joint military exercise begins

Press Trust of India
KATHMANDU

The 18th edition of Exercise Surya Kiran, a joint military exercise between India and Nepal aimed at enhancing interoperability and fostering collaboration between the two nations' Armies, began on Tuesday.

The annual training event is conducted alternatively in the two countries.

The exercise, taking place at the Nepal Army Battle School, Saljhandi in the Shivalik ranges of Western Nepal, will be conducted till January 13.

It "aims to enhance interoperability, primarily in the fields of Counter Terrorism (CT) Operations," according to an X post by the Indian Embassy here.

"Exercise Surya Kiran signifies the strong bond of friendship, trust and common military linkages that exist between India and Nepal," it said. The Indian Army contingent, comprising 334 personnel, is being led by a Battalion from the 11th Gorkha Rifles, according to a press release by the Defence Ministry.

The exercise aims to enhance interoperability in jungle warfare, counter-terrorism operations in mountains and Humanitarian Assistance

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Topic → Exercise Surya Kiran: Strengthening India-Nepal Military Ties

Overview

🇮🇳 18th Edition: Exercise Surya Kiran is a joint military exercise between India and Nepal.

🏞️ Location: Held at the Nepal Army Battle School in Saljhandi, situated in the Shivalik ranges of Western Nepal.

📅 Duration: Commenced on Tuesday, continuing until January 13.

🤝 Objective: Enhance interoperability in Counter Terrorism (CT) Operations and jungle warfare.

👥 Participants: Indian Army contingent includes 334 personnel, led by a Battalion from the 11th Gorkha Rifles.

🌍 Significance: Symbolizes the strong bond of friendship, trust, and military collaboration between India and Nepal.

🚑 Focus: Also emphasizes Humanitarian Assistance operations.

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Key Highlights

Interoperability: Aims to improve joint operational capabilities in challenging terrains.
Cultural Exchange: Fosters mutual understanding and cultural exchange between the two armies.
Humanitarian Focus: Includes training for disaster response and humanitarian aid.

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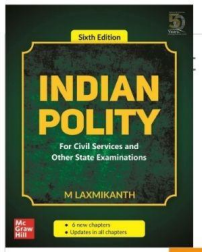

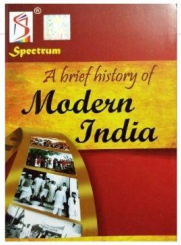

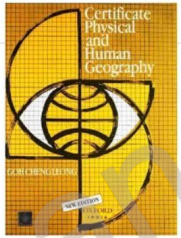

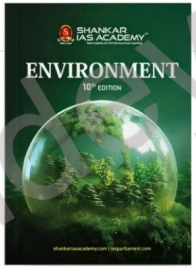

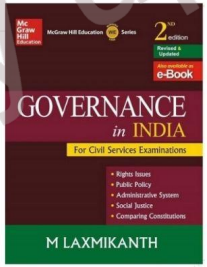

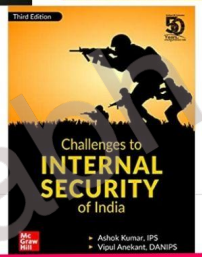

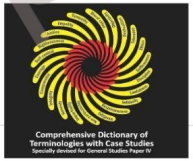

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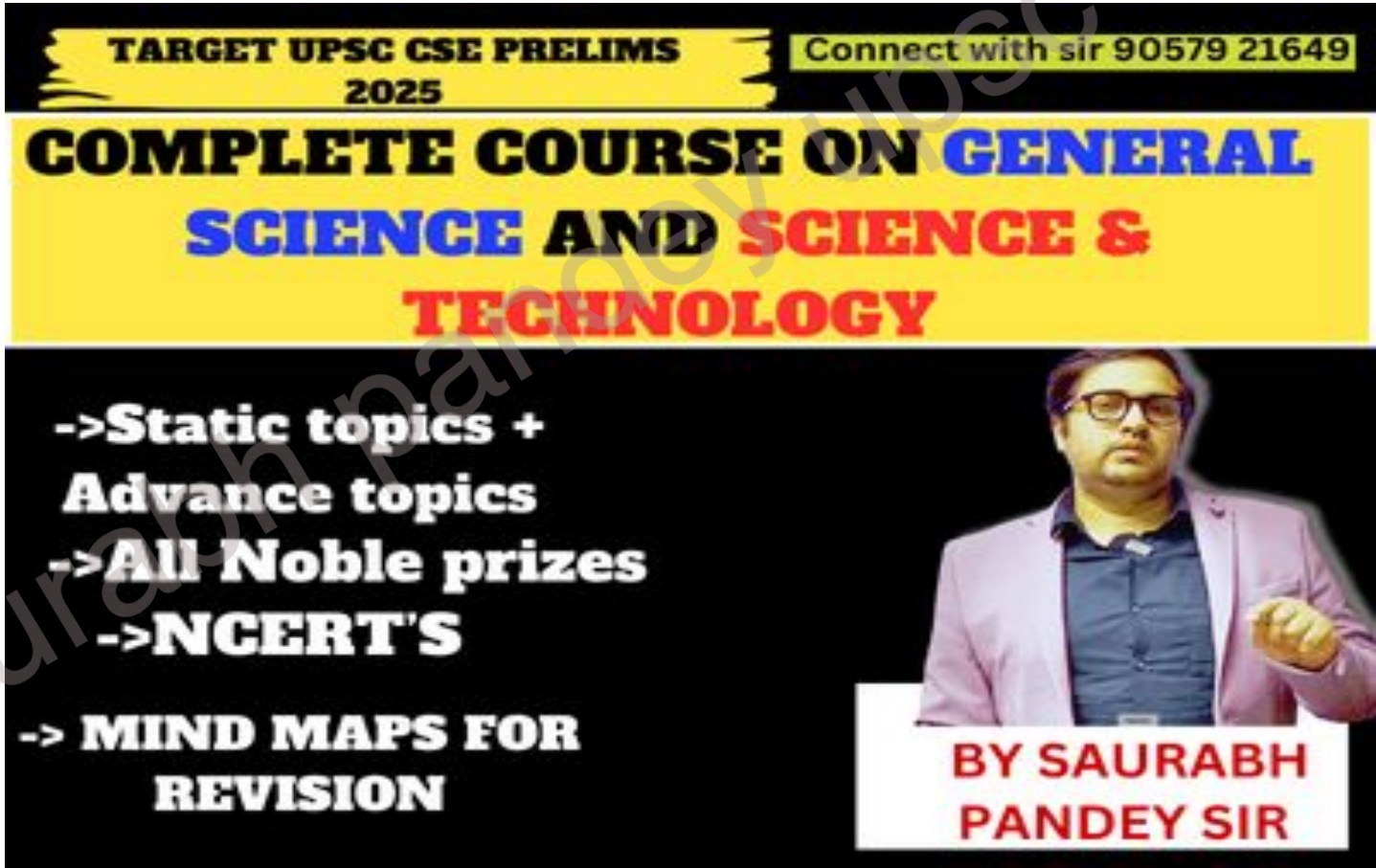

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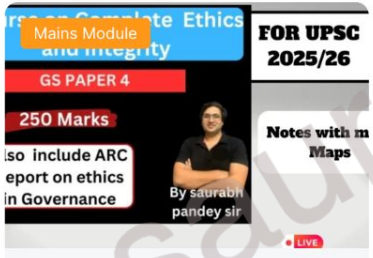

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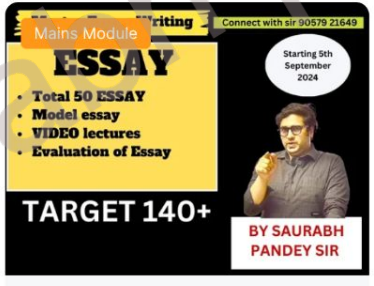

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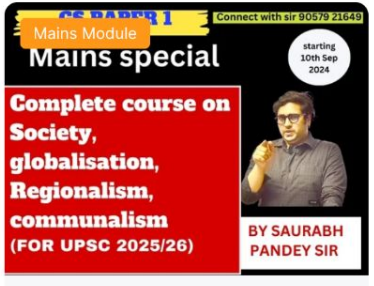

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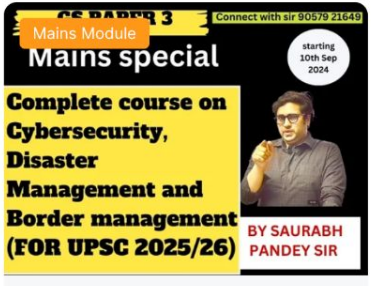

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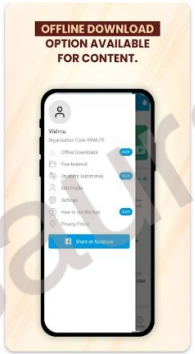

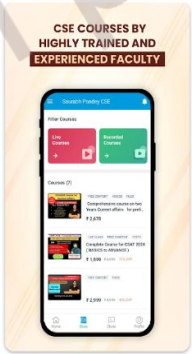

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A) Betwa River

B) Chambal River

C) Yamuna River

D) Ken River

Ans: D

Prime Minister Narendra Modi laid the foundation stone of the Ken- Betwa River Linking National Project on Wednesday (December 25), on the 100 th birth anniversary of former Prime Minister Atal Bihari Vajpayee.

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