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INSIDE



Gas blowout at ONGC well triggers fire

RAZOLE
A blowout of natural gas triggered a fire in a well owned by the Oil and Natural Gas Corporation on the outskirts of Irusumanda village in A.P.'s Dr. B. R. Ambedkar Konaseema district on Monday. » PAGE 3

HC refuses to stay trial against Lalu in IRCTC 'scam'

NEW DELHI
The Delhi High Court on Monday declined to stay the trial against RJD leader Lalu Prasad in the IRCTC scam case. It asked the CBI to submit its response to his plea challenging an order framing charges against him. » PAGE 4

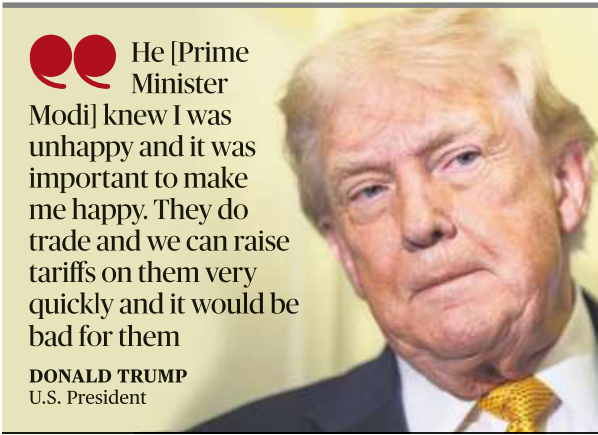
Trump asserts India cut import of Russian crude to please him

U.S. President says that Prime Minister Modi wanted to 'make him happy'; Senator Graham claims India's Ambassador asked him to mediate with the President for lowering 25% penalty tariff; a Russia Sanctions Bill would mandate up to 500% tariffs

Suhasini Haidar
NEW DELHI

U.S. President Donald Trump on Sunday asserted that India cut its oil imports from Russia in recent months in an effort to "make him happy", and to secure the India-U.S. trade deal, even as he threatened more tariffs could "come quickly" if India continues its purchases from Russia.

Backing Mr. Trump's claim, U.S. Senator Lindsey Graham said that India's Ambassador to the U.S., Vinay Kwatra, had brought up India's declining oil imports from Russia during a meeting in December 2025, requesting Mr. Graham to ask Mr. Trump to "relieve the tariff" of 25% imposed by the U.S. over



and above 25% reciprocal tariffs.

"I was at the Indian Ambassador's house about a month ago and all he wanted to talk about is how they are buying less Russian oil. Would you tell the President to relieve the tariff? This stuff works," Mr. Graham said during a press

conference held by Mr. Trump.

"They [India] wanted to make me happy," interjected Mr. Trump. "Basically, he wanted to... [Prime Minister] Modi is a very good man. He's a good guy. He knew I was unhappy and it was important to make me happy. They do trade and

Congress hits out at Centre over Trump's threat

NEW DELHI
The Congress on Monday criticised the Centre after U.S. President Donald Trump said U.S. could raise tariffs on Indian imports "very quickly", saying that public displays of bonhomie with the American leader had yielded little diplomatic dividend. » PAGE 4

we can raise tariffs on them very quickly and it would be bad for them," he added.

The External Affairs Ministry did not respond to requests for comments on the claims by the U.S. leaders.

In the past, the MEA has termed the American im-

position of unilateral sanctions as "double standards", given that the U.S. itself buys Russian oil, uranium and critical minerals.

While Mr. Graham did not specify the date of the meeting, Mr. Kwatra had hosted a bipartisan U.S. Senate delegation on December 2 at the Indian Embassy in Washington, where Mr. Graham and Senator Richard Blumenthal were present.

Both Senators are leading co-sponsors of a Russia Sanctions Bill introduced in the U.S. Senate that mandates up to 500% tariffs on countries that continue to purchase oil or uranium from Russia.

Mr. Trump had made the claim that India had promised to cut Russian oil imports "completely" on several occasions.

SC denies bail to Umar Khalid and Sharjeel Imam

Aaratrika Bhaumik
NEW DELHI

The Supreme Court on Monday denied bail to activists Umar Khalid and Sharjeel Imam in a case registered under the Unlawful Activities (Prevention) Act (UAPA) relating to the alleged "larger conspiracy" behind the February 2020 riots in New Delhi. The court said the evidence on record *prima facie* attributed to them a "central and formative role" in the orchestration of the violence.

A Bench of Justices Arvind Kumar and N.V. Anjaria, however, granted conditional bail to five other co-accused, drawing a clear distinction between their alleged roles and those attributed to Mr. Khalid and Mr. Imam.

The court held that the allegations against Gulfisha Fatima, Meeran Haider, Shifa-ur-Rehman, Mohd. Saleem Khan, and Shadab Ahmed reflected conduct of a subsidiary or facilitative nature, thereby warranting differential treatment.

The Bench underscored the need to assess the "hierarchy of participation".

While Mr. Khalid and Mr. Imam were found to have exercised "command authority", the judges noted that the co-accused lacked any "independent ability" to mobilise resources or exert organisational leverage and posed no "systemic risk".

"In the case of the alleged masterminds, namely Sharjeel Imam and Umar Khalid, the prosecution material comprises direct, corroborative, and contemporaneous evidence.... Where evidentiary strength varies materially between accused persons, the need for continued detention likewise varies," the Bench observed.

The appeals before the top court arose from a Sep-



Umar Khalid

tember 2 judgment of the Delhi High Court refusing bail to the accused.

Delay not 'trump card'
Addressing the defence's contention that prolonged incarceration without trial offends the right to personal liberty, the Bench underscored that delay, by itself, cannot operate as a "trump card" to override statutory constraints on bail under UAPA.

"The jurisprudence of this court does not support a construction whereby delay simpliciter eclipses a statutory regime enacted by Parliament to address offences of a special category," the ruling, authored by Justice Kumar, underscored.

The court also rejected the defence claim that the delay in the commencement of the trial was attributable solely to the Delhi Police and constituted a "fatal flaw" in the prosecution's case. It noted that a perusal of the trial court record indicated that the prosecution had, at various stages, expressed readiness to commence arguments on charge, while objections and requests for deferment were raised on behalf of the accused.

However, acknowledging that the prolonged pre-trial custody of Mr. Khalid and Mr. Imam raises a "constitutional concern", the Bench directed the trial court to expedite the proceedings.

RELATED REPORTS
» PAGE 5

Maduro pleads not guilty, says he is still the President

Agence France-Presse
NEW YORK

Venezuelan President Nicolas Maduro pleaded not guilty to charges of narco-terrorism in a New York court on Monday, two days after being snatched along with his wife, Cilia Flores, by U.S. forces from Caracas. "I'm the President of the Republic of Venezuela and I'm here kidnapped," Mr. Maduro told a federal judge. "I was captured at my home in Caracas, Venezuela," he said.

The judge ordered both Mr. Maduro and Ms. Flores, who likewise pleaded not guilty, to remain behind bars and set a new hearing date of March 17.

Late on Sunday interim Venezuelan leader Delcy Rodriguez stepped back from her initial defiance by offering to work with U.S.

President Donald Trump. "We extend an invitation to the U.S. to work together on an agenda for cooperation," the former Vice-President said. When asked what he needs from Ms. Rodriguez, Mr. Trump said on Sunday: "We need total access. We need access to the oil and other things in their country that allow us to rebuild their country."

Meanwhile, some 2,000 Maduro supporters, including rifle-wielding men on motorcycles, rallied on Sunday in Caracas even as the Venezuelan military, loyal to Mr. Maduro, announced it recognised Ms. Rodriguez and urged calm.

Venezuela's Parliament on Monday re-elected Jorge Rodriguez, brother of Ms. Rodriguez, as its head.

'WILL ENFORCE CHANGES'
» PAGE 14



Shocking turn: U.S. Law enforcement officials move captured Venezuelan President Nicolas Maduro and his wife, Cilia Flores, out of a helicopter in New York City on Monday ahead of an initial appearance to face federal charges. REUTERS

Bangladesh cites 'hurt sentiments' to ban IPL telecast after Mustafizur's exclusion

Kallol Bhattacharjee
NEW DELHI

Two days after Indian Premier League (IPL) franchise Kolkata Knight Riders (KKR) dropped Bangladeshi fast bowler Mustafizur Rahman from its team, Dhaka banned the telecast of the upcoming IPL season starting March 26 citing "hurt public sentiments".

"It is being requested in these circumstances that all sports and events of the Indian Premier League should be stopped till the next order," said a notification signed by Mohammad Feroze Khan, Assistant Secretary of Bangladesh's Information and Broadcasting Ministry.



Bangladeshi pacer Mustafizur Rahman with his Delhi Capitals teammates during the 2025 IPL season. FILE PHOTO

The decision came two days after the sports and youth affairs adviser of the interim government Asif Nazrul's request to the Ministry to ban the IPL's telecast.

The Board of Control of

Cricket in India's (BCCI) secretary Devajit Saikia had hinted at Bangladesh's internal breakdown of law and order, including attacks on minorities, and said that the decision on Mr. Rahman was taken due

to "recent developments" going on "all across".

KKR had picked Mr. Rahman in the December 16, 2025, auction for ₹9.20 crore, but on January 3, it announced that he had been dropped following instructions from the BCCI.

'Condemnable' action
Bangladesh interim government's adviser on cultural affairs Mostafa Sarwar Farooki said KKR's treatment of the bowler was "condemnable". He expressed doubts on whether BCCI's decision was a fallout of Bangladesh Foreign Ministry's recent expression of concern about alleged atrocities on minority communities in India.

SC allows petitioner to approach Centre on timely revision of EPFO wage ceiling

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Monday allowed a petitioner to approach the Centre with a representation on the revision of wage ceiling for Employees Provident Fund Scheme (EPFO).

A Bench headed by Justice J.K. Maheshwari permitted petitioner Naveen Prakash Nautiyal, an academic and activist, represented by advocates Pranav Sachdeva and Neha Rath, to file a representation with the government in two weeks, along with a copy of Monday's court order. The government was asked to take a call in four months thereafter.

The petitioner argued



Petitioner has been given two weeks by the apex court to file representation with the Centre.

that the EPFO had not revised rates even though the minimum wage notified by the Union government and by various States was more than the EPFO wage ceiling of ₹15,000 per month. This anomaly has resulted in depriving a majority of workers of the benefits and protection of the EPFO

scheme, a welfare measure. "The EPFO, which administers social security schemes for employees, currently excludes from coverage those whose wages exceed ₹15,000 per month. However, the wage ceiling has historically been revised inconsistently, sometimes after 13-14 years, without any fixed periodicity or linkage to relevant economic indicators such as inflation, minimum wages, per capita income or consumer price index," the petition said.

The erratic approach, the petition argued, had resulted in the exclusion of large sections of the workforce, contrary to the object of providing social security to employees in the

organised sector. The plea submitted that the inconsistency has prevailed over revisions even though the Public Accounts Committee of the 16th Lok Sabha and the EPFO's own Sub-Committee on Enhancing Coverage and Managing Related Litigation, in 2022, had recommended periodic and rational revision.

"But despite approval by the Central Board (EPF) in July 2022, the Centre has not acted upon these recommendations," the plea said. It flagged two major problems – the absence of a prescribed timeline for regular revision of the ceiling and the arbitrary revision of the ceiling leading to "exclusion, reduction in the scheme's coverage".

INBRIEF



Kavitha announces exit from BRS; set to launch new party

Telangana MLC K. Kavitha formally announced her exit from the Bharat Rashtra Samithi (BRS), saying she was “happy to leave an unethical BRS”. Ms. Kavitha, who is the daughter of BRS chief and former Chief Minister K. Chandrasekhar Rao, said she will start a new party and contest in the next Assembly elections. In what she indicated was the last speech as MLC on Monday, she accused the BRS of suspending her without an opportunity to explain her stand.

Antony Raju disqualified as MLA after court verdict

The Kerala Legislative Secretariat on Monday disqualified LDF legislator and former Transport Minister Antony Raju as an MLA following the Judicial First Class Magistrate Court order last week which found the MLA guilty of forging and planting evidence in a evidence tampering case following a drug seizure case booked in 1990. As per the Secretariat, the disqualification is as per the provisions of the Representation of People Act, 1951 and relevant Supreme Court decisions.

Kerala HC extends deadline given to SIT by six weeks

While stating that it is satisfied with the probe by the special investigation team (SIT) into the alleged misappropriation of gold from the Sabarimala temple, the Kerala High Court on Monday extended the deadline given to the SIT to complete the probe by another six weeks. The High Court had given the team a six weeks extension a month ago, following a request by the head of the SIT. This was after the SIT submitted its updated findings to the court.

Shashi Tharoor says he never deviated from the party line

Thiruvananthapuram MP claims that he and Congress have been on the same page on most matters; he says has been in the party for 17 years and shares good ties with his colleagues

Press Trust of India
WAYANAD

Congress Working Committee member Shashi Tharoor, whose recent statements had put the party on the defensive, on Monday said he had never deviated from the party line.

He was speaking to presspersons after attending the leadership camp of the party at Sulthan Bathery here to chalk out strategies for the Kerala Assembly election. “My question is, who said that I left the party line... the party and I have stood on



Shashi Tharoor with party colleagues Ramesh Chennithala, Sunny Joseph, K.C. Venugopal, and V.D. Satheesan. SPECIAL ARRANGEMENT

the same line on most matters,” he said.

He said controversies often arise when media reports are based only on headlines without reading the content. “When I ask

people whether they have read what I wrote, most have not,” he said. Mr. Tharoor said he had been in the party for 17 years and shared good relations with colleagues.

Congress to finalise names for Kerala Assembly polls soon

The Hindu Bureau
KOZHIKODE

The Congress is apparently planning to have an early bird advantage in the upcoming Assembly polls in Kerala by finalising its candidates much ahead of the declaration of the election schedule.

The party has already started bilateral talks for the purpose and the first list could be out by January-end. This is among the main points in the action plan conceived at the two-day ‘Lakshya 2026’ State leadership camp that concluded at Sulthan Bathery in Wayanad on Monday. Leader of the Opposition

V.D. Satheesan presented the action plan before the delegates, prepared in consultation with poll strategist Sunil Kanugolu.

According to party sources, the AICC’s screening committee led by Madhusudan Mistry is likely to visit the State soon. The State-level screening committee will hold talks with its members to zero in on probable candidates.

The Congress is also planning to improve the UDF’s performance in districts like Malappuram and Ernakulam, where it has a strong presence, and Kozhikode and Pathanamthitta, where its presence has been weak in recent years.

Kerala University-run CLAS faces scrutiny

The Hindu Bureau
THIRUVANANTHAPURAM

The Centre for Latin American Studies (CLAS) at Kerala University has found itself at the centre of a controversy over the alleged financial irregularities related to remunerations paid to a foreign journalist for online lectures conducted three years ago. The issue pertains to a two-week summer school programme organised between May 15, 2023, and May 27, 2023.

CLAS Director Girish Kumar R. had requested

the State Bank of India (SBI) Karyavattom branch to remit an amount equivalent to ₹20,000 in U.S. dollars from the centre’s account as honorarium for the Brazil-based journalist.

However, the bank erroneously made a remittance of \$20,000 to the Bank of America. It was only some weeks later that CLAS detected the absence of ₹16,51,500 from its account. With SBI failing to recall the amount, Vice-Chancellor in-charge Mohanan Kunnummal called for legal steps to recover the amount.

Gas leaks from ONGC well in A.P. during repair; villagers evacuated

The Hindu Bureau
RAZOLE

A blowout of natural gas triggered a fire in a well owned by the Oil and Natural Gas Corporation (ONGC) on the outskirts of Irusumanda village in Andhra Pradesh’s Dr. B. R. Ambedkar Konaseema district on Monday.

The gas leak occurred when the well, identified as Mori-5, was being repaired for increasing gas production, said a release from the ONGC. The workover operation (a type of



Flames rise from an ONGC gas well in Dr. B. R. Ambedkar Konaseema district, Andhra Pradesh, on Monday. PTI

major maintenance) was being done by a contractor identified as PEC Operator

Deep Industries Limited. District Collector R. Mahesh Kumar inspected the

blowout site in Malkipuram mandal and nearby villages to initiate precautionary steps. Residents within one km of the well were evacuated, he said.

Cooling operation on ONGC officials said efforts are on to control the natural gas flow or cap the well. They said the agency was coordinating with international experts in this regard. “There is no human habitation within 600 metres of the well. Cooling operation is under way,” they said.

Naidu calls for Telugu unity, interlinking of rivers

The Hindu Bureau
GUNTUR

Andhra Pradesh Chief Minister N. Chandrababu Naidu on Monday made a strong pitch for Telugu unity, river interlinking, and language-driven cultural confidence while addressing a gathering on the concluding day of the third World Telugu Mahasabha in Guntur.

The three-day event, organised by the Andhra Saraswatha Parishath, drew delegates from nearly 40 countries.

Declaring that the platform was not political, Mr. Naidu said he would speak only about unity. “Telugu people may live in two States, but Telugu is our common mother tongue. There should be no animosity between the Telugu States. Whether it is water or cooperation, we must stand together,” he said.

On water resources, the Chief Minister advocated interlinking the Krishna and Godavari rivers and eventually connecting all major rivers in Andhra Pradesh. Citing the success of the Pattiseema project, which ensured water for the Krishna Delta, he said nearly 3,000 TMC of Godavari waters still flow wastefully into the sea every year. A.P. he added, had never objected to Telangana’s use of Godavari waters or its construction of the Kaleshwaram project.

Mr. Naidu also announced the establishment of a Telugu University named after Potti Sriramulu in Rajamahendravaram. He stressed that technology would not erase Telugu but serve as a tool to preserve and promote it.

Rolling waves



Strong gale: Strong wind churns the Malampuzha reservoir in Palakkad in Kerala on Monday. The district has been experiencing unusually heavy winds over the past few days. K. K. MUSTAFAH

3 minors held for throwing stones at religious procession

The Hindu Bureau
BENGALURU

The J.J. Nagar Police nabbed three minor boys for allegedly pelting stones at a religious procession in Bengaluru on Sunday.

The accused are aged between 14 and 15. The police said further investigation was under way to ascertain the motive behind the incident which occurred near V. S. Garden shortly after 8 p.m.

Om Shakti devotees took part in the procession, and a girl, who was part of the procession, sustained head injuries in the stone-pelting incident.

A girl who was taking part in the Om Shakti devotees’ procession sustained head injuries

Tensions prevailed for some time after the devotees gathered outside the police station demanding strict legal action against those who were involved.

Senior police officers intervened and pacified the crowd, following which security was tightened in the area. The J.J. Nagar Police later registered an FIR and conducted a spot inspection.

Hyderabad woman found dead with injuries in U.S.

The Hindu Bureau
HYDERABAD

A 27-year-old Indian woman from Secunderabad, Telangana, was found dead with stab wounds at her former boyfriend’s apartment in Maryland in the United States, days after concern over her whereabouts surfaced on social media and a missing person complaint was filed by the accused himself.

The victim, 27-year-old Nikitha Rao Godishala, was found at an apartment on Twin Rivers Road in Maryland on January 3.

Her ex-boyfriend, 26-year-old Arjun Sharma, had filed a missing person report on January 2, telling police that he had last seen her on December 31 at the same apartment. Investiga-

tors later learned that Mr. Sharma had already left the U.S. and travelled to India.

The Howard County police stated that the concern over Godishala’s disappearance was first raised when her friends shared appeals on Facebook seeking help to locate her.

Detectives executed a search warrant at Mr. Sharma’s apartment on January 3 and found her body with stab wounds. The police believe she was killed shortly after 7 p.m. on December 31.

An arrest warrant has since been obtained against Mr. Sharma, charging him with first- and second-degree murder.

Howard County police said they are working with US federal agencies to lo-

IUML to seek larger share of seats in UDF for Kerala polls

Sam Paul A.
KOZHIKODE

Swiftly acting to work out the modalities of its electoral road map for the upcoming Kerala Assembly elections, the Indian Union Muslim League (IUML) leadership met in Kozhikode on Monday to strategise a high-stakes demand for a larger seat allocation within the Congress-led United Democratic Front (UDF).

The assertive stance of the party is buttressed by its recent performance in the local body polls held in December, where its surge in representation outside Malabar has cemented its role as the undisputed linchpin of the coalition.

The IUML saw its tally of civic seats jump by nearly 40%, securing 3,203 repre-



P.M.A. Salam

sentatives across the State, up from 2,338 in 2020. Crucially, the party demonstrated newfound strength outside its traditional stronghold of Malappuram, making strides in Kasaragod, Kannur, and Pathanamthitta.

In the previous Assembly elections, the IUML maintained robust efficiency, winning 15 of the 25

seats it contested, eclipsing the Congress, which contested the lion’s share of seats.

Briefing the media, IUML State general secretary P.M.A. Salam was explicit on the party’s view on the seat-sharing pact. “The League will demand more seats, as the party deserves them. The matter will be discussed with the Congress. We will make our stance clear after the initial round of talks. At the same time, we are ready to make compromises if new parties join the UDF,” he added.

Its leadership is also aware that a visible expansion of the IUML into the southern districts might inadvertently consolidate Hindu and Christian communities against the front.

Couple from A.P. dies in road accident in the U.S.

The Hindu Bureau
VIJAYAWADA

A couple, Kotikalapudi Krishna Kishore, 44, and his wife K. Asha, 39, who hailed from Palakol in West Godavari district of Andhra Pradesh, died in a road accident in Washington, D.C. on Sunday.

cate him. Interpol is expected to issue a red notice, which would alert law enforcement agencies across nearly 200 countries, including India. Godishala was em-

Mr. Kishore was working as a software engineer, and the family settled in the U.S. a few years ago. The couple has a son and a daughter.

The couple died of the mishap while their children escaped with injuries, and were said to be out of danger.

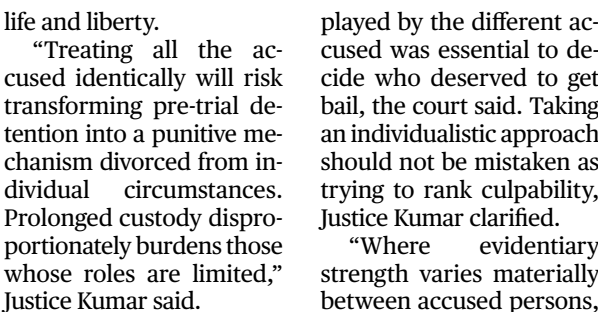
played as a Data and Strategy Analyst at Vheda Health in Columbia, Maryland, having joined the firm in February 2025. Within a year, she received the company’s “All-In

Award” for her performance.

Godishala studied pharmacy at the Jawaharlal Nehru Technological University (JNTU) in Hyderabad from June 2015 to September 2021. She later moved to the U.S. to pursue a master’s degree in Health Information Technology at the University of Maryland, Baltimore County.

Following confirmation of her death, the Indian Embassy in the U.S. said it was assisting the family and coordinating with local authorities. In a post on X, the embassy said it is in contact with Godishala’s family and is extending all possible consular assistance while following up the matter with the concerned authorities.

The judgment held that treating all the accused identically merely because the case against them arises from the same conspiracy would lead to a violation of Article 21 of the Constitution, which enshrined the fundamental right to

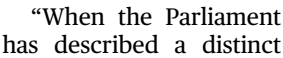


A separate and individual assessment of roles

“The logic of detention cannot be applied homogeneously when the risk profiles of the accused are markedly dissimilar,” the court reasoned.

Delay cannot be used as 'trump card' to secure bail: SC verdict

Though flagging prolonged pre-trial detention as a “serious constitutional concern”, the court said personal liberty must bow to Parliament’s wish, expressed through a special



statutory threshold for grant of bail and where the prosecution has placed *prima facie* material of deliberate action affecting the security of the nation, the court cannot turn a Nelson's eye on such material merely because incarceration is prolonged or liberty is invoked in the abstract. . . . Equally, in cases in which continued incarceration is not necessary to serve the legitimate purpose, the court must not hesitate to restore the personal liberty with stringent conditions to safeguard the larger public interest." Justice Kumar, who authored the

Justice Kumar said a “principled approach”, not diluted by ideology or pre-judgment of the case at hand, must be adopted by courts to strike a delicate balance between the personal liberty of the accused and the collective security of the public in UAPA bail cases.

Nevertheless, Article 21 cannot operate in “isolation of the prevailing law”. The UAPA was after all a special statute meant to address acts which affected security, integrity, sovereignty of the state and stability of civic life. The restrictive conditions of bail under Section 43D(5) were

“No constitutional court can be unmindful of the gravity of restraining the personal liberty of a person before guilt is adjudicated, but the Constitution does not conceive liberty in isolation. When bail is sought under a special statute, the court has to undertake a difficult and balancing exercise, conscious that neither liberty nor security admits absolutism,” the court explained.

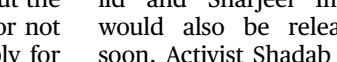
'Shocking order raises troubling questions'

RJD MP Manoj Jha said, "This raises troubling questions about how much incarceration must be endured before constitutional protections are activated and achieved."

Happy for others who got bail; jail is life now, says Umar after verdict

Protracted proceedings

bail for another one



tance said his parents remained confined to home on Monday and hardly spoke with anyone. "He just came out on bail for his sister's wedding. The family was happy. But the decision of the SC for not allowing him to apply for bail for another one year is

Meanwhile, family members of activists who were granted bail expressed hope that Mr. Khalid and Sharjeel Imam would also be released soon. Activist Shadab Ahmad's father, Shamshad

“Umar and Sharjeel are also our children. We are sad they have not been granted bail. They will also get bail sooner or later,” he added.
(With PTI inputs)

A 'terrorist act' is not just finale, but culmination of conspiratorial activities: SC

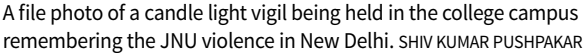
A Bench headed by Justice Arvind Kumar, in its judgment on the bail plea filed by the accused in the Delhi riots “larger conspiracy” case, referred to Section 15(1)(a) of the 1967 Act to note the residuary phrase of “by another means” while defining acts of terror using “bombs, dynamite or other explosive substances or inflammable substances or firearms or other lethal weapons or poisonous or noxious gases or other chemicals or by any other substances (whether biological radioactive, nuclear or otherwise) of a hazardous nature.”

One of the arguments raised by the petitioners in the riots case was that they did not participate in the actual acts of violence in February 2020. The Delhi Police had argued that they had conspired for a “regime change” through an armed rebellion and dis-

The court reasoned that getting bail under Section 43D(5) of the UAPA was more stringent than in any other ordinary criminal laws solely due to the distinctive nature of the offences under the Act.

People behind mob rampage in JNU still unknown, at large, says Teachers' Association

It said the veritable non-action against the assaulters reflected not just incompetence but “complicity” on the part of the JNU administration and the



Delhi Police. It accused the authorities of being lenient towards those involved in criminal activity while abusing power to "oppress the innocent and suppress their voice." It said the moment was made more poignant

nant as two former students – Umar Khalid, Sharjeel Imam – were again denied bail. The attackers are “neither unknown, nor will they be forgotten,” Surajit Majumdar, president, JNUTA said.

BJP welcomes SC decision rejecting bail pleas of Umar Khalid, Sharjeel Imam

“Today, an important decision has come from



the Supreme Court on this very issue, and after this decision, the so-called *tukde-tukde* gang in the country is feeling deep sorrow and pain," he said, adding that letters and remarks of sympathy were coming from abroad for the accused.

“The riots that took place in Delhi were neither spontaneous nor organic, but were completely sponsored and organised. There was a clear intent behind them, as has been seen in several countries in recent years, and for which leaders of parties like the Congress and the Samajwa-

"Tahir Hussain, from whose house petrol bombs and other objectionable materials were recovered, was a leader of the Aam Aadmi Party and was considered close to Arvind Kejriwal. In fact, AAP MP Sanjay Singh had held a press conference, and said that Tahir Hussain was being framed because he was a Muslim. In such a situation, this question also arises for the Aam Aadmi Party as to whether such rioters, terrorists, and elements with a jihadi mindset were being given protection solely because of the 'M' factor," he said.

Hydrogen ‘tests’ basic physics more precisely after tough theory update

Modern techniques can measure gaps between different energy levels of the H2 molecule with an accuracy of about one part in a 100 billion; the question is whether the theories used to ‘calculate’ these energy levels match what experiments have found, and these calculations are very difficult

Vasudevan Mukunth

The hydrogen molecule H₂ is the simplest stable molecule, with two protons and two electrons bound together. Scientists have studied it for more than a century because it’s small enough that theory can try to predict its behaviour from basic physics, yet it’s rich enough to include many features found in larger molecules. This said, after all this time, can scientists predict H₂’s energy levels so accurately that the predictions match with today’s best measurements?

Four challenges

An experimental technique called spectroscopy can measure the distances between the different possible energy levels of H₂ by observing which frequencies of light the molecule can absorb or emit. Modern setups can measure some of these gaps with a relative accuracy of about one part in 100 billion. At this precision, experiments are sensitive not only to the main predictions of quantum mechanics but also to extremely small effects due to quantum electrodynamics (QED). QED is the theory of how charged particles like electrons interact with electromagnetic fields.

A calculation that tries to predict the effects of quantum mechanics as well as QED effects has to get many things right at once. According to a new study by researchers from Poland, there are four big challenges. First, the two electrons in H₂ affect each other strongly, so the calculation must capture their togetherness, or what physicists call correlation. Second, the nuclei don’t sit still: the electrons and the nuclei (the clumps of protons) influence each others’ motions. Third, the electrons move fast enough that the special theory of relativity makes a small but measurable difference to their energy. Fourth, there are smaller QED effects that are measurable with today’s instruments.

Full monty

Over the last decade, experiments have improved dramatically. Earlier, theory and experiment would agree to within about 10 MHz of each other; newer measurements can reach accuracies of the order of 10 kHz. In these experiments, scientists measure the frequency of light that H₂ absorbs or emits when it jumps between two specific energy levels. The frequency of that light equals the energy difference between the levels (divided by Planck’s constant). So 10 MHz and 10 kHz refer to the uncertainty in the measured transition frequency, i.e. how precisely scientists know the difference between two energy levels.

But when measurements got that good, scientists realised that some theoretical predictions were off by several MHz. According to the authors of the new study, from the University of Warsaw and the Adam Mickiewicz University, the scientists suspected one particular reason: the older calculations didn’t completely account for recoil effects inside the relativistic and QED parts of the theory. ‘Recoil’ here refers to the nuclei having a finite mass and responding to the electrons, in slight ways.

Ignoring that response could shift the predicted frequency by very small, yet nonzero, amounts – and which matter at



The Hubble Space Telescope’s shot of IRAS 14568-6304, a young star cloaked in a haze of gas and dust. It appears to be embedded in a swoosh of dark sky, which is the Circinus molecular cloud. Most of the gas in this cloud is hydrogen. ESA/HUBBLE & NASA

today’s precision.

To catch up, the new study’s authors skipped a common shortcut in molecular physics: the Born-Oppenheimer approximation. It assumes the nuclei to be almost fixed while the electrons move, allowing physicists to ignore the effects of the nuclei’s small movements. The authors instead solved the Schrödinger equation for H₂, treating the two electrons and two protons together, without using the Born-Oppenheimer approximation. This is called the direct nonadiabatic approach.

Computationally intensive

The Schrödinger equation is the basic rule in quantum mechanics that says how a quantum system behaves. Put differently, it’s an important mathematical statement that accepts as its inputs which particles and forces are present and spits out which energy levels and quantum states are possible.

If that sounds simple, the truth is that solving the Schrödinger equation for four particles at once is extremely difficult (which is one of the reasons Max Born and J. Robert Oppenheimer came up with their approximation). The whole four-particle system has a single wavefunction, a kind of mathematical master description that physicists use to predict where the particles are likely to be found. And it depends on the positions of two electrons and two protons simultaneously. That means it lives in a very high-dimensional space and physicists need lots of computing power to represent it accurately.

Each particle also interacts with all the others: electrons and protons attract, electron and electron repel, proton and proton repel. As a result physicists can’t cleanly split the problem into ‘the part with the electrons’ and the ‘part with the

Thanks to the new work, the H2 molecule is now an ‘exam’ that fundamental physics has to pass because experiments and the theory now agree at a level such that any disagreements between them, if any, would have to be extraordinarily small

protons’. In this picture, without the Born-Oppenheimer approximation, physicists must handle electronic motion and nuclear motion together from the start, which is also computationally demanding.

Finally, the goal here was to predict the light’s frequencies with a precision of under 1 MHz. That means the calculation couldn’t skip subtle details of the wavefunction, especially in regions where the particles got close.

Exponential functions

To deal with these challenges, the authors used a special kind of wavefunction. A wavefunction is “good” if it can do a good job of describing the stronger attraction when an electron is closer to a proton, the stronger repulsion when two electrons are closer to each other, and the electrons’ situation depending on how close the protons are to each other. The team’s special wavefunction thus used exponential functions. These functions are designed to describe things that change quickly with distance.

For example, an electron’s “influence” around a nucleus tends to be much stronger nearby and drops off as it gets farther away. Exponential functions can naturally describe this sort of behaviour.

After calculating a very accurate ‘baseline’ energy from quantum

mechanics, the authors then made smaller adjustments due to the special theory of relativity and QED.

Exam for physics to pass

Finally the authors reported their results in two ways. One was the dissociation energy, the energy required to split one H₂ molecule into two separate hydrogen atoms. The authors reported the dissociation energy at the lowest rotational and vibrational states of H₂ in its ground electronic state with a relative accuracy of 7 × 10⁻¹⁰. Second, they predicted the frequency corresponding to the gap in energy between these states with a relative accuracy of about 3 × 10⁻⁹.

Next, they compared their theoretical predictions to nine recent measurements of these energy levels and found they agreed almost perfectly.

Their findings were published in the *Journal of Chemical Theory and Computation* on December 5.

Reaching this level of accuracy is important for physicists to test QED in molecular systems and to interpret any future mismatch as a possible sign of an unknown force rather than as a gap in the existing theory.

The study’s authors also pointed to the next bottleneck: further progress for excited states will require fully nonadiabatic calculations of some especially difficult QED ingredients.

More broadly, thanks to the new work, the H₂ molecule is now an ‘exam’ that fundamental physics has to pass because experiments and the theory now agree at a level such that any disagreements between them, if any, would have to be extraordinarily small. And physicists developing new theories predicated on such disagreements also have to come up with ways to identify them.

mukunth.v@thehindu.co.in



Scientists on the slopes of Popocatepetl volcano in Mexico. AP

Scientists obtain first 3D images from inside major volcano

Associated Press

In the predawn darkness, a team of scientists climbs the slope of Mexico’s Popocatepetl volcano, one of the world’s most active. Its mission: figure out what is happening under the crater.

Most of the world’s volcanoes that pose a risk to humans already have detailed maps of their interiors, but not Popocatepetl, despite the fact that some 25 million people live within a 100-km radius and houses, schools, hospitals and five airports could be affected by an eruption.

Other scientists took some early images 15 years ago, but they showed contradictory results and did not have sufficient resolution to see where the magma gathered, Marco Calò, professor in the Mexico National Autonomous University Geophysics Institute’s volcanology department, said.

For five years, the group from Mexico, led by Calò, has climbed the volcano with kilograms of equipment, risking data loss due to bad weather or a volcanic explosion. Now, the team has created the first three-dimensional image of the 5,452-m volcano’s interior, which tells them where the magma accumulates and will help them better understand its activity, and, eventually, help authorities better react to eruptions.

This first 3D image goes 18 km below the crater and shows what appear to be pools of magma with rock between them, and are more numerous towards the southeast of the crater

Inside an active volcano, everything is moving: the rocks, magma, gas and aquifers. It all generates seismic signals. The seismographs among the group’s tools measure vibrations in the ground 100 times per second and generate data that a researcher processes using artificial intelligence.

Little by little the scientists began to infer what kinds of material were where, in what state, at what temperature and at what depth. The map that emerged was far more complex than the drawings of volcanoes most saw in school, with a main vent connecting a chamber of magma with the surface.

This first three-dimensional cross-sectional image goes 18 km below the crater and shows what appear to be various pools of magma at different depths, with rock or other material between them and more numerous towards the southeast of the crater.

Popocatepetl emerged in the crater of other volcanoes in its current form more than 20,000 years ago and has been active since 1994, spewing plumes of smoke, gas and ash more or less daily. The activity periodically forms a dome over the main vent, which eventually collapses, causing an eruption. The last was in 2023. After hours of walking up the volcano’s flank, Calò’s team sets up camp in a pine grove at about 3,810 m altitude, an apparent safe spot from pyroclastic explosions.

Having direct knowledge of the volcano provides a much more objective sense of the limits of their analysis, Calò said.

“We have a natural laboratory here.” It’s “very important to be able to understand and give residents detailed, trustworthy information about what is happening inside the volcano.”

Digging up one of the last seismic stations, Calò’s face falls. The last registered data are from months earlier. The battery died. Sometimes rats chew the machines’ wires or an explosion causes more serious damage.

The project has yielded some certainties and if repeated will allow the analysis of changes that eventually will help authorities make better decisions when eruptions occur.

For feedback and suggestions for ‘Science’, please write to **science@thehindu.co.in** with the subject ‘Daily page’

THE SCIENCE QUIZ

A millennia-old calendar system

Prathmesh Kher

QUESTION 1

While the Julian calendar included a leap day once every four years, it was not the first calendar to have such a system. For example, the Roman system that it replaced included a month called X once every two or three years. What is X? In Latin it means ‘work month’.

QUESTION 2

Julius Caesar, who instituted the Julian calendar by a decree on January 1 of 45 BC, consulted the Alexandrian astronomer _____ when reforming the Roman calendar in order to base the new calendar on the solar year rather than on the variable lunar Roman system. Fill in the blank.

QUESTION 3

Which specific astronomical cycle was the Julian calendar attempting to approximate? This was so that calendar dates would stay aligned with the seasons instead of drifting through the year, thus also keeping the sun’s equinoxes and solstices on the same dates.

QUESTION 4

In 46 BC, the Julian calendar reform realigned the Roman calendar with the seasons in 46 BC by creating a “_____”. This transitory period was effectively a 445-day long civil year that included two extraordinary months between November and December. Fill in the blanks.

QUESTION 5

What is the difference in the length of

Please send in your answers to science@thehindu.co.in

the average year between the Julian and the Gregorian calendars (in number of days)? Pope Gregory XIII instituted the Gregorian calendar in 1582, via the papal bull ‘Inter gravissimas’.

Answers to January 1 quiz:

1. Traits influenced by thousands of genetic variants – **Ans: Polygenic**
2. Condition in which single genes can affect many traits – **Ans: Pleiotropy**
3. Condition of having only one copy of a gene – **Ans: Heterozygous**
4. Statistical concept explaining children’s lower extreme scores – **Ans: Regression to the mean**
5. Phenomenon to explain differences despite identical DNA – **Ans: Epigenetics**

Visual: **Franz Boas**

First contact: K.N. Viswanathan | Ugrasen Bachhor | Surojit Pal | Basit Altaf



Visual: Identify this Roman deity associated with gates and transitions, and identified as the tutelary deity of January. MARIE-LAN NGUYEN (CC BY)



Hierarchy of roles

The state must not be allowed to normalise prolonged incarceration

Using the terms of the Unlawful Activities (Prevention) Act (UAPA), the Supreme Court of India has grouped the accused in the Delhi riots case of 2020 based on their ‘hierarchy of participation’, denying bail for Umar Khalid and Sharjeel Imam while granting it under strict conditions to the other five appellants, Gul-fisha Fatima, Meeran Haider, Shifa-ur-Rehman, Mohd. Saleem Khan, and Shadab Ahmed. The Court emphasised Section 43D(5) of the Act, which only requires courts to assess whether the accusations are *prima facie* true, and thus rejected the defence of prolonged incarceration and narrowed Khalid’s and Imam’s options. The prosecution has always alleged that the riots were the result of a plan allegedly coordinated in protest networks and WhatsApp groups. People routinely plan protests on messaging apps and that is not inherently suspicious. But the state has persuaded the Court that the articles of organisation are evidence of a terroristic design. However, the Court has treated “terrorist acts” under Section 15 as being able to cover more than overt violence, including threatening to disrupt services, an interpretation that could have a chilling effect by emboldening governments to use stringent preventive detention under UAPA and, in political cases, to normalise the pursuit of prolonged incarceration without trial.

The Court using its ‘hierarchy of participation’ as the basis to relieve all but two people is unfair when the evidence to establish it has yet to be tested in court. Khalid and Imam were arrested as young men and have now spent five years in custody. The passage of time weighs more heavily on youth; if the courts find no case later, the damage done by prolonged incarceration cannot be undone. The UAPA’s provisions vest the state with an unrelieved power to snare those charged under the Act and prevent easy exits. But the existence of such power should also be weighed against the charges. There is a difference between, say, the perpetrators of the 26/11 Mumbai attacks, which informed parts of the UAPA, and Khalid’s and Imam’s alleged roles in the Delhi riots. The state has often invoked the Act to crush any opposition to its decisions even without an act of terrorism on the ground, revealing its over-arching anxiety to quell dissent over entertaining the constitutional right to protest. The trial against Khalid and the others has not begun because, among other reasons, the sessions court has yet to frame charges and there are reportedly around 700 witnesses. That the Court granted bail to the five should be a sign for trial courts to rationalise witness lists and ensure that trials, including that of the Delhi riots, begin without undue delay.

Off the guard rails

Those abusing an AI model’s capabilities with illegal requests must face action

The generative artificial intelligence (AI) chatbot Grok developed by social media platform X, formerly Twitter, has a sordid but compelling unique service proposition: it avoids the kinds of safeguards, both commonsensical and cautious, that other large firms such as OpenAI and Google have instituted in their large language models. This *laissez parler* attitude has resulted in novelties, such as the chatbot freely insulting national politicians and celebrities alike. But a specific behaviour that has come to light in recent days is alarming: Grok has been responding to user requests to non-consensually generate sexually suggestive and explicit images of women. Days after New Year’s eve, when such requests crowded Grok’s X account, the behaviour continues, in spite of stunned reactions and demands for guard rails from India and France. In response to calls for accountability, X’s billionaire owner Elon Musk has responded not with reassurances, but with a joking request for the chatbot to dress him skimpily too, as though doing so to oneself and subjecting strangers to such a crime – for it is a crime to create imagery like this – were in any way comparable. Mr. Musk’s other corporate entities have chimed in with jokes of their own, dismissing the gravity of the public-facing capabilities they have put in the hands of users.

The Union government has rightly demanded that X cease image generation of this kind, and pointedly referred to the criminal nature of generating sexually explicit imagery of women in this manner. On top of the viscerally provocative nature of such patently criminal content, Grok has added to the overall hostility of being a gender minority on the Internet. There are aspects of this where neither the government nor social media platforms have inspired much confidence, with sexual violence and death threats to prominent and outspoken women transpiring with impunity in both cyberspace and the real world. X’s impunity rests on an assumption that the geopolitical power of the United States, especially under its current government, will protect it from any serious blowback for its cruel handling of such sensitive matters. Even as the government pushes back against the social media platform – which it has not necessarily done with virtuous aims in the past – it must vigorously push for the prosecution of people who encourage the public creation and circulation of non-consensual intimate imagery. The easy proliferation of these tools must not be coupled with a fearlessness to leverage their worst capabilities, and this must be made clear by making an example of those who do.

On March 20, 2006, the Chairman of the International Civil Aviation Organization (ICAO), Assad Kotoite, delivered this message in Montreal while addressing the Directors General of Civil Aviation Conference on Global Aviation Safety Strategy: “It must be a strategy that recognizes that a weakness in one is a weakness in all. And the thread that must run through this strategy is transparency. By being transparent and freely sharing information with each other and the public, you recapture the ability to act as one, to reinforce each others’ actions, and to strengthen public confidence.

“You will be better able to stand united against those who compromise aviation safety... For me, one accident was always one too many, and the loss of even one life, was one too many. Like all of you here, I was entrusted with a noble mission, to protect the lives and well-being of the travelling public. We have done and must continue to do everything within our power to make sure they get to their destination safely and unharmed, and that no one on the ground will be killed or injured because of an aircraft accident.”

On, June 12, 2025, Air India flight 171 crashed at Ahmedabad, Gujarat within a minute of its take-off. Out of the 242 passengers, there was one survivor, while 19 people were killed on the ground.

India is a signatory of ICAO and has to comply with ICAO Annex 13 Standards for Aircraft Accident and Incident Investigation. The National Transportation Safety Board (NTSB) of the United States and the Air Accident Investigation Bureau (AAIB) of the United Kingdom were participants in the investigation. The Cockpit Voice Recorder (CVR) and the Digital Flight Data Recorder (DFDR) were recovered by June 16 and the NTSB’s help was taken in downloading and decoding the contents of the two recorders as the Indian authorities did not have the expertise to retrieve all the data. The NTSB and AAIB were aware of the contents. The Indian government must also be aware of the contents as it ordered commando protection for the chief investigator of AAIB India. This was a clear pointer that it was a serious issue.

A vague report, the facts

The vague Preliminary report that was released a month after the crash, clearly mentioned two points. First, the fuel control switches of both engines had moved to cut off from three to four seconds after lift-off. Second, one pilot asked the other pilot ‘why did you do that?’ And the other responds ‘I did not do that.’ It has been clearly established that the fuel control switches can only be moved mechanically by lifting the spring loaded switches from run and moving and



Captain A. (Mohan) Ranganathan

is a former airline instructor pilot and aviation safety adviser. He is also a former member of the Civil Aviation Safety Advisory Council (CASAC), India

The transparent and the truthful report promised on the Ahmedabad air crash in June 2025 appears to be a dream

dropping them into the cut off gate. These switches do not move due an electrical failure or software glitch. The DFDR and CVR would have clearly indicated what had happened in those critical 15 seconds – what was being spoken in the cockpit, who was handling the flight controls and all the ambient sounds in the cockpit area. The NTSB has the best expertise to identify the exact data.

If one were to go by details leaked by The Wall Street Journal in July 2025 – and also in November 2025 – it appears that there was friction between the U.S. and Indian authorities that mushroomed into serious differences on the findings. The NTSB will only support technical investigation in an accident. The transparency and the truthful report that India’s Minister of Civil Aviation promised on the day of the crash, appears to be a dream. Political massaging of the report will not find favour with the NTSB. From what this writer hears from former top safety officials in the U.S., the breakdown between U.S. and Indian authorities is the worst he has witnessed and the worst he has seen in an international accident investigation.

The state of aviation

India has had three fatal accidents in the past 15 years. In 2010, Praful Patel, then Minister of Civil Aviation, declared that Mangalore airport conforms to all standards of ICAO. The Court of Inquiry committee, under his Ministry, conveniently drafted a report with a litany of lies. Blatant violations such as a rigid concrete structure holding the Instrument Landing System Localiser, that a rescue and fire fighting truck got stuck outside a gate and never reached the burning aircraft, were covered up. The only positive aspect of the report was the identification of the dangers of flying in hours during the Window of Circadian Low and the lack of rest for crew.

The Directorate General of Civil Aviation’s Civil Aviation Requirements have been undergoing modifications over 15 years, with extensions due to pressure from airline owners. An example is the way Indigo, a leading private airline, disrupted air travel for thousands of passengers across India and the Minister and the DGCA to their knees.

In 2020, there was the air crash in Kozhikode. There again, there was scant action by Aviation Minister, Hardeep Singh Puri, and later, Jyotiraditya Scindia on safety measures addressing the dangerous operations at the airport. The deadline set for safe operation has long passed. We are now in 2026 and there are no restrictions in operations. The DGCA, as is the norm, dances to political pressure and is failing in its duty to ensure passenger safety.

The parallel track that keeps U.S.-India ties going

In 2025, despite political strains and the postponement of the much-anticipated Quad Leaders’ Summit hosted by India, the underlying machinery of India-United States cooperation remains vigorous and steadily advancing. While political engagement appears low, notably amid U.S. trade sanctions on India and its warming ties with Pakistan, the institutional collaboration between the two democracies continues to expand, particularly in defence and technology cooperation. The visits of India’s External Affairs Minister S. Jaishankar’s and the Indian Navy Chief to the U.S. must be seen in this framework.

The Quad Leaders’ Summit, which New Delhi was supposed to host, has been delayed amid opaque communication from officials, reflecting current bilateral tensions that have been marked by challenges such as worsening trade relations. The U.S. tariff regime levied on Indian goods and New Delhi’s recalibration of its diplomatic posture amid perceptions of a “G-2” style rapprochement between the U.S. and China have some underlying factors. India’s exports to the U.S., which dropped sharply in 2025, are a stark indicator of these tensions.

Economic frictions persist, especially with U.S. tariffs on India’s purchase of Russian crude oil, while China and Pakistan enjoy lower tariffs and even strengthened relations with the U.S. In return, Islamabad’s offering, highlighted by port access to the U.S. and critical minerals shipments to American firms, is an economic decision with geopolitical imperatives. Washington’s balance-of-interest pragmatism manifests itself in signals from U.S. officials that relations with New Delhi remain vital despite transactional pressures.

Continuing institutional cooperation

In contrast to strained political signals, institutional engagement has accelerated. The July 2025 Quad Foreign Ministers’ meeting in Washington unveiled new initiatives that spanned maritime security, transnational threats, economic cooperation, critical technologies and humanitarian efforts. On similar lines, Quad’s Counterterrorism Working group also held its third meeting in December 2025, all demonstrating the Quad’s continued operational relevance beyond high-level political optics.

Defence cooperation forms the backbone of



Pooja Bhatt

is Associate Professor at the O.P. Jindal Global University, Sonapat, Haryana

While political engagement appears low, institutional collaboration continues to expand

this resilience. Since the 2008 India-U.S. civil nuclear deal, defence and technology agreements have steadily deepened. The landmark signing of a decade-long Defence Framework Agreement in 2025 marks a new chapter, enhancing joint coordination, information sharing and technological collaboration that is designed to buttress Indo-Pacific regional stability. This is exemplified through regular bilateral military exercises, such as Yudh Abhyas (‘War Practice’), Tiger Claw and Malabar, which promote interoperability and trust among forces.

Oiled by defence and technology agreements

Since the political upheaval brought by the India-U.S. nuclear deal, bilateral ties have been predominantly driven by defence and technology agreements. Over the years, the two countries have signed various agreements, including the 2023 India-US Defence Acceleration Ecosystem (INDUS-X) and foundational defence agreements such as the Logistics Exchange Memorandum Of Agreement (LEMOA) in 2016, the Communications Compatibility and Security Agreement (COMCASA, 2018) and the Basic Exchange and Cooperation Agreement (BECA, 2020) and the Initiative on Critical and Emerging Technologies (2023) to provide and promote logistical support, cooperation and information sharing between the two militaries. India’s Ministry of Defence and the U.S. Department of Defence also signed the Security of Supply Arrangement (SOSA) in 2024. Despite political challenges, defence cooperation remains strong.

In October 2025, a significant 10-year defence framework agreement was signed by U.S. Secretary of War Pete Hegseth and India’s Defence Minister Rajnath Singh. This long-awaited pact aims to enhance coordination, information sharing and technological collaboration to promote regional stability and deterrence.

Building on years of growing strategic convergence, the agreement reinforces defence as a core pillar of India-U.S. relations. Further bolstering defence ties, Indian aerospace giant, Hindustan Aeronautics Limited signed a billion-dollar deal, in November 2025, with the U.S.’s General Electric for fighter jet engines. Similarly the joint U.S.-India NASA ISRO Synthetic Aperture Radar (NISAR) satellite, launched in July 2025 for disaster resilience, agriculture and

Immediately after the AI 171 crash, the site was not sanitised. Television crew and cameramen were seen moving all over the site, trampling on and shifting through crash debris even before investigations began, and wiping out important clues. The airport was opened in three hours, with the zero availability of rescue and fire fighting services. Every flight that operated in this phase did not have rescue and fire fighting services on standby, endangering the lives of every air passenger and even those on the ground.

By delaying the findings and couching the facts with misleading statements, the AAIB is playing into the hands of YouTubers and social media narratives. ACARS and Inmarsat data are being quoted as proof of the flight having operated in dangerous conditions. The data is accessible only between the company that operated the system and an authorised person in the subscribing company. The entire chain of messages will be in an encrypted format. A simple example is how users of WhatsApp are confident about their messages being secure. The refusal of Apple to comply with the Indian Government order to preload a cyber-safety app citing privacy, security, and consent issues that go against its global policies is another example. It is to the credit of the airline, Air India, that it has not commented or responded to many of these strange narratives.

A lesson to learn

The Ministry of Civil Aviation and the AAIB should note how the FAA and NTSB act after a crash. When a UPS cargo MD-11 aircraft crashed on November 4, 2025, the NTSB had press briefings on November 5, 6 and 7, with its findings after the CVR and the DFDR had been downloaded and analysed. By November 9, the FAA issued an Emergency Airworthiness Directive grounding the aircraft type.

The NTSB and the FAA were aware of the CVR and DFDR data within a week of the AI171 crash. If there was an indication of serious system failures on the Boeing 787, as being projected by ‘aviation illiterates’ (as a former NTSB investigator describes them), the FAA would have grounded all Boeing 787s. The very fact that no such action has been done is a clear indication that they know the reason behind the crash.

India’s standing is dropping everyday on the diplomatic front. It is the same as far as India’s credibility in aviation safety investigation is concerned.

The crash of AI 171 has drawn worldwide attention. For India to isolate itself with a self-centred ego, is going to take it down a dangerous path. Isolating foreign experts from the AI 171 crash report is a dangerous trend.

infrastructure planning requirements adds to the technological jointmanship. At the infrastructural and regional levels, the inaugural Quad Ports of the Future Conference, held around India Maritime Week in Mumbai in early November 2025, brought together delegates from 24 Indo-Pacific partners, focusing on developing resilient and secure ports that leverage shared expertise and investments. Co-organised by the Ministry of Ports, Shipping, and Waterways and the Ministry of External Affairs, it emphasised that quality infrastructure development is a crucial dimension of Quad cooperation, underlining the broader regional connectivity.

Build deeper institutional understanding

Despite political challenges, this enduring institutional engagement reveals the India-U.S. relationship’s dual-track dynamic. While political leaders manage strategic diplomacy with and national interests, the bureaucratic and institutional frameworks continue to sustain and evolve core collaborations. Despite institutional challenges such as domestic regulatory frameworks and concerns about technology interoperability, mutual regional interests drive this continuity.

Such institutional continuity may well be the relationship’s greatest strength, fostering trust while shielding essential cooperation from political volatility. However, analysts have cautioned that bilateral ties may struggle to regain full momentum, even if trade disputes are resolved.

Looking ahead to 2026, both nations must invest in a deeper institutional understanding – defence and beyond. Learning about structures and institutions, appreciating the processes, and developing resilient relationships with other countries require continuous efforts. Expanding cooperation into broader sectors can build the mutual trust essential during political lows. The resilience of the India-U.S. partnership will depend heavily on these parallel institutional tracks, which have so far, quietly but effectively, maintained the alliance’s robustness and strategic relevance in an ever-evolving geopolitical landscape. While political summits may pause, institutions keep the dialogue alive, working together on mutual areas, and having long-term partnerships that can survive the short and medium-term headwinds.

LETTERS TO THE EDITOR

The U.S.’s move

The arrogance by the Donald Trump administration, in utter violation of established laws, by taking the law into

its own hands and arresting the Venezuelan President, calls for popular condemnation. It is a shame and a pity that the Indian government is playing safe

with its diplomatic card, in a distinct departure from India’s anti-imperialist stand.

S.V. Venugopalan,
Chennai

Cricket and politics

The release of Mustafizur Rahman by KKR, reportedly under the BCCI’s direction, is a disgraceful attempt to appease communal

sentiments. Violence by extremist elements in Bangladesh, arising from failures of law and order, cannot be projected onto an individual cricketer with

no role in it.

Aluru Venkat Revanth,
Roorkee, Uttarakhand

Letters emailed to letters@thehindu.co.in must carry the postal address.

Stepping in with Maoism in rapid retreat

Maoism seems to be on its last legs with mass surrenders by Maoists in the Dandakarnaya (DK) and other regions since October 2025. While the movement was on the decline since 2011-12, and faced a setback in 2018, it changed the form of its organisation as well as struggle in August 2024. The polit bureau (PB) of the CPI(Maoist) decided to split into smaller formations to avoid encirclement by the security forces. It also decided to remain in defensive mode unless the situation warranted attacking the security forces.

However, the adoption of this strategy, the party split when some central committee (CC) members and DK special zonal committee members (since August 2024) and the general secretary, Nambala Keshava Rao (alias Basavaraju) was killed in May 2025 with almost his entire security posse was wiped out in a gun battle with the security forces in Maad (Narayanpur district in Chhattisgarh). Some leaders, particularly PB member, Venugopal alias Sonu favoured peace talks with the government and asked to consult with other senior leaders. When the government declined such conditional talks, he surrendered along with 60 others (with weapons) in Gadchiroli. Another senior cadre under the name ‘Rupesh’ (in-charge of the north and west sub-zonal bureau of DK) surrendered with 210 Maoists and their weapons in Jagdalpur. CC member (from Chhattisgarh) and person in-charge of the People’s Liberation Guerrilla Army (PLGA) battalion-1, Madvi Hidma, was killed in Alluri Sitharamaraju district in Andhra Pradesh. Another CC member (from Chhattisgarh), Ramdher, surrendered recently in another special zone, Maharashtra-Madhya Pradesh-Chhattisgarh.

The PLGA Battalion commander and the secretary South Bastar division, have also surrendered, some of the cadres



R.K. Vij
is a former IPS officer

of West Bastar and others are still holding out. The central military commission head of the CPI (Maoist), Thippiri Tirupati alias Deoji, is for continuing the fight. In October, the Ministry of Home Affairs said that only seven districts in India were Left Wing Extremism-affected districts, with only three in Chhattisgarh the ‘most affected’ districts.

How is the government going to address the issues which prompted the Maoists to organise the masses against the state? Some of the cadres who surrendered have said that their struggle for tribal rights in the areas is still ongoing. While the surrendered cadres are being given benefits under the surrender and rehabilitation (S and R) policy of the Centre and the States concerned, there is no doubt that the DK region which lacks even basic amenities needs to be developed.

First, the network of medical facilities should be extended to interior locations so that villagers have access to health care. Anaemia is a health issue among the tribals of DK. Cerebral malaria is also widespread in certain pockets. The lack of safe drinking water has led to outbreaks of dysentery. There is also the issue of snake bites which are not uncommon in the jungles. Health centres must cater to the needs of tribals in areas freed from the Maoist influence.

Second, most tribals depend on agriculture and forest produce for their basic needs. Maoists dug ponds and created orchards to win the confidence of the tribals and induct them into the movement. They also forced contractors to pay increased rates to villagers for plucking *tendu-patta* leaves. Later, they took up land levelling to increase production and gain even more support. The government should now ensure the supply of good seeds (including fish seeds) and create better irrigation facilities by constructing check dams. While the minimum support price of many items of

forest produce is notified by the government(s) annually, processing units need to be established where tribals can access them easily. The focus should be on increasing economic activity and the standard of living.

Third, more educational ashrams should be established in DK. This model has been quite successful in the past because it is not practical to open schools in villages that were sparsely populated. It is also necessary to undo the ‘education’ imparted to villagers by the Maoists through their *krantikari jantana sarkar* (revolutionary) schools. Most of the surrendered cadres are illiterate and need to be sent to government schools for basic education and rehabilitation. Many surrendered cadres are already trained in useful vocations and their skills can be tapped.

While the S and R policy provides financial benefits, jobs and housing, it must not be forgotten that most male cadres were forced to undergo vasectomy while in the Maoist movement. It is necessary they have a reverse vasectomy procedure to enable them to start a family. This facility must be provided free of cost in district hospitals. Similarly, the wives of the surrendered cadres should also be assisted with reproductive technology.

Many of the women who joined the Maoist movement were those who wanted to escape forced marriages by their families. Therefore, awareness needs to be spread through the *siyan* (elderly people) of villages to respect a girl’s consent with respect to marriage.

The State government has been implementing the *Niyad Nellanar* (‘Your good village’) scheme to provide the benefits of government schemes (about 25) to villages which fall within five kilometres of the remote security camps (about 50). However, with districts gradually becoming free of Maoists, this scheme must be extended to previously affected villages.

A brewing storm over ‘defections’

The focus is on the Telangana Speaker’s verdict on BRS MLAs who ‘defected’

STATE OF PLAY

M. Rajeev
rajeev.madabhushi@thehindu.co.in



“The office of the Speaker is held in highest respect and esteem in parliamentary traditions. The robes of the Speaker do change and elevate the man inside.” This observation by the Telangana Assembly Speaker, G. Prasad Kumar, was made while dealing with the disqualification petition filed against Bharat Rashtia Samiti (BRS) MLA Arekapudi Gandhi, who is facing the charge of having defected to the ruling Congress. The Speaker also dismissed the petitions filed against four other BRS MLAs, Tellam Venkat Rao, Gudem Mahipal Reddy, T. Prakash Goud and Bandla Krishnamohan Reddy.

The Speaker was acting as the chairman of the Tribunal to deal with the disqualification petitions filed by the BRS leadership against 10 of its MLAs, who allegedly defected to the Congress, after winning in the December 2023 elections. The Speaker has kept in abeyance the decision on three e MLAs. He has not conducted hearings for two other MLAs despite repeated requests by the BRS.

The Speaker made an interesting observation about the petition which claimed that the respondent (Mr. Gandhi) had “voluntarily gave up his membership of the BRS by joining the Indian National Congress”. Here, the Speaker dealt with the *locus standi* of the petitioners (the BRS legislators) to file the disqualification petitions. This concerned the issue whether a disqualification petition against a sitting MLA alleging defection must

be filed only by a person duly authorised to do so and in writing by the party on whose B-Form the legislator was elected, or whether any other person too has the *locus standi* to file such a petition even without specifying the capacity in which it is filed.

The Speaker said that since objections around the issue repeatedly arise during disqualification proceedings, particularly where one MLA sought the disqualification of another who had allegedly defected on grounds that were more out of political vendetta or over internal differences, it was appropriate that the Tribunal settled this issue first before proceeding to answer other questions.

Citing Rule 3(1)(a) of the Rules, 1986 and Rule 3(4), he said: “Admittedly, the petitioner did not state in what capacity he filed the petition or how he acquired the right of action, as he is neither a voter of the constituency from which the respondent was elected nor specifically authorised in writing by the BRS party.”

The Speaker did not factor in the observation made by the Supreme Court of India, in the *Speaker of Odisha Legislative Assembly vs Utkal Keshari Parida* which raised the *locus standi* of a non-member of the House in submitting a petition for disqualification. The Court had held that “not only a member of the House, but any person interested would also

be entitled to bring to the notice of the Speaker the fact that a Member of the House had incurred disqualification under the Tenth Schedule of the Constitution of India.” The observation assumes importance as all the petitioners who filed their disqualification pleas with the Speaker are Members of the Assembly representing the BRS.

The manner in which the petitions have been dismissed has drawn the ire of the BRS and the Bharatiya Janata Party (which described the verdict as “unilateral”). The parties have alleged that the Speaker was acting at the behest of the Chief Minister, A. Revanth Reddy, and was in line with the Chief Minister’s claims that there was no scope for any bypolls. The BRS has said that it will explore legal avenues after a thorough study of the Speaker’s verdict based on the Supreme Court’s observation that the Speaker of a State Assembly does not enjoy constitutional immunity while acting as an adjudicating authority in disqualification petitions.

The action in delivering the verdict pertaining to disqualification petitions filed against five of the 10 MLAs appears largely driven by the deadline set by the Supreme Court. The Court, while dealing with the petitions filed by the BRS leaders, had said it was about time that Parliament reviewed its expectation that Assembly Speakers and Chairmen would live up to the dignity of their high office and crush the “evil of political defection” by deciding disqualification proceedings against legislators in time and without favour.

With the decision on disqualification petitions pending against the other MLAs, it remains to be seen what happens next.

Old alliances, new markets: Two-path formula for export growth

India has replaced its lost U.S. sales by deepening its ties with existing partners and exploring new destinations

DATA POINT

Sambavi Parthasarathy
Nitika Francis
Vignesh Radhakrishnan

Last month, we noted that India’s trade data for November had shown a continued resilience in exports despite mounting U.S. tariffs. Not only did India’s overall exports grow, but shipments to the U.S. also rebounded. However, the exact drivers were harder to discern at the time, as detailed data were still awaited.

Foreign Trade Performance Analysis data show several new trends. This analysis focuses only on items where India’s export dependence on the U.S. was already significant. To isolate the impact of the tariffs, the figures for September through November 2025 were compared against the 2023-24 average for those same months.

Not all commodities exported to the U.S. were impacted by tariffs. Notably, exports of telecom instruments to the U.S. – most of which are not tariffed, particularly smartphones – surged by 237% between the periods considered (**Chart 1A**). Exports of electrical machinery also grew by 15%.

That brings us to the items hit by the U.S. tariffs and other challenges. Exports of pearls and precious stones declined by about 78.5% between the periods considered (**Chart 1B**). Gold jewellery exports to the U.S. declined by 39%, cotton fabrics by 23%, marine products by 17% and ready-made cotton by 4.6%.

Overall, the surge in smartphone exports to the U.S. masked the decline in sectors hit by tariffs. This explains why total exports to the U.S. rose despite the new duties. But what about the items that did suffer? The explanation follows two distinct paths: for some commodities, the blow from U.S. tariffs was partially blunted (**Chart 2B**), while for others, Indian ex-

porters managed to not only absorb the hit but also increase overall exports by diversifying into other markets (**Chart 2A**). Consider marine products, where overall exports grew by roughly 17% between the considered periods, despite a near-identical decline in shipments to the U.S. Moreover, the U.S. continued to be a dominant buyer in 2025 with a market share exceeding 30%. So, exporters did more than just absorb the blow in a traditionally dependent market; they also pivoted to other destinations, driving total export even higher than before in marine products. Marine exports to China – already a robust buyer – grew by 23% during the same period (**Table 3A**). Simultaneously, India made significant inroads into relatively newer territories – between September and November 2025, India exported over \$50 million worth of marine products to Spain. This expansion extended across Europe, with marine shipments to Belgium surging by 124%, while exports to the Netherlands (56%), Germany (65%), and Italy (23%) all posted substantial gains. So, the gap left by the U.S. was filled by a mix of strengthening alliances and discovering new ones.

“Shipments to the EU and China have increased over the past few months. We request the Centre to intervene and have Free Trade Agreements with other countries to help the aqua sector,” Seafood Exporters Association of India (SEAI) Andhra Pradesh president K. Anand Kumar said.

A similar strategy was recorded in the case of readymade cotton garments also, with increases in exports to European markets helping here too (**Table 3B**). “The Rupee at 90 is a good instrument for Indian exporters to locate new markets. It helps push exports to various markets,” said Siddhartha Rajagopal, Executive Director of the Cotton Textiles Export Promotion Council.

With inputs from Rajulapudi Srinivas and M. Soundariya Preetha

A shift in India’s trade gaze

The data (charts) were sourced from the Ministry of Commerce and Industry. For this analysis, only the top 20 exported products and the top 20 countries they were exported to, in any given month, were considered to narrow the focus

CHART 1A: % change in exports to the U.S. between Sept-Nov. 2025 and the 2023-24 average for the same months

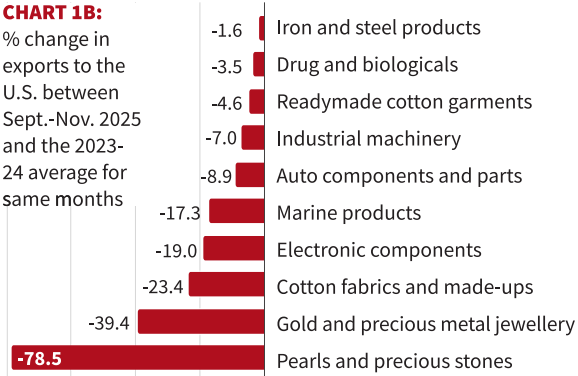
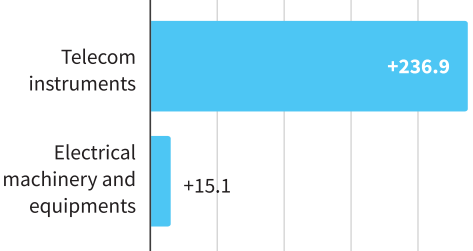


CHART 2A: % change in total exports between Sept.-Nov. 2025 and the 2023-24 average for the same months

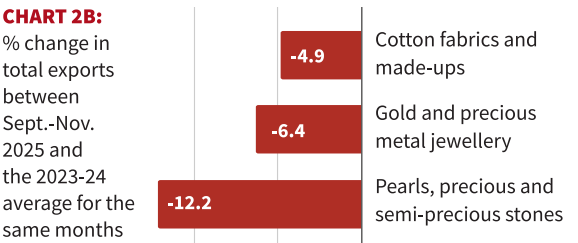
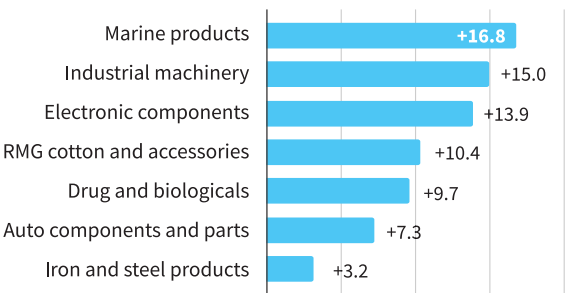


TABLE 3A:

Value of India’s marine exports (in \$ million) to various countries between September to November of 2025. The % change in marine exports between Sept.-Nov. 2025 and the 2023-24 average for same months are also provided

Partner	2025	Change
Total	2557.8	+16.8
U.S.	570.0	-17.3
China	556.6	+22.8
Belgium	124.5	+124.3
Italy	56.3	+23.3
Spain	51.8	-
UAE	42.6	-5.1
U.K.	31.7	-0.3
The Netherlands	31.4	+56.0
Germany	30.2	+65.3
Malaysia	28.0	+81.0
France	23.9	+41.2
Hong Kong	17.9	+8.1
South Korea	14.9	+466.6

TABLE 3B:

This table provides the same information in Table 3A for readymade cotton garment exports

Partner	2025	Change
Total	1989.2	+10.4
U.S.	580.3	-4.6
U.K.	180.8	+15.5
UAE	163.5	+29.9
Germany	117.9	+20.0
The Netherlands	107.3	+16.4
France	87.4	+22.6
Australia	61.5	+1.1
Italy	57.8	+28.8
Spain	49.1	New
Saudi Arabia	40.3	+20.8
Belgium	31.4	+20.1
South Africa	13.9	-6.2
China	12.0	+29.1

FROM THE ARCHIVES

The **Hindu.**

FIFTY YEARS AGO JANUARY 6, 1976

‘Mythological Programmes on TV Enjoyed Most by Villagers’

From Our Correspondent VISAKHAPATNAM, Jan. 5
“Television audiences in rural India are highly appreciative of the mythological programmes dealing with subjects like Ramlila, Karna and Kunti and Devaki and Krishna. However, if these programmes are used for conveying development messages, even if they are enjoyed, the message is lost.” This was stated in a paper presented at a symposium on “Mass media and integrated rural development” as part of the Indian Science Congress here to-day. In his paper, Mr. Binod C. Agarwal of the Research and Evaluation Cell of the Space Applications Centre, Ahmedabad, said the preliminary findings of the Satellite Instructional Television Experiment (SITE) showed that the farmers preferred programmes with a direct development message. Data were being collected by anthropologists stationed in nine villages of seven States to which the SITE programmes were beamed. The audience in general showed a high level of awareness of the family planning campaigns due to repeated exposure to the family planning programmes, but the programmes had not generated any further interest. Instead, the audience seemed indifferent to the family planning programmes. Culinary programmes for women audiences had evoked mixed reactions. Observations showed that schoolchildren were the most sincere viewers in the villages under study. Drop-outs and non-school going children were induced to come to school due to the TV programmes.

A HUNDRED YEARS AGO JANUARY 6, 1926

Excavations at Ur

Remarkable New Find (British Official Wireless) LEAFIELD (Oxford), Jan. 6
Excavations at Ur of The Chaldees have led to the discovery of the site of the place of Dungi, who reigned 2,250 years before Christ. It was already the custom, as it is to-day, to bury, in the foundation of buildings, relics typical of the time and such were found by Mr. Leonard Woolley, leader of the excavations. They were in brick boxes and consisted of copper statuettes of Dungi, carrying on his head a basket of mortar, of the laying of first brick and stone tablets inscribed with the dedication of the work.

Text & Context

THE HINDU

NEWS IN NUMBERS

Duration of daily OPD boycott by Odisha doctors

2 In hours. Doctors across government hospitals in Odisha began a two-hour daily boycott of OPD services, affecting outpatient care from 9 a.m. to 11 a.m. The protest is over long-pending demands, including filling over 50 percent vacant posts. PTI

Number of presumed deaths during Hasina-era abductions

287 A Bangladesh commission investigating abductions during former PM Sheikh Hasina's rule reported that at least 287 individuals are presumed dead. The investigation covered 1569 abduction cases. AFP

Maximum term limit plans for Malaysia's Prime Minister

10 In years. Malaysia's PM Anwar Ibrahim announced plans to introduce legislation limiting the tenure of the PM to a maximum of 10 years or two full terms. The move aims to prevent leaders from clinging to power and ensure generational transition. AFP

Reward amount on inter-State criminal arrested

1 In ₹ lakh. Police arrested an inter-State criminal carrying a bounty of ₹1 lakh after a brief encounter in Gurugram. The accused is wanted in nearly two dozen cases, including attempted murder and robbery, across Haryana, Uttar Pradesh and Rajasthan. PTI

Value of the bridge project to connect Sagar Island in Bengal

1,670 In ₹ crore. CM Mamata Banerjee laid the foundation stone for the Gangasagar Setu, a 5-km bridge over the Muriganga river connecting Sagar Island. PTI
COMPILED BY THE HINDU DATA TEAM

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What does the SHANTI Bill change?

How open is India's nuclear sector now? What role will private firms play? What powers does the AERB now have? How self-reliant is India's nuclear programme?
How has nuclear liability changed? Why is the Opposition opposing SHANTI?

EXPLAINER

Saeed Pande

The story so far:

Parliament has cleared the Sustainable Harnessing and Advancement of Nuclear Energy in India (SHANTI) Bill, despite Opposition demands for amendments and review by a Select Committee. To achieve India's energy security needs, the government has boosted the Nuclear Energy Mission with ₹20,000 crore dedicated to Small Modular Reactors and advanced pressurised water reactors. India's nuclear power sector has remained State-controlled and unchanged since 1956. The private and foreign partnership has been restricted under earlier laws – the Atomic Energy Act, 1962, and the Civil Liability for Nuclear Damages Act, 2010. Private and Foreign companies avoided India due to its strict liability laws.

What is the SHANTI Bill?

The SHANTI Bill is an overarching legislation that opens India's nuclear power sector to private and foreign participation, which was earlier entirely State-controlled and deeply regulated. Under the Bill, private Indian companies can seek licences to own, build, and operate nuclear power plants. It is also open for foreign supplier participation.

The SHANTI Bill allows up to 49% private participation, while maintaining 51% government control over sensitive activities such as nuclear fuel production, heavy water manufacturing, radioactive waste management, safety mechanisms, licensing, and strategic oversight.

The Bill ends the monopoly of Nuclear Power Corporation of India Limited (NPCIL) in plant operations. It allows private companies and joint ventures to build, own, and operate nuclear power plants. The private sector will be involved in fuel fabrication, equipment manufacturing, plant operations, and research and development. It will essentially be a public-private partnership model aimed at attracting private capital with government oversight.

The Bill facilitates advanced nuclear technologies by enabling private participation and regulatory clarity. It supports the deployment of Small Modular Reactors (SMRs) and indigenous reactor designs, contributing to the clean energy transition and long-term energy security.

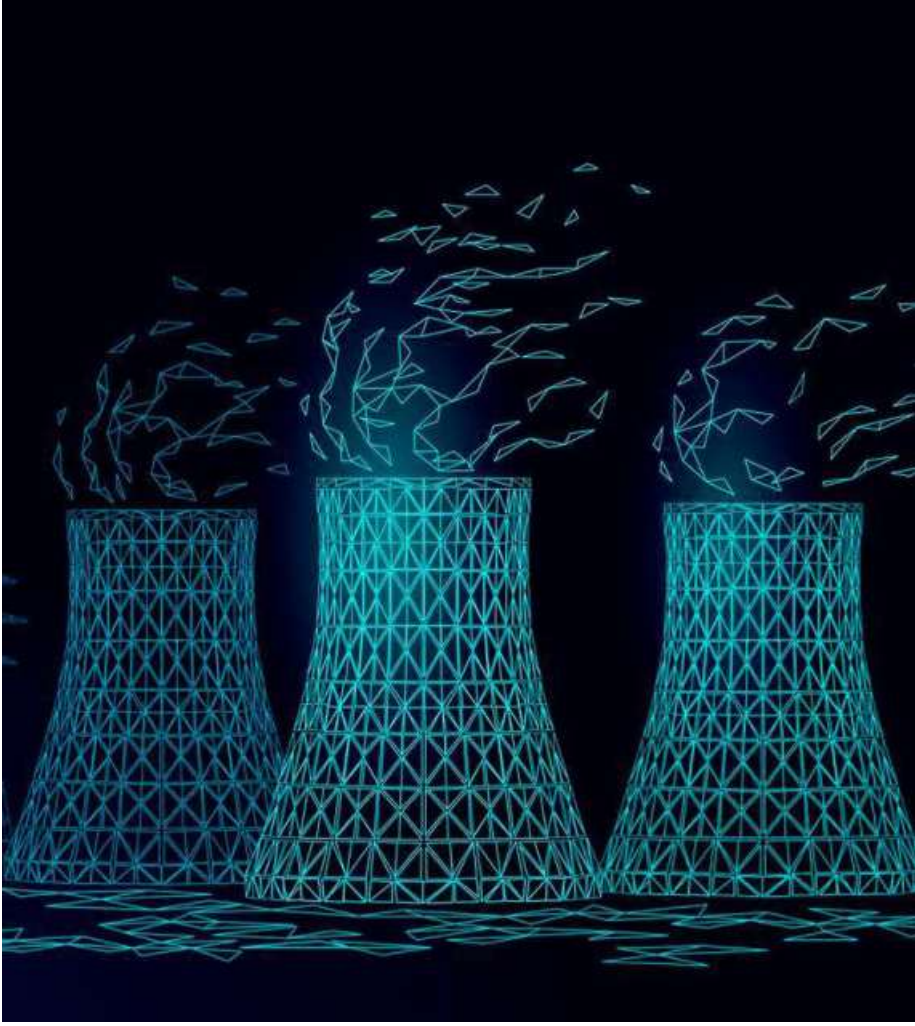
What is the role of AERB?

The Atomic Energy Regulatory Board (AERB), constituted in 1983 under the Atomic Energy Act, has now been given statutory status and is answerable to Parliament rather than solely to the executive.

The AERB is responsible for ensuring nuclear safety, radiation protection, emergency preparedness, and quality assurance across civilian nuclear installations. It issues safety measures, licences and standards; administers industrial safety provisions of the Factories Act, 1948, for units under the Department of Atomic Energy as per Section 23 of the Atomic Energy Act and conducts inspections to prevent radiation hazards. It plays a crucial role in strengthening regulatory oversight under the SHANTI Bill due to increased private sector participation. However, the Bill has been criticised for concentrating power in one institution.

What safeguards are in place?

The Bill does not explicitly permit foreign direct investment in the nuclear power



GETTY IMAGES

sector. The private companies will have to seek authorisation from the AERB. Authorisations are required for setting up a plant range from production, possession, to disposal of radioactive material and radiation generation equipment, as well as for establishing, operating, or withdrawing radioactive facilities.

The government controls the reprocessing and management of spent fuel and high-level radioactive waste; production and upgradation of heavy water; enrichment and isotopic separation of radioactive substances. The law also provides for the establishment of a nuclear liability fund to meet compensation needs in case of nuclear accidents.

What has changed with respect to liability?

Compared to the earlier regime, the SHANTI Bill ensures that the liability aspect is transparent and predictable for operators. Liability caps are fixed as follows: ₹3,000 crore for large plants of 3,600 MW capacity; ₹1,500 crore for medium plants of 1,500-3,600 MW; and ₹100 crore for Small Modular Reactors of 150 MW capacity. Penalties for legal violations in cases of severe breach are capped at ₹1 crore.

The Union government will bear liability beyond the operator's cap, with additional support from the proposed nuclear liability fund. Earlier, operators could hold suppliers liable for defective parts, faulty equipment, design inefficiency, and deliberate acts causing damage. The current Bill removes supplier accountability completely.

What is the government's viewpoint?

The Centre aims to strengthen India's energy security by diversifying the power mix, reducing dependence on fossil fuels and fuel imports, and expanding atomic energy capacity.

Energy security is one of the main aims for boosting India's development index. It ensures 24x7 baseload power as compared to solar energy and wind energy, which are subject to geographical

conditions. It will be a boost for the energy sector, which is still heavily dependent on coal. It also ensures an enhancement for technology and the economy.

Nuclear power ensures clean energy with very low carbon emissions. It facilitates achieving India's net-zero targets for 2070. The Bill may also revive the stalled civil nuclear deals with the U.S., France, and Japan, reduce dependence on Russia alone, and enhance India's image as a responsible global nuclear player.

Why does India need nuclear energy?

India struggles with solar, wind, and hydro energy due to its geographical and climate variables and still majorly relies on coal for electricity generation. Storage and grid integration costs for renewables remain high.

Thus, having sufficient baseload generation capacity is mandatory for an affordable and unrestricted supply. In order to achieve energy security for the growing economy, India has to strengthen and expand its nuclear energy sector. Moreover, the electricity mix must have enough baseload generation capacity in order to make it affordable and reliable for consumers. Nuclear power plants are one of the most effective in ensuring this.

What is India's nuclear energy mission?

India has a largely indigenous nuclear power programme based on a fuel cycle that aims to utilise India's vast thorium reserves. Currently, India manages 25 nuclear reactors in seven power plants – 21 pressurised heavy water reactors and four light water reactors – all managed by NPCIL.

According to R.B. Grover, distinguished Professor Emeritus at the Homi Bhabha National Institute and member of the Atomic Energy Commission, as India does not have enough uranium, the Nuclear Power Corporation of India Limited has mastered the design and operation of pressurised heavy water reactors. The Bhabha Atomic Research Centre has developed technologies to reprocess

spent fuel to recover valuable materials and handle nuclear waste. In that sense, India is independent and self-sufficient in its nuclear power generation. India has operationalised the fast breeder reactor for thorium use.

Why has the Opposition strongly criticised the Bill?

The Opposition argues that the Bill dilutes accountability by allowing profit-driven private participation while placing liability on the State and society. There is a fear of repeating incidents like the Bhopal Gas tragedy, where accountability and remuneration were evaded by the foreign firms in spite of recourse to civil courts; moreover, such recourse is unavailable according to the new Law. Removing supplier liability and capping operator liability and penalties at a nominal cost, as compared to the actual volume and expanse of damages, is considered unreasonable. The 'polluter pays' principle has been undermined, and this compromises public safety. Private firms have no liability for accident costs, public safety issues and long-term risks. The cap on operator liability does not change in 15 years despite inflation or long-term assessment of health, environment, livelihood cost of any serious accident.

The cases such as Fukushima and Chernobyl point out the huge expense of liability. In the case of the Fukushima disaster, the actual civil damages were 700 times more than the cap proposed by the SHANTI bill.

Section 39 of the Bill seeks to override the RTI Act of 2005. It has raised several concerns as it seeks to remove public interest review and public appeal mechanisms. This will make the most crucial nuclear sector-related information – including plant details, operations, mechanisms, regulatory submissions and data on nuclear materials – 'restricted'. This dilutes the transparency and questions the public accountability of the proposed system. The RTI Act 2005, in its wisdom, already exempts revealing information regarding India's security, national interest, commercial information, and personal data. But these exemptions are subject to justification in cases of public accountability and public interest.

Section 42 overrides occupational safety, health and working conditions for nuclear facilities. Nuclear workers are removed from the country's general labour safety framework. This has triggered opposition from ten central trade unions, including the Samyukta Kisan Morcha and the National Coordination Committee of Electricity Employees and Engineers, who have termed the Bill "draconian."

The Opposition insists that the Bill is vendor-driven despite India's self-reliance in nuclear technology. It argues that India has deep thorium reserves, around which nuclear reactors were built, which should be utilised. The Opposition demands that the private companies be compelled to install India's technology.

The Bill lacks provisions for mandatory public hearings, environmental impact assessment disclosures, community consent mechanisms, regular public reporting of safety inspections, or Parliamentary scrutiny.

The Opposition also cited the example of France, where all nuclear reactors are under government control. The Bill is criticised for being pro-profit, pro-oligarch, catering to the crony capitalists while gambling with public safety.

Saeed Pande is a freelance writer with a focus on politics, current affairs, international relations, and geopolitics

THE GIST

Parliament has cleared the SHANTI Bill, opening India's State-controlled nuclear power sector to private and foreign participation, ending NPCIL's monopoly while retaining 51% government control over sensitive activities.

The Bill removes supplier liability, caps operator liability, and shifts responsibility beyond the cap to the Union government and a nuclear liability fund, a move defended as providing predictable liability but criticised as diluting accountability and the 'polluter pays' principle.

The Centre argues the law will strengthen energy security, provide 24x7 baseload power, support clean energy and net-zero targets, and enable SMRs and advanced reactor technologies, while the Opposition warns of weakened transparency, safety, and public accountability.

BUILDING BLOCKS

What remote-sensing reveals about plants, forests, and minerals from space

Remote-sensing technology allows engineers and scientists to map land, forests, water bodies, and minerals without physically touching the ground; by detecting spectral signatures from visible and invisible light, satellites and drones reveal the health and location of natural resources

Vasudevan Mukunth

Say you're on a desert island on a quest for buried treasure. You've lost your map and run out of clues. Now you have two options: you could walk around with a shovel, digging holes at random and hoping for the best, or you could fly a drone overhead equipped with special cameras that can 'see' through the sand or detect the magnetic pull of the gold coins.

This isn't a pirate move but an existing technology called remote-sensing. It's what engineers and scientists use to map the earth's resources without ever touching the ground. From tracking the health of a forest to finding water deep underground, their satellites and drones are changing the way humans understand our planet.

What is remote-sensing?
Our eyes only see visible light, e.g., the colours of the rainbow. But the sun emits many other types of electromagnetic energy that we can't see, like infrared and ultraviolet light.

Everything on the earth, including the rocks, the water, the trees, etc., reflects these energies differently. The reflections are called spectral signatures; they are sort of like the fingerprint of the materials these objects are made of.

By studying this light, a sensor installed onboard a satellite can look at a patch of ground and say, "This reflects a lot of near-infrared light but absorbs red light. Therefore, it must be a healthy plant." This is the basic idea of remote-sensing.

What do different materials 'look' like?
Farmers and forest rangers use satellites to check the health of plants. Healthy leaves are full of chlorophyll, which absorbs red light for photosynthesis and reflects near-infrared light to avoid overheating.

Scientists use a formula called the normalised difference vegetation index to determine if a plant is healthy based on its spectral signatures. If a satellite observes high near-infrared reflection, the crops are healthy. If the reflection of that part of the spectrum drops, the plants might be thirsty or sick.

According to a review published in the *Journal of Plant Ecology* in 2008, by analysing the spectral signatures, researchers can distinguish between different plant communities and tree species across entire forests.

Such mapping is the first critical step in calculating the biomass of a forest, which is essentially weighing the trees from space, to understand how much carbon they are storing to help fight climate change.

How do satellites map water?
To map water bodies from space, scientists mainly use two complementary techniques: optical indexing, using reflected sunlight, and synthetic aperture radar, using active radio waves.

The optical indexing technique makes use of the fact that water reflects visible green light, which is why deep water often looks blue-green, but strongly absorbs near-infrared and shortwave infrared light. These readings are combined in the normalised difference water index (NDWI).

This way, in remote-sensing data, the index has a high positive value over water



GETTY IMAGES

bodies and a negative value over land. A newer version called modified NDWI, or MNDWI, uses only shortwave infrared light. This is often preferred in cities because it's better at distinguishing between water and the shadows cast by tall buildings.

Of course, optical cameras have a weakness: they can't see through clouds or at night. To map water in these conditions, including floods during a storm, scientists use synthetic aperture radar (SAR). To understand how this technology works, please see *The Hindu* article 'What makes the NASA-ISRO SAR satellite so special?', dated July 27, 2025.

In SAR's gaze, surfaces like soil, grass, and buildings – which scatter radio waves in all directions – look bright. Calm water, however, is very smooth, almost like a mirror, and looks pitch black. So by looking for these black matches in a radar image, scientists can map floodwaters even through a cyclone.

Satellites can also estimate water quality. Muddy water reflects light differently than clear water, and water full of algae has a specific spectral signature. This helps environmentalists track pollution or harmful algal blooms.

So much for features above the earth's surface; how do scientists and engineers use satellites to find what's underground?

How do satellites map subsurface features?
Experts look for clues on the surface or use different types of physics.

Valuable minerals like copper, gold, and lithium often form deep

underground, but geological forces push some of them to the surface over millions of years. Even if they're just traces in the soil, hyperspectral sensors can find them.

When sunlight strikes an object, it's reflected. A normal camera may group that reflection into a combination of three main colours: red, green, and blue, e.g. a hyperspectral sensor uses a prism or grating to split that light into hundreds of very narrow, continuous colours and measures the intensity of light at every single frequency across the spectrum.

As a result these sensors can create a spectral signature for every pixel in the image.

So while a 'normal' satellite might look at a forest and say, "This is green. It's a tree", a hyperspectral sensor could look at the same forest and say, "This is a banyan tree. It has a nitrogen deficiency. And the rock next to it is limestone, not granite."

According to a 2023 study in *Ore Geology Reviews*, geologists also use these sensors to even map alteration zones, areas where heat and fluids from deep underground have changed the chemistry of surface rocks.

Oil and gas are trapped deep in the earth but small amounts often leak upwards through very small cracks, a process called micro-seepage. When this gas reaches the surface, it changes the soil chemistry and can even turn the leaves of plants slightly yellow, by stressing them out.

Satellites can detect these subtle changes in vegetation health and soil colour, giving exploration companies a sense of where to drill.

What if there isn't micro-seepage?
If there's no seepage, there's no way satellites' sensors can 'see' the oil or gas directly. However, satellites are still crucial in these situations because, instead of looking for the oil, geologists use satellites to look for the container holding the oil.

Oil and gas don't just lie in big underground lakes, they're also trapped in the pores of rocks and are usually naturally squeezed into specific shapes called traps. The most common trap is an anticline, where rock layers curve upwards like a dome or an arch.

NASA's Landsat satellites or Japan's Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) sensor onboard NASA's Terra satellite take pictures of exposed rock layers on the earth's surface. And if geologists see layers on the surface that are folded into the shape of a dome, there's a good chance they're folded the same way deeper underground.

Another technique makes use of the fact that oil forms when organic materials are buried deep and 'cooked' by the earth's heat for millions of years. This happens in deep depressions called sedimentary basins.

Over the oceans, satellites measure the height of the sea surface with incredible precision. Large underwater geological structures, which might contain oil traps, have a gravitational pull that actually piles water up above them. By mapping these bumps in the ocean, scientists can map the rock structures below the seafloor.

Oil is found in sedimentary rock like sandstone or limestone, which is generally not magnetic. However, the basement rock deep below it, such as granite or volcanic rock, is magnetic. So satellites measure the earth's magnetic field to find where the magnetic basement is very deep.

And where the basement is deep, it means there could be a thick layer of sedimentary rock on top, with the prospect of oil.

In effect, when there's no micro-seepage, satellites can't say "there's oil here" but rather that "there's a geological structure here capable of holding oil".

How do satellites track groundwater?
Since water is heavy, a large underground aquifer actually has a stronger gravitational pull than dry rock.

From 2002 to 2017, NASA operated its Gravity Recovery and Climate Experiment (GRACE) mission with two satellites that chased each other around the earth. When the lead satellite flew over a heavy underground aquifer, gravity would pull it slightly faster, changing the distance between the two satellites.

By measuring this change in distance, scientists could weigh the water underground.

One famous 2009 study published in *Nature* used GRACE data to show that groundwater levels in North India were dropping at alarming rates because they were being extracted to irrigate crops.

Remote-sensing makes resource exploration faster, cheaper, and more environmentally friendly. Instead of drilling thousands of holes to find oil or water, we can target specific areas.

It also helps us protect resources: by monitoring forests and aquifers from space, we can ensure we aren't using them up faster than nature can replenish them.



FROM THE ARCHIVES

Know your English

S. Upendran

What is the difference between "artist" and "artiste"? (R. Ramasubramanian, Coimbatore)
The word "artist" is a general term used to refer to anyone who is skilled at something. For example, he/she may be good at drawing or painting. Ravi Varma and M. F. Hussain are considered great artists. An individual who excels in cooking or in picking locks can also be called an "artist". Musicians, actors and others who entertain people are also called artists.

While the word "artist" has the stress on the first syllable, "artiste" has the stress on the second syllable. The 'i' in the second syllable of "artiste" is pronounced like the 'i' in "fit", "bit" and "hit".

The word "artiste" is someone who practises a performing art: Dancers, singers, acrobats, clowns can all be called "artistes". Since painters, cooks and thieves do not usually perform in front of an audience, they are not generally referred to as "artistes".

What is the meaning of "higgledy piggledy"? (C. Karikal Chozhan, Thirupparai Thurai, Trichy District)
The 'i' in the word 'pig' is pronounced like the 'i' in "big", "wig" and "dig". The 'i' in the word 'piggledy' is pronounced like the 'i' in "fit", "bit" and "hit".

When you say that something is "higgledy piggledy", it means that it is completely mixed up. Things are all over the place in a mixed muddle; everything is untidy. Here is an example:

When I walked into her room, I found papers higgledy piggledy on the floor.

What is the meaning of "use your loaf"? (V. Amritha Kalyani, Chrompet, Chennai)
If somebody tells you to "use your loaf", they want you to use your common sense; they want you to think carefully about what you are doing or saying. Perhaps what you are saying is not very intelligent, so they want you to think harder. This expression is an example of Cockney rhyming slang. The 'loaf' here refers to a loaf of bread; 'bread' rhymes with the word 'head'. Here are some examples:

Why didn't you use your loaf and cover the computer before you started painting the room?

The angry chairman told the manager to use his loaf.

If you use your loaf, you can predict your opponent's next move.

What is the meaning of SOS? (S. Suresh, Royapettah, Chennai)
In the old days, when you were out on the ocean, sailing on a ship, it wasn't possible for you to talk to people on land. If the ship's captain wished to get a message across to someone, he had to make use of Morse code – a radiotelegraph signal. When a ship was in distress; for example if the ship were in danger of sinking, the captain sent an SOS. SOS was and still is the signal used to indicate that a ship is in trouble. The letters SOS were chosen because they were very easy to transmit and easy to recognise in Morse code. Later, people created stories about why the letters SOS were chosen. Some said that it was an abbreviation for "Save our souls". Others maintained that it was an abbreviation for "Save our ship".

Nowadays, any appeal for help can be called an SOS; it is not restricted to ships alone.

Published in The Hindu on March 16, 1999

Word of the day

Imbroglio:
a complicated, confused, or embarrassing situation that causes many problems

Synonyms: difficult, disagreement, controversy

Usage: *The deal ended in an imbroglio.*

Pronunciation: newsth.live/imbrogliopro

International Phonetic Alphabet: /ɪmbɹoˈliəʊ/

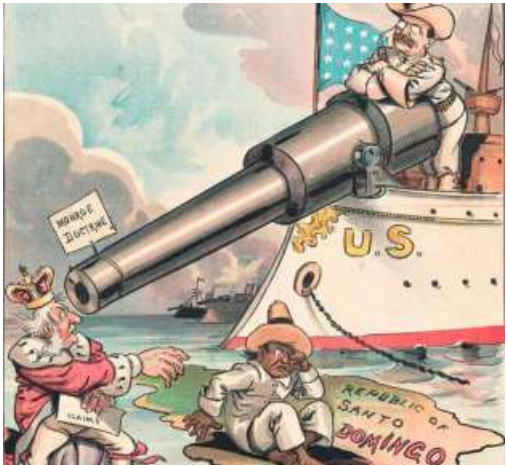
For feedback and suggestions for Text & Context, please write to letters@thehindu.co.in with the subject 'Text & Context'

THE DAILY QUIZ

As the U.S. once again invokes hemispheric influence in its dealings with Venezuela, this quiz revisits the Roosevelt Corollary and how it reshaped the Monroe Doctrine

Prathmesh Kher

- QUESTION 1**
What was the intent of the Monroe Doctrine issued in 1823?
- QUESTION 2**
What geopolitical crisis preceded the articulation of the Roosevelt Corollary?
- QUESTION 3**
How does the Roosevelt Corollary expand the Monroe Doctrine?
- QUESTION 4**
What was one of the earliest uses of the Roosevelt Corollary in practice?
- QUESTION 5**
Which U.S. policy later renounced the Roosevelt Corollary's interventionist thrust?



Visual Question:
The American intervention in which Latin-American country is depicted in this cartoon from March 18, 1905? PUBLIC DOMAIN

- Questions and Answers to the previous day's daily quiz:**
1. He became the Nawab of Pataudi in 1952 on the death of his father. Where is Pataudi located in independent India? **Ans: Haryana**
 2. Mansur Ali Khan was an Oxford Blue and the first Indian captain there. At which Oxford college did he study? **Ans: Balliol**
 3. Why is July 1, 1961, an important date in the life and career of Mansur Ali Khan? **Ans: He was involved in a car accident that left him blind in one eye**
 4. Following an injury to regular skipper Nari Contractor, Mansur Ali Khan became the youngest Test captain ever at 21 years and 77 days. Against which country? **Ans: West Indies**
 5. Thanks to his superb athletic ability and speed while (particularly) patrolling the cover area, what nickname was given to him? **Ans: Tiger**
 6. Under his captaincy, India scored its first-ever series win overseas in 1968. Against which country? **Ans: New Zealand**
 7. Name his popular actor wife and son. **Ans: Sharmila Tagore and Saif Ali Khan**
- Visual: Name the trophy, instituted in 2007 to mark India's 75th anniversary of its first-ever Test against England, that Mansur Ali Khan is handing over to Rahul Dravid. **Ans: Pataudi Trophy named after his father, Iftikhar Ali Khan**
- Early Birds:** Piyali Tuli | Sudhir Thapa | Rajib Ganguly | Dodo Jayaditya | Abhay Krishan

Please send in your answers to dailyquiz@thehindu.co.in

U.S. auto sales defy regulatory uncertainty to rise 2% in 2025



Against odds: Grenadier vehicles are shown for sale at a Grenadier dealership in Irvine, California, U.S. REUTERS

Reuters
DETROIT

Sales of new cars in the United States rose about 2% in 2025, analysts estimate, defying a year of extraordinary disruption for an industry where “black swan” events have become routine.

Automakers confronted supply-chain snarls, unpredictable tariffs and the removal of a \$7,500 electric-vehicle tax credit, factors that drove some buyers to dealer lots to snatch vehicles before regulations pushed prices higher.

“To say it’s been a sales roller coaster of a year would bean understatement,” said Thomas King, president of OEM solutions at J.D. Power.

Analysts warn that sustaining this growth in 2026 may prove difficult as economic uncertainty and tariff-related costs weigh on consumers.

About 16 million vehicles were sold last year, with gas-powered trucks, SUVs and hybrids fuelling demand. Final figures will be released later Monday by automakers including Toyota Motor, General Motors and Hyundai Motor.

While some automakers bumped up prices of models made outside of the U.S., tariffs did not substantially affect vehicle prices, J.D. Power found. The average new-vehicle retail transaction price in December had been expected to reach \$47,104, up \$715 or 1.5% from December 2024, the firm said.

Issue of affordability

Still, affordability remained a top barrier for the industry, and executives from Detroit’s auto giants have been called to testify about this at a Senate Commerce Committee hearing on January 14. “Many price-sensitive shoppers have been pushed out of the new-vehicle market entirely as elevated monthly payments put ownership out of reach,” said Edmunds’ head of insights Jessica Caldwell. Electric vehicles were perhaps the most turbulent part of the market last year. U.S. President Donald Trump axed a hefty consumer tax credit, and championed loosening regulations around fuel economy and emissions. The moves have dampened consumer demand and caused automakers to pull back on plans to produce electric models.

Sales of EVs are expected to account for 6.6% of retail sales in December, down from 11.2% the prior year, according to J.D. Power. Last summer, GM announced it would use some plants to increase production of gas models, instead of the originally intended EVs. The automaker in October took a \$1.6 billion charge related to changing its EV plans, and said more charges would be recorded in the fourth quarter. Ford and Stellantis killed off major EV programmes in 2025. “We had to come up with a better plan,” Ford CEO Jim Farley told Reuters, as the automaker said it would take a \$19.5 billion hit after cancelling the fully-electric version of the F-150 Lightning pickup, as well as a planned next-generation electric truck and van.

AI-driven inflation is 2026’s most overlooked risk, investors say

Inflation risk ‘underappreciated’ by markets in 2026 - investor; data centre spree to contribute to price pressures, according to analysts; investors warn interest rate hikes to cool inflation will hit Artificial Intelligence (AI) shares ; world stocks, investors’ risk appetite heavily exposed to AI boom

NEWS ANALYSIS

Reuters
LONDON/NEW YORK

Global stock markets, riding high on AI euphoria at the start of 2026 may be disregarding one of the biggest threats that could spoil the party: a surge in inflation driven partly by the tech investment boom.

U.S. stock indexes, where seven tech groups contributed half of all market earnings this year, made double-digit gains in 2025 to hit record highs as exuberance about AI and monetary easing also propelled European and Asian equities to record peaks.

Rate cut hopes

Expectations for further rate cuts have buoyed bonds too, handing U.S. Treasury investors the best annual performance for five years as inflation retreated, although it remains above the Federal Reserve’s average 2% target. For 2026, waves of government stimulus in the U.S., Europe and Japan as well as the AI boom are expected to refuel global growth.

This has money managers bracing for inflation to accelerate, prompting central banks to end their rate-cutting cycles, slamming the brakes on the ea-



Risky year: A trader works on the floor of the New York Stock Exchange. AP

sy money flow into AI-obsessed markets.

“You need a pin that pricks the bubble and it will probably come through tighter money,” said Trevor Greetham, head of multi-asset at Royal London Asset Management. He said that while he was holding on to big tech stocks for now he would not be surprised to see inflation booming worldwide by the end of 2026.

Tighter money would reduce investors’ appetite for speculative tech, raise funding costs for AI projects and reduce tech groups’ profits and share prices, Greetham said.

The multi-trillion-dollar race by so-called hyper-



Tighter money would reduce investors’ appetite for speculative tech, raise funding costs for AI projects and reduce tech groups’ profits and share prices

scalers like Microsoft, Meta and Alphabet to build new data centres was also an inflationary force, analysts said, because of the rate at which these projects are gobbling up energy and advanced chips.

Rising costs
“The costs are going up not

down in our forecast, because there’s inflation in chip costs and inflation in power costs,” Morgan Stanley strategist Andrew Sheets said.

He said U.S. consumer price inflation would stay above the Federal Reserve’s 2% target until the end of 2027 in part because of heavy corporate investment in AI.

Above target inflation
J.P. Morgan head of cross-asset strategy Fabio Bassi said that an improving U.S. labour market, stimulus spending and rate cuts that have already happened would keep inflation above that target “regardless of the price of chips.”

Samsung to double AI mobile devices to 800 mn

Reuters
SEOUL

Samsung Electronics plans to double this year the number of its mobile devices with “Galaxy AI” features largely powered by Google’s Gemini, its co-CEO said, which would give the U.S. firm an edge over rivals as the global race in artificial intelligence heats up.

The South Korean company, which had rolled out Gemini-backed AI features to about 400 million mobile products, including smartphones and tablets, by last year, plans to boost that figure to 800 million in 2026.

“We will apply AI to all products, all functions, and all services as quickly as possible,” T. M. Roh told Reuters in his first inter-



Going AI way: People shop inside a store selling Samsung mobile phones and accessories in Mumbai, India. REUTERS

view since becoming Samsung Electronics co-CEO in November.

Major boost to Google
The plan by the world’s largest backer of Google’s Android mobile platform is set to give a major boost to its developer Google, which is locked in a race

with OpenAI and others to attract more consumer users to their AI model.

Samsung seeks to reclaim its lost crown from Apple in the smartphone market and fend off competition from Chinese rivals not only in mobile telephones, but televisions and home appliances, all

overseen by Roh.

It will offer integrated AI services across consumer products to widen its lead over Apple in such features, though the latter was set to be the top smartphone maker last year, according to market researcher Counterpoint.

AI race
Alphabet’s Google launched the latest version of Gemini in November, highlighting Gemini 3’s lead on several popular industry measures of AI model performance.

In response to Gemini 3, Open AI CEO Sam Altman reportedly issued an internal “code red,” pausing non-core projects and redirecting teams to accelerate development. The ChatGPT maker launched its GPT-5.2 AI model a few

weeks later. Roh expects the adoption of AI to accelerate, as Samsung’s surveys on awareness of its Galaxy AI brand jumped to a level of 80% from about 30% in just one year.

“Even though the AI technology might seem a bit doubtful right now, within six months to a year, these technologies will become more widespread,” he said.

While search is the most used AI feature on phones, consumers also frequently use a range of generative AI editing and productivity tools for images and others, as well as translation and summary features, he said.

Galaxy AI is Samsung’s term for its suite of AI features, including those powered by both Google’s Gemini model and Samsung’s

own Bixby for different tasks. Samsung shares ended up 7.5% on Monday, as the company is set to flag a profit jump for the fourth quarter later this week, fueled by a global chip shortage.

Chip shortage
A global shortage of memory chips is a boon to Samsung’s mainstay semiconductor business, but pressures margins on the smartphone business, its second largest revenue source.

“As this situation is unprecedented, no company is immune to its impact,” Roh said, adding that the crisis affects not only mobile phones but other consumer electronics, from TVs to home appliances.

He did not rule out raising product prices.

Old laws, new tech: massive litigation poised to define 2026

OPINION

Reuters

Looking ahead to some of the biggest lawsuits of 2026, one theme stands out: the law is racing to catch up with technology.

High-stakes disputes involving artificial intelligence, antitrust, privacy, social media and more are poised to shape the litigation landscape in the year ahead, offering a legal stress test for the digital age.

The cases I’m following include litigation over software pricing algorithms. Class-actions have already been brought against landlords that use the AI-driven tools to help set apartment rents, hotel

operators to decide room rates and healthcare insurers to determine out-of-network reimbursements.

Antitrust concerns may arise if the software “suggests prices based on the non-public information of competitors” that also use the platform, Skadden, Arps, Slate, Meagher & Flom antitrust partner Karen Lent, who has represented defendants facing such allegations, told me.

Could that be considered illegal per se, akin to industry titans meeting in a smoke-filled room to fix prices?

The question looms large in a potential test case in Seattle federal court, where apartment renters filed a proposed class-action against major property management



New problem: The year ahead will be offering a legal stress test for the digital age. REUTERS

companies and software maker Yardi Systems in 2023. The plaintiffs allege the landlords colluded to set rents on millions of apartments across the country through Yardi’s

automated pricing software.

In a pending motion for summary judgment, Yardi denies the allegations. The company’s outside counsel, Debevoise & Plimpton-

partner Maura Monaghan, told me Yardi software only utilizes “the client’s own data and publicly available information.”

Artificial intelligence-related litigation is heating

up on other fronts as well, said Gregory Ewing, a data privacy and cybersecurity partner at Dickinson Wright. He flags dozens of still-unresolved suits against major tech companies over what constitutes fair use of copyrighted materials in training AI models.

Judges nationwide are considering when such use of materials creates new, transformative content that doesn’t diminish the market for the original work.

Watch list
My watch list includes a class action brought in San Francisco federal court by anonymous software coders against GitHub, Microsoft (which bought GitHub in 2018), and OpenAI.

Seeking billions in penalties, the plaintiffs allege the companies copied their computer code to train the AI-powered assistant Copilot.

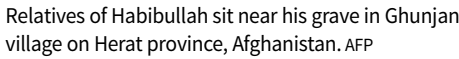
After a lower court judge dismissed the plaintiffs’ Digital Millennium Copyright Act claims at the heart of the case, the 9th U.S. Circuit Court of Appeals granted an interlocutory appeal, with oral arguments set for Feb. 11.

A GitHub spokesperson said Copilot “adheres to applicable laws.” Microsoft declined comment and an OpenAI spokesperson said the claims are without merit. Massive penalties are also on the line in litigation brought under the California Invasion of Privacy Act, in which plaintiffs allege consumer tech companies’

online tracking tools violate their privacy. The challenge, Mayer Brown litigation partner John Nadolenco noted, is how to apply the 1967 wiretapping law to modern website tools.

For example, Meta has been hit with lawsuits under the California privacy law and other consumer protection statutes involving its “Pixel” – a snippet of code that allows companies to track visitor activity online. As I previously wrote, a San Francisco federal jury in August found Meta liable for violating the privacy of users of the fertility tracking app Flo. The crucial question now is damages.

(The opinions expressed here are those of the author, a columnist for Reuters)



Agence France Presse
GHUNJAN

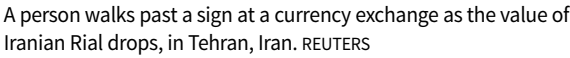
They are drawn to Iran due to greater job opportunities and a common language, but legal routes are limited.

As Iran reels from economic protests, Trump's intervention threat gains new meaning after the U.S. captures Maduro; demonstrations have reached over 220 locations in 26 of its 31 provinces; U.S. agencies have assessed that Iran has 'undertaken activities that better position it to produce a nuclear device

Associated Press
DUBAI

“We’re watching it very closely,” Mr. Trump told journalists aboard Air Force One late Sunday. “If

The collapse of the rial has led to a widening economic crisis in Iran. Prices are up on meat, rice and

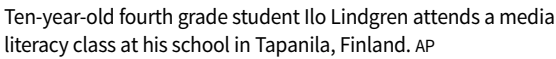


Iran's "Axis of Resistance," which grew in pro-

China meanwhile has remained a major buyer of Iranian crude oil, but hasn't provided overt military support. Neither has Russia, which has relied on Iranian drones in its war on Ukraine.

Iran has insisted for decades that its nuclear programme is peaceful. Ho-

Associated Press
HELSINKI



“We think that having good media literacy skills is a very big civic skill,” Kiia

At Tapanila Primary School, in a quiet neighbourhood north of Helsinki, teacher Ville Vanhanen taught a group of fourth

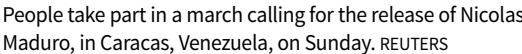
“We’ve been studying how to recognise if a picture or a video is made by AI,” added Vanhanen, a teacher at the school.

Migrants take a group picture as they prepare to disembark from the rescue ship *Ocean Viking* operated by NGO SOS Mediterranee, at the port of Savona, northwestern Italy, on Monday. As many as 33 migrants were saved. AFP

Associated Press
MIAMI

"There's no claim to sovereign immunity if we don't recognise him as head of state," said Dick

Mr. Noriega died in 2017 after nearly three decades in prison, first in the U.S., then France and finally Panama. In his first trial, his lawyers argued that his arrest as a result of a U.S. invasion was so “shocking to the conscience” that it rendered the government’s case an illegal violation of his due process rights.



Supreme Court decisions dating to the 1800s also have upheld America's jurisdiction to prosecute foreigners regardless of whether their presence in the United States was lawfully secured.

"Going after them and dismantling them inherently involves regime change," Mr. Barr said in a "Fox News Sunday" interview. "The object here is not just to get Maduro. We indicted a whole slew of his lieutenants. It's to clean that place out of this crimi-

"Before you ever get to guilt or innocence, there are serious questions about whether a U.S. court can proceed at all," said David Oscar Markus, a defense lawyer in Miami who has handled several high-

For U.S. courts, however, the only opinion that matters is that of the State Department, which considered Mr. Maduro a fugitive and has for months been offering a \$50 million reward for his arrest. Mr. Maduro is accused of facilitating the shipment of thousands of tons of cocaine into the U.S. by providing law enforcement cover, logistical support and partnering with "some of the most violent and prolific drug traffickers and narco-terrorists in the world."

INBRIEF



Hazare Trophy: Kohli not to play against Railways

India superstar Virat Kohli will not feature in Delhi's fixture against Railways in the Vijay Hazare Trophy in Bengaluru on Tuesday. However, pacer Harshit Rana and wicketkeeper-batter Rishabh Pant are available for selection for the game, said Delhi head coach Sarandeep Singh. "Virat is not available. Pant and Harshit will be playing," he said.

Chebet takes maternity break in 2026

Kenyan runner Beatrice Chebet, who won gold in the 5,000m and 10,000m at the 2024 Paris Olympics, is taking a maternity break in 2026, her agent announced on Monday. The 25-year-old is also the world record holder in both events.

VIJAY HAZARE TROPHY — TUESDAY'S FIXTURES

Elite: Group A (Ahmedabad): Tamil Nadu vs. Tripura, Karnataka vs. Rajasthan, Jharkhand vs. Madhya Pradesh, Kerala vs. Pondicherry. **Group B (Rajkot):** Baroda vs. Jammu & Kashmir, Bengal vs. Hyderabad, Uttar Pradesh vs. Vidarbha, Assam vs. Chandigarh. **Group C (Jaipur):** Sikkim vs. Uttarakhand, Himachal Pradesh vs. Mumbai, Goa vs. Punjab, Chhattisgarh vs. Maharashtra. **Group D (Bengaluru):** Saurashtra vs. Services, Delhi vs. Railways, Andhra vs. Haryana, Gujarat vs. Odisha. **Plate (Ranchi): Final:** Bihar vs. Manipur.

LIVE TELECAST

Vijay Hazare Trophy: JioHotstar, 9 a.m.
HIL: Women: Sony Sports Ten 1 & LIV, 5 p.m. Men: Sony Sports Ten 1 & LIV, 7.30 p.m.
The Ashes: 5th Test, day 4, Star Sports 1 & JioHotstar, 4.30 a.m. (Wednesday)

Indian Railways has a field day

The women beat Karnataka to post their second win in the tournament while the men got the better of Uttar Pradesh to sit at the top of Group B

BASKETBALL

S. Dipak Ragav
CHENNAI

Indian Railways women outclassed Karnataka 95-65 to post their second win in the 75th senior National basketball championship at the Nehru Indoor Stadium here on Monday. The only time the contest was evenly matched was in the opening five minutes when both were level 8-8. But Railways then sprinted away to a small lead, winning the next nine points before closing out the quarter at 22-11. The defending champions then went on the offensive, led by Vaishnavi Yadav's fine layups while Pushpa Senthilkumar netted in a few free throws and a three-pointer as their side established a 39-17 lead.

The Railways outfit was stronger in defence, with higher steals led by Dharshini Thirunavukkarasu and P. Priyanka; the former also led in assists.

In the third quarter, Railways' K.B. Harshitha, who came in as a substitute, made instant impact, executing precise jump shots and lay-ups (16 points). As the game started to slip away, Karnataka took ambitious chances as H.M. Bhandavya and Sruthi Arvind nailed a treble of three-pointers each.

It though, had by then built a 19-point lead, which



Commendable show: Vaishnavi scored 15 points for the defending champion Railways. R. RAGU

it consolidated easily in the final quarter to post a win.

In the men's section, too, Railways made it two out of two, with a 96-70 win over Uttar Pradesh to sit at the top of Group B.

Top results: Women: Group A: Indian Railways 95 (K.B. Harshitha 16, Vaishnavi Yadav 15, Pushpa Senthilkumar 12, Manmeeth Kaur 12) bt Karnataka 65 (Sruthi Arvind 24, H.M. Bhandavya 18, Nidhi Umesh 14); Delhi 68 (Prakriti Ranjan 18, Suman 13, Simran Kaur 12, Preethi Kumari 11) bt Chhattisgarh 55 (Priya Sharma 20). **B:** Kerala 88 (V.J. Jayalakshmi 20, Swapna Merin Jose 14, Kavitha Jose 12, S. Susan 10) bt Madhya Pradesh 34. Tamil Nadu 101 (S. Krithika 17, R. Sruthy 17, V. Kogilavani 16, Antheya Diasy 14, Shree Varshini

12) bt West Bengal 33 (Ananya Mandal 13).

Men: A: Karnataka 94 (Pratyanshu Tomar 22, Aaron Monterio 20, Aravind Arumugam 14, Shashikant Rai 14) bt Services 75 (Sunil Rathee 18, Ajay Singh 18, Hemant Sheoran 12, Himanshu Hooda 10, T.S. Santosh 10); TN 100 (Muin Bek Hafeez 21, Arvind Kumar Muthukrishnan 15, Lokeshwaran Mohan 15, Anantharaj Anantharaj 15) bt Gujarat 48 (Vinay Kaushik 10).

B: Indian Railways 96 (Gurbaz Sandhu 15, Tushal Singh 15, Palpreet Singh 14, Princepal Singh 14, Sahaj Pratap Singh 12) bt U.P. 70 (Harsh Dagar 20, Kushal Singh 14, Prince Tyagi 11); Delhi 94 (Jeethandar Singh 23, Ayush Sharma 18, Arjun Singh 13, Rachit 13, Issac T. Thomas 11) bt Chandigarh 82 (Aditya 35, Gaurav Kumar 17, Gautam Yadav 10).

Kapp backs Jemimah's leadership traits

WPL

Vivek Krishnan
NEW DELHI

In a Delhi Capitals set-up that will be led by the young and exuberant Jemimah Rodrigues during the fourth Women's Premier League season, Marizanne Kapp is the experienced old pro. The 36-year-old South African, by virtue of her all-round variety, has been indispensable to whichever side she has turned up for over the course of a lengthy career. It has been no different at DC since the outset.

It puts Kapp in the position to provide an insightful view on the leadership change that has transpired at the Capitals.

With Australia's Meg Lanning, who guided DC to three runner-up finishes in a row, moving to UP Warriors during November's mega auction, the 25-year-old Jemimah has been asked to step into those big shoes.

"Losing Meg as a cap-



Looking ahead: Kapp doesn't want to read too much into past results. FILE PHOTO: SHIV KUMAR PUSHAKAR

tain is obviously a big thing," Kapp reflected during a virtual interaction on Monday.

"But in saying that, when they asked me, a couple of years ago, who should be India's next captain, I said Jemimah. I feel like she's one of those players who can bring a team together, with her personality and the caring that she has. I feel like she's always been a leader. There will be challenges. But I believe Jemimah will take this opportunity with

both hands and she'll be very successful."

A prevalent talking point as DC prepares for the new season has been its failure to find a way on the big occasions in previous years. Kapp doesn't want to read too much into those results.

"At some stages, it was just a bit of bad luck," Kapp stated. "It's a mixed bag of that and us not having our best day in the final. But I wouldn't say it's a case of not being able to cope with the pressure."

Man United sacks manager Amorim

Agence France-Presse
LONDON

Ruben Amorim has been sacked as Manchester United manager 14 months after arriving at Old Trafford. United said in a statement that the Portuguese had left his role, with the club's leadership having "reluc-

tantly made the decision that it is the right time to make a change".

The club added: "This will give the team the best opportunity of the highest possible Premier League finish."

United is sixth in the table after a 1-1 draw at Leeds on Sunday.

Neeraj ends a hugely successful decade-long association with JSW Sports

Sports Bureau
NEW DELHI

The decade-long partnership between Neeraj Chopra and JSW Sports is formally over. The star javelin thrower, one of its earliest signings as a teenager, and JSW officially announced the decision on Monday along with the announcement of Neeraj launching his own athlete management firm, Vel Sports. The contract between the two

reportedly ran out in December 2025 with both sides agreeing not to renew it.

Interestingly, company records mention Vel Sports as being incorporated as early as December 2023 with Neeraj as one of its two directors. Neeraj's association with JSW Sports began in 2016 after being scouted through the Sports Excellence Programme and saw the athlete through the biggest moments of his career, and Indian athletics, including gold at the

Tokyo Olympics in 2021 and silver in the 2024 Paris Games a with the World Championship crown in between in 2023 besides winning the Diamond League in 2022.Talk of Neeraj taking a more active entrepreneurial responsibility had been around ever since the NC Classic last year, which he practically micro-managed first at Panchkula and then in Bengaluru. While it has not been announced yet, sources have

also confirmed that Neeraj is keen on developing a track and field High Performance Centre as well in the near future.

"Working with Neeraj has been an incredible experience for all of us at JSW Sports. His success story reflects our shared philosophy of excellence and purpose. We're immensely proud of what we've achieved together and wish him continued success in all his future pursuits," CEO

JSW Sports CEO Divyanshu Singh said in a statement.

"Over the last decade, our journey together has been one of growth, belief, and achievement. JSW Sports has played a defining role in my career, and I'll always remain grateful for their support and vision. As we conclude this chapter, I carry forward the same values into the next phase of my journey," the 28-year-old Neeraj, a Lt. Colonel in Indian Army, said.



Fruitful stint: The partnership with JSW saw Neeraj winning India's maiden Olympic gold in athletics. FILE PHOTO

The results (Provisional): MRF F2000 (Race-2, 10 laps): 1.

Ishaan Madesh (15mins, 58.080s); 2. Arjun Chheda (16:09.792); 3. M.B. Tarun (16:21.957). **Race-3 (8 laps):** 1. Chheda (12:50.994); 2. Madesh (12:51.970); 3. Shivesh Selvarathnam (13:03.884).

MRF F1600 (Race-2, 10 laps): 1. Sai Shiva Sankaran (17:26.932); 2. Nigel Abraham Thomas (17:29.862); 3. Arjun S. Nair (17:34.344). **Race-3 (8 laps):** 1. Sai Shiva Sankaran (13:51.994); 2. Arjun (13:52.734); 3. Nigel (13:59.360). **Indian Touring Cars (Race-2, 10 laps):** 1. Ritesh Rai (Buzzing Hornet Motorsports) (18:51.494); 2. Biren Pithawala (Team N1) (18:59.574); 3. Karna Kadur (Arka Motorsports) (18:59.800). **Race-3 (8 laps):** 1.

Ritesh (14:58.815); 2. Dhruv Chavan (15:22.189); 3. Pithawalla (17:10.467). **ITC 1625 (Race-2, 10 laps):** 1. Vidyaprakash Damodaran (Team Performance Racing) (19:46.309); 2. Nikanth Rambalu (Team Performance Racing) (19:46.466). **Race-3 (8 laps):** 1. Nikanth Rambalu (16:35.344). (Only one finisher).

Indian Junior Touring Cars (Race-2, 10 laps): 1. Viswas Vijayaraj (Team Performance Racing) (19:23.558); 2. Ritvik Thomas (Race Concepts Motorsports) (19:27.878); 3. Jarshan Anand (20:11.101). **Race-3 (8 laps):** 1. Vijayaraj (15:34.116); 2. Jarshan (16:16.844). **Super Stock (Race-2, 10 laps):** 1. T.S. Diljith (DTS Racing) (20:45.227); 2. Kesara Godage (Redline Racing India) (18:45.845 +1 lap); 3. Lal Kattikulam Bharathan (DTS Racing) (18:58.193 + 1 lap). **Race-3 (8 laps):** 1. Diljith (16:34.197); 2. Godage (16:40.033); 3. Krishanu Dutta Bhuyan (Zion Racing) (16:52.865).

Formula LGB 1300 (Race-2, 10 laps) (Open and Junior): 1. Joel Joseph (DTS Racing) (22:48.689); 2. Lokithingeash Ravi (DTS Racing) (22:48.778); 3. Aditya Patnaik (Momentum Motorsports) (22:57.522). **Race-3 (8 laps, Open and Junior):** 1. Joel Joseph (15:05.346); 2. Vinith Kumar (DTS Racing) (15:08.935); 3. Bhuvan Bonu (MSPORT) (15:20.145). **MRF Saloons (Toyota Etios) Race-2 (10 laps):** 1. Akshay Muralidharan (21:27.550); 2. Mohammed Arfath (21:32.038); 3. Yash Pawar (22:35.920). **Race-3 (8 laps):** 1. Mohammed Arfath (17:14.385); 2. Tarushi Vikram (17:14.800); 3. Akshay Muralidharan (17:15.536).

Divyanshi loses to Matsushima



Stellar show: Aadya and Rajdeep are the under-11 champions.

TABLE TENNIS

Amol Karhadkar
VADODARA

Divyanshi Bhowmick – regarded as one of India's most promising young paddlers – fell short of top honours, going down fighting to second seed Miku Matsushima of Japan in the under-19 girls' final of the WTT Youth Contender here on Monday.

In a contest that capped a punishing day for both players – who featured in four knockout matches over a span of seven hours – Matsushima prevailed over Divyanshi 11-6, 9-11, 9-11, 11-8, 11-3 in a 45-minute encounter at the SAMA Indoor Sports Complex.

The Japanese left-hander used her pace and ear-

ly aggression to race to an 8-3 lead in the second game after winning the opener.

However, the Indian responded impressively. A seven-point winning streak helped the reigning under-15 Asian champion level the match by converting her second game point. She carried the momentum into the third game to move ahead 2-1.

The results: Final: Girls: U-19: Miku Matsushima (Jpn) bt Divyanshi Bhowmick 11-6, 9-11, 9-11, 11-8, 11-3; **U-15:** Sreejani Chakraborty bt Tanishka Kalbhairav 8-11, 11-8, 7-11, 11-7, 11-5; **U-11:** Aadya Baheti bt Sakshya Santosh 15-13, 11-8, 12-10.

Boys: U-19: Priyanuj Bhattacharyya bt Sarthak Arya 12-10, 11-8, 14-12; **U-15:** Aditya Das bt Sanjay Jagdish 11-4, 11-9-11-8; **U-11:** Rajdeep Biswas bt Sharvil Karambelkar 11-8, 11-6, 11-13, 11-4.

Former World billiards champion Manoj Kothari passes away

Sports Bureau
KOLKATA



Manoj Kothari. THE HINDU ARCHIVES

Former World billiards champion and Indian cue sports chief coach Manoj Kothari passed away on Monday.

Kothari was 67 and is survived by his wife and son Sourav. He was not keeping well and was being treated in Tamil Nadu.

"He passed away following a cardiac arrest in the morning," Sourav, also a World billiards champion in 2018 and 2025, told *The Hindu*.

"I lost everything. He was my hero," he added. Kothari, who won the World billiards title in 1990 and the World doubles billiards championships in 1997 before being conferred the prestigious Dhyan Chand Award for lifetime achievement in 2005, had been serving as India's cue sports chief coach for about a decade-and-a-half.

"Manoj Kothari was an efficient administrator and

a fantastic coach. More than that, he was an amazing human being.

"We went a long way back and shared a great relationship. Since he was appointed National coach, we travelled together on many international trips.

"He was always helpful, kind and passionate in bringing out the best in all top players. My heartfelt condolences to the Kotharis," said the 28-time World championships gold medalist cueist Pankaj Advani.

"We lost a legend," said former World champion and Asian Games gold medalist Ashok Shandilya.

Top names advance with easy wins

NATL. BOXING

Sports Bureau

After the chaos and mismanagement of the opening day, things appeared to get slightly better on day two of the Elite men's and women's National boxing championships here in Greater Noida, even though the inability to complete the day's proceedings meant the organisers had to scramble to bring things back on track

on Tuesday.

While the bouts were supposed to begin at Gautam Buddha University in the afternoon, Monday's delayed bouts meant action began early in the morning as the officials tried to clear up the backlog. With all three rings finally available for the competition, the results in the opening round of the competition were on expected lines, with most of the top names in both sections registering easy, unanimous wins.

Top results:

Women: 48kg: Minakshi Hooda (AIPSCB) bt V. Lakshya S. Vijayan (TN) 5-0; Manju Rani (RSPB) got walkover Monika Mallick of West Bengal.

51kg: Nikhat Zareen (Tel) bt Nidhi (Chd) 5-0. **75kg:** Lovlina Borgohain (Asm) bt Krishna Verma (Pun) 5-0.

Men: 50kg: Vishwanath Suresh (SSCB) bt Sahil (Utk) 5-0. **55kg:** Pawan Bartwal (SSCB) bt Bilal (Tel) 5-0; **60kg:** Sachin Siwach (SSCB) bt Tusar (Meg) 5-0.

70kg: Hitesh Gulia (SSCB) bt Ankit (SPSB) 5-0. **75kg:** Sumit Kundu (SSCB) bt Arshpreet Singh (Pun) 5-0.

Shreyas to lead Mumbai in Shardul's absence

Shayan Acharya
JAIPUR

With Shardul Thakur ruled out due to a calf injury, Shreyas Iyer will lead Mumbai in the remaining group fixtures of the Vijay Hazare Trophy.

Shreyas, who joined the Mumbai team on Monday, had a long training session at the Jaipuria Vidyalaya Ground, under the watch-

ful eyes of coaches Omkar Salvi and Atul Ranade.

He looked comfortable while batting against the fast bowlers, and also did some catching drills.

"With Shardul still recovering from the injury, it has been decided that Shreyas will captain the team for the last two group league fixtures," Mumbai's chief selector Sanjay Patil told *The Hindu*.

Gill boost for Punjab

Shayan Acharya
JAIPUR

When Punjab takes on Goa in the Vijay Hazare Trophy on Tuesday, the batting department will be bolstered by the presence of Shubman Gill. Having missed out on Punjab's last Vijay Hazare Trophy group fixture against Sikkim due to illness, Gill could be heard cracking a few jokes with his teammates.

Caruana will certainly be the favourite and Praggnanandhaa, too, if he is better prepared in the opening; Anish can do well if he continues his GCL form, but I have my reservations about Nakamura given the way he performed against players with ratings of 1800

