

# THE PALA CIVIL TIMES



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## The Governor who forgot his job

THE HINDU :  
11-05-2026 : Page 6



## Advancing India-South Korea defence innovation ties

THE HINDU :  
11-05-2026 : Page 6



## Prevalence of fake currency still a reality post-demonetisation

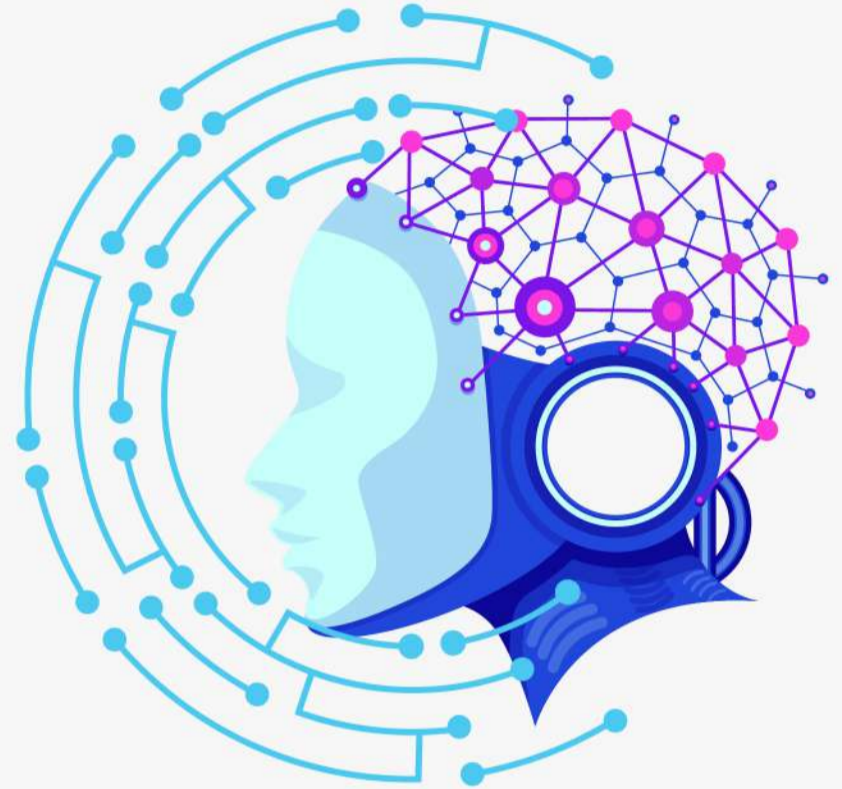
THE HINDU :  
11-05-2026 : Page 7

## NATIONAL Page 3



## Labour Codes: Provisions, Concerns and Labour Rights Debate

THE PALA CIVIL TIMES  
Special Feature



## PRELIMS CORNER

### Page 8



Petroleum and Natural Gas  
Regulatory Board

Ethanol Production

UPSC PYQ analysis -  
Economics

## National Technology Day 2026

National Technology Day commemorates the momentous events of 11th May 1998, when India conducted successful nuclear tests under Operation Shakti, and saw the maiden flight of the indigenously developed Hansa-3 aircraft. In recognition of these achievements, then Prime Minister Sh. Atal Bihari Vajpayee declared 11th May as National Technology Day.

National Technology Day 2026 was observed with the inauguration of "Vigyan TECH 2026" at BRIC-NII, New Delhi, under the theme "Building India's Innovation Ecosystem for Viksit Bharat". Addressing the event, Union Minister for Science & Technology, Dr. Jitendra Singh highlighted that India's startup ecosystem has expanded from around 400 startups in 2014 to more than two lakh startups today, making India the world's third-largest startup ecosystem. He also stated that India's Global Innovation Index ranking improved from 80 to 38, while patent filings crossed one lakh, with over 55% filed by Indian residents. The programme also stressed greater inter-ministerial collaboration, indigenous technology development, and the role of science and technology in achieving the vision of Viksit Bharat by 2047.

## EDITORIALS DECODED

### Page 5



### Cost to access

*The opportunity cost of accessing medical care remains high*



### Judicial reform shouldn't stop at SC



### Bond truths

*Retail exposure to foreign bonds not a great idea*

## The Governor who forgot his job

The Governor is the constitutional head of the State and functions broadly on the aid and advice of the Council of Ministers (Articles 153 to 164). Though the office is nominal, the Governor plays a crucial role during government formation, especially in hung Assembly conditions. The Governor, (appointed by the President) also acts as a link between the Union and the States, giving the office a dual constitutional and political role.

### Governor's Role in Government Formation

After an election, the Governor's primary responsibility is to identify the person most likely to command the confidence of the Legislative Assembly and invite them to form the government. The Governor is not expected to independently test majority support outside the House or impose arbitrary political conditions. The real constitutional test of majority lies on the floor of the Assembly through a no-confidence motion. The Constitution does not explicitly lay down a detailed procedure for inviting parties to form governments in hung Assemblies. Rather, constitutional conventions and recommendations of expert commissions have become important guiding principles.

### Commission Recommendations

The Sarkaria Commission (1983) on Centre-State relations emphasised that a government enjoying Assembly majority should not be dismissed arbitrarily and that floor tests should be the ultimate method for determining majority support. The Punchhi Commission (2007) further clarified the order of preference that Governors should follow in a hung Assembly. According to its recommendations, the Governor should first invite a pre-poll alliance commanding majority support. If no such alliance exists, the largest single party with support from others should be invited. This may then be followed by post-poll coalitions and outside-support arrangements. The Commission recognised that minority governments are constitutionally valid so long as they survive on the floor of the House. It also recommended that Governors should insist on floor tests rather than subjective political assessments.



### Judicial Position and Constitutional Conventions

The Supreme Court in the S.R. Bommai case, reinforced the principle that **legislative majority must be tested on the floor of the House**. Later interventions in cases relating to Karnataka, Maharashtra, Goa and Manipur further highlighted judicial concern over misuse of gubernatorial discretion.

**Indian parliamentary practice has also seen several minority governments functioning legitimately, including governments led by P. V. Narasimha Rao and Manmohan Singh.** These precedents established that governments need not demonstrate majority support before swearing-in but only during Assembly proceedings.

### The Broader Takeaway

The 2026 Tamil Nadu Legislative Assembly Election reignited debate over the Governor's constitutional role. The Tamilaga Vettri Kazhagam emerged as the single largest party with 108 seats in the 234-member Assembly. However, Governor Rajendra Vishwanath Arlekar initially refused to invite party leader C. Joseph Vijay to form the government unless written support from 118 MLAs was produced. The debate reflects a larger issue concerning the balance between constitutional morality and political discretion. Excessive gubernatorial intervention risks undermining parliamentary democracy, federalism and the autonomy of elected State governments.

At the same time, the constitutional framework recognises the need for Governors to ensure stable governments and prevent unconstitutional political practices such as defections and horse-trading. Therefore, the challenge lies in ensuring neutrality, transparency and adherence to established constitutional conventions.

## Labour Codes: Provisions, Concerns and Labour Rights Debate

The Union government has fully operationalised the four Labour Codes through more than 30 gazette notifications issued in May 2026, bringing into force a major overhaul of India's labour law framework. The Codes, which had earlier been notified in November 2025, now replace 29 existing labour laws governing wages, industrial relations, social security, working conditions, retirement benefits, and trade union rights. The government stated that the final rules contain only "minor amendments" to the draft rules published in December 2025 after consultations with stakeholders.

### Major Focus Areas of the Labour Codes

The new Labour Codes seek to streamline and consolidate India's fragmented labour law regime into **four** broad categories — the **Code on Wages, the Code on Social Security, the Industrial Relations Code, and the Occupational Safety, Health and Working Conditions** framework.

Under the **Code on Wages**, the Union government will determine the criteria for fixing the national floor wage through separate order after consulting a Central Advisory Board. The Rules specify that the standard working day for daily wage employees will be eight hours, while total weekly working hours for other employees cannot exceed 48 hours. Employers are also required to issue wage slips either electronically or in physical form.

The **Code on Social Security** introduces changes to provisions linked to Employees' State Insurance and provident fund systems. It also includes provisions for creating social security mechanisms for unorganised workers and gig workers.

The **Industrial Relations Code** focus on the recognition of trade unions - a single registered trade union that has at least 30% membership of the total workers in an industrial establishment will be recognised as the **sole negotiating union** for collective bargaining purposes.

The long-term impact of the Labour Codes will depend on how effectively the provisions are implemented by both the Union and State governments, and whether labour welfare objectives can be balanced with industrial and economic reforms.



### Controversy Over Minimum Wage Formula

The most debated aspect of the final Rules is the calculation of minimum wages. The draft rules released earlier had included a detailed formula based on nutritional intake, clothing, housing, fuel and electricity costs, and children's education and medical expenses. This formula had evolved from the recommendations of the **15th Indian Labour Conference (1957)** and the Supreme Court's judgement in the **Reptakos Brett case (1991)**. However, the final Rules omit this formula and instead state that the criteria for determining minimum wages will be specified separately by the Union government through special or general orders. This removal could lead to arbitrary and inconsistent wage calculations across states, increasing wage disparities for similar categories of workers.

### Why it matters?

The operationalisation of the Labour Codes triggered protests by members of 10 central trade unions across the country, with demonstrators burning copies of the Rules and accusing the government of undermining labour rights. Trade union leaders alleged that their recommendations regarding working hours, minimum wages, trade union protections, and social security safeguards were ignored despite consultations. Labour economists argued that removing the wage calculation formula could produce "unscientific and inconsistent" wage structures across states and worsen inequalities in worker compensation.

## Advancing India-South Korea defence innovation ties

India and South Korea have steadily expanded their defence partnership since establishing diplomatic relations in 1973, transforming it from limited military cooperation into a broader Special Strategic Partnership. The foundation was laid through the 2005 Memorandum of Understanding on Defence Industry and Logistics, which encouraged collaboration in defence production, procurement, logistics, and research. This was followed by the 2010 agreements on defence cooperation and defence research and development, which promoted exchanges in training, joint exercises, military visits, and emerging technologies through cooperation between India's DRDO and South Korean defence industries. The relationship was elevated to a "Special Strategic Partnership" in 2015, reflecting growing strategic convergence in the Indo-Pacific region.

### Expanding Defence Industrial Cooperation

The 2020 Roadmap for Defence Industries Cooperation widened engagement into land systems, naval systems, aero systems, guided weapon systems, testing, certification, and technology transfer between the two countries. The roadmap aligned closely with India's "**Make in India**" and **defence indigenisation goals** by encouraging South Korean investments in India's defence industrial corridors in Tamil Nadu and Uttar Pradesh. One of the most successful outcomes of this cooperation has been the **K9 Vajra-T self-propelled artillery system**, jointly developed by Larsen & Toubro and Hanwha Aerospace. Its successful deployment demonstrated the practical viability of India-South Korea defence co-production and strengthened confidence for future collaborations.

The growing India-South Korea defence partnership carries wider geopolitical relevance in the Indo-Pacific amid rising strategic competition, technological rivalry, and evolving security challenges. Both countries share concerns regarding maritime security, supply-chain vulnerabilities, and regional stability. Their defence cooperation therefore contributes to broader regional security management. It also demonstrates India's shift from a buyer-centric defence model to one focused on co-development, innovation, and industrial collaboration. By integrating defence manufacturing, emerging technologies, and strategic diplomacy, India and South Korea are gradually building a long-term security partnership in the Indo-Pacific region.



### Emergence of KIND-X

The latest Korea-India Defence Accelerator (KIND-X) was announced during the April 2026 summit between Prime Minister Narendra Modi and President Lee Jae Myung. ***KIND-X aims to connect defence startups, industries, universities, investors, incubators, and research institutions of both countries into a joint defence innovation ecosystem.*** Modeled on India's earlier innovation bridges such as INDUS-X with the United States and FRIND-X with France, the initiative is expected to be jointly supported by **South Korea's Defence Acquisition Program Administration (DAPA)** and **India's Defence Innovation Organisation (DIO)**. It seeks to promote co-development, co-production, defence innovation grants, testing access, technology certification, intellectual property collaboration, and startup acceleration in advanced defence technologies.

### Strategic and Technological Significance

KIND-X reflects the increasing importance of defence technology and deep-tech innovation in contemporary security architecture. Both countries are seeking collaboration in critical future-oriented sectors such as artificial intelligence, autonomous systems, robotics, semiconductors, space-based intelligence and surveillance systems, critical minerals, cyber technologies, and defence electronics. The initiative aligns with **India's "Defence Forces Vision 2047"** and **South Korea's "Defence Innovation 4.0" strategy**, both of which focus on technologically advanced, integrated, and future-ready military capabilities.

**The Indian EXPRESS**

## Judicial reform shouldn't stop at SC

The Union Cabinet's decision to increase the sanctioned strength of the Supreme Court of India from 34 to 38 judges seeks to address the growing backlog of cases before the apex court. While the move may provide limited relief in terms of judicial workload and disposal capacity, it does not address the deeper structural causes of judicial pendency. Despite operating close to its full sanctioned strength and disposing of a large proportion of annual filings, the Supreme Court continues to face rising pendency due to the expansion of its jurisdiction, increasing litigation, and the role of the government as the country's largest litigant. The issue is more severe in subordinate courts and High Courts, where the overwhelming majority of pending cases are concentrated. India's judge-population ratio remains significantly lower than that of many developed and emerging economies, indicating inadequate judicial capacity relative to the volume of disputes generated by population growth and expanding economic activity. Judicial delays also carry serious governance and constitutional implications, including prolonged incarceration of undertrials and denial of timely access to justice. Isolated increases in judicial appointments cannot substitute for comprehensive judicial reforms. Sustainable solutions require strengthening trial courts, improving judicial infrastructure, reducing avoidable government litigation, expanding alternative dispute resolution mechanisms, and reforming procedural inefficiencies across the justice delivery system.

**Editorial to Exam - Most probable question from this editorial**

**Judicial pendency in India is not merely a problem of inadequate judge strength but also of deeper structural deficiencies in the justice delivery system. Discuss.**



## Cost to access

Centre's decision to provide free annual health check-ups for workers above 40 years through the ESIC reflects strengthening occupational health and labour welfare. It draws upon provisions of the Labour Codes to improve early detection and treatment of occupational and non-communicable diseases, especially among workers exposed to hazardous conditions. However, there are several shortcomings to address. A large share of workers remain outside formal social security networks despite efforts such as the e-Shram portal. Informal sector including women workers, home-based workers, and migrant labourers often lack identifiable employers, making access to health benefits and occupational protections difficult. Overcrowded ESIC facilities, shortage of medical personnel, inadequate integration between labour databases and healthcare systems, and the opportunity cost faced by workers who lose wages while accessing healthcare services amplify the programme's inefficiency. The scheme also adopts a limited understanding as it lacks an understanding of occupational hazards such as heat stress, infectious diseases among sanitation workers, and preventive vaccination needs. The broader issue is that labour welfare in India continues to be shaped by a formal-sector approach even though the majority of the workforce is informal.

**Editorial to Exam - Most probable question from this editorial**

**Occupational health remains one of the most neglected dimensions of labour welfare in India, particularly for informal workers.**

**Examine the challenges in implementing occupational healthcare and social security measures for workers in India. Suggest reforms to make labour welfare systems more inclusive and effective.**

thehindu**businessline.**

TUESDAY - MARCH 31, 2026

## Bond Truths

Online bond platforms in India was expected to deepen retail participation in corporate and government bond markets. However, retail bond trading volumes have remained limited, prompting SEBI to propose regulatory relaxations aimed at improving ease of doing business for such platforms. These include allowing platforms to offer foreign debt securities regulated by the International Financial Services Centres Authority (IFSCA) and enabling the sale of Section 54EC tax-saving bonds. However these measures alone are unlikely to substantially increase retail participation. Indian bonds already provide comparatively attractive yields relative to advanced economies, reducing the incentive for retail investors to diversify into foreign debt markets that involve additional exchange-rate and geopolitical risks. Moreover, retail investors often lack sufficient understanding of interest rate cycles, bond pricing, and global macroeconomic conditions, making foreign bond investments potentially risky. Furthermore, bond trading remains relatively opaque compared to equity markets, with limited price transparency and weak information dissemination. In addition, the taxation of bond interest at slab rates reduces the attractiveness of debt instruments relative to equities. Expanding retail participation in bond markets therefore requires deeper financial literacy, transparent trading infrastructure, tax rationalisation, and stronger market development measures.

**Editorial to Exam - Most probable question from this editorial**

**Despite being relatively safer financial instruments, bond markets in India continue to witness low retail participation compared to equity markets.**

**Discuss the structural and policy-related challenges hindering the development of retail bond markets in India.**

## Prevalence of fake currency still a reality post-demonetisation

The demonetisation of November 8, 2016, was projected as a major step to eliminate black money and counterfeit currency circulation in India. The ₹500 and ₹1,000 notes were withdrawn with the expectation that the existing counterfeit notes would lose legal validity and fake currency networks would collapse. However, nearly a decade later, official data indicates that counterfeit currency circulation continues to remain a major challenge, raising questions about the long-term effectiveness of demonetisation.

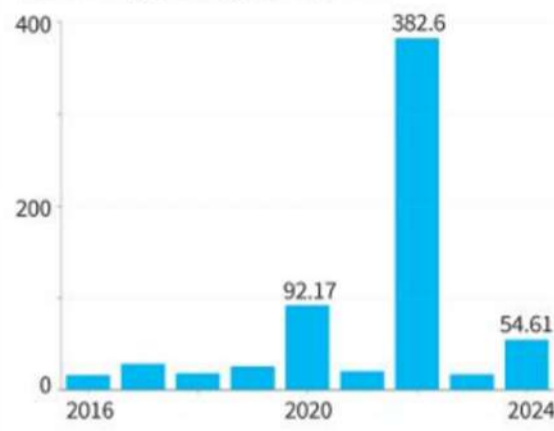
### Continued Seizure of Fake Currency

According to the 2024 "Crime in India" report of the National Crime Records Bureau, fake currencies worth more than ₹54.61 crore were seized across India in 2024 alone. This included nearly six lakh counterfeit ₹500 notes and more than one lakh fake ₹2,000 notes. Significantly, the ₹2,000 denomination itself was introduced after demonetisation and later withdrawn from circulation by the RBI in 2023, though it continues to remain legal tender. The presence of large numbers of fake ₹2,000 notes demonstrates that counterfeit networks rapidly adapted even to the newly introduced currency system.

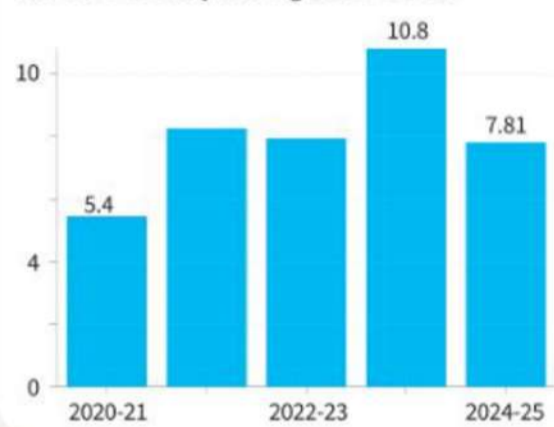
Between 2017 and 2024, fake currencies worth approximately ₹654 crore were seized across the country. The year 2024 recorded the third-highest value of counterfeit currency seizures since demonetisation. Earlier, counterfeit currency seizures had reached around ₹92 crore in 2020 during the COVID-19 pandemic period, while 2022 witnessed exceptionally high seizures valued at nearly ₹382.6 crore.

The available data suggests that demonetisation did not produce a sustained decline in counterfeit currency circulation. Instead, counterfeit networks adapted to the new currency structure and began targeting the redesigned denominations introduced after 2016. Continued large-scale seizures, rising detection of fake notes in banks, and increasing circulation of counterfeit ₹500 and ₹2,000 notes indicate that fake currency remains a persistent challenge for India's financial and internal security systems.

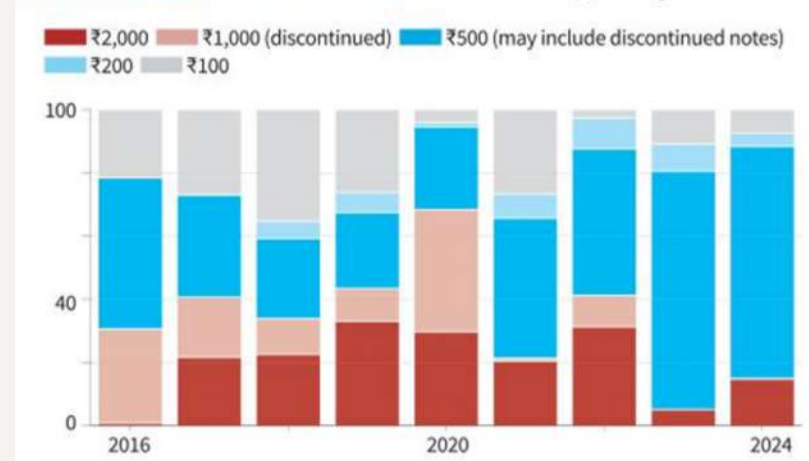
**Chart 1:** The value of fake Indian currencies seized every year. Figures in ₹ crore



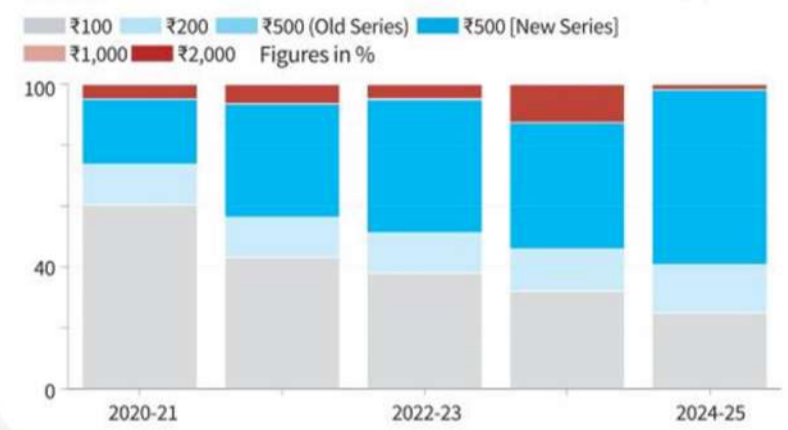
**Chart 3:** The value of counterfeit notes detected and reported in the banking system during the last five financial years. Figures in ₹ crore



**Chart 2:** Denomination-wise share of fake Indian currency seized by authorities every year. Figures in %



**Chart 4:** Denomination-wise counterfeit notes detected in the banking system



### Rise in Counterfeit New-Series Currency Notes

Data shows that counterfeiters increasingly targeted the currency denominations introduced after demonetisation. Total fake ₹500 notes seized in 2024 was nearly four times higher than the seizures recorded in 2016 (pre-demonetisation). Counterfeit ₹2,000 notes almost doubled compared to 2017 levels. Parliamentary data also revealed that more than 11 lakh counterfeit notes (valued at over ₹40.26 crore) of different denominations entered the banking system between 2020-21 and 2024-25. On average, nearly two lakh fake notes were detected every year by banks during this period. Out of this, new-series ₹500 notes formed the largest category of fake notes (nearly 37%) detected in banks. Counterfeit ₹100 notes accounted for nearly three lakh pieces, constituting around 26% of the total fake currency detected.

**Between 2017 and 2024, Gujarat recorded the highest value of fake currency seizures (₹355.72 crore). This alone accounted for more than half of the total counterfeit currency seizures across India. Maharashtra ranked second (₹100 crore), while Karnataka followed at nearly ₹50 crore.**

# SCIENCE

## Hope for pancreatic cancer as new drug shows promise

Pancreatic cancer is one of the most dangerous and difficult-to-treat forms of cancer in the world. It is often diagnosed at an advanced stage as it develops silently and spreads quickly to various organs. Furthermore, there are limited treatment options and the chances of recurrence remain high. Consequently, pancreatic cancer has long been associated with poor survival rates and limited medical breakthroughs. Recent clinical trial results involving a new experimental drug called **daraxonrasib** have generated major interest in the global medical community.

### Climate Change and Emerging Disease Risks

Cancer develops when cells in the body begin to divide uncontrollably. Normally, the body has a carefully regulated system that controls when cells should grow, divide, repair themselves, or die. In cancer, this balance breaks down, allowing abnormal cells to multiply rapidly and form tumours.

In 1988, researchers identified that nearly 95% of pancreatic cancers carried mutations in a gene called KRAS that acted like a switch controlling cell growth. In healthy cells, the KRAS protein can turn “on” or “off” depending on whether the cell needs to divide. However, mutations in the KRAS gene can lock the switch permanently in the “on” position which causes continuous and uncontrolled cell division, leading to pancreatic, colorectal, and lung cancers.

### Why KRAS Was Considered “Undruggable”

For decades, scientists recognised KRAS as an important target for cancer treatment. However, developing medicines against it proved extremely difficult. Most cancer drugs work by attaching themselves to specific pockets or grooves on a protein’s surface and blocking its activity. However, the KRAS protein has a very smooth and compact surface with very few areas where medicines can bind effectively. Due to this, earlier attempts to develop KRAS-targeting drugs failed in clinical trials. As a result, KRAS was widely described by researchers as an “undruggable” target.

The emergence of daraxonrasib reflects the growing importance of precision medicine in cancer treatment. Instead of using general treatments alone, modern cancer therapies increasingly focus on targeting specific genetic mutations responsible for disease progression.

### Lock it off

Daraxonrasib could be useful to treat a variety of cancers

- In 1988, scientists discovered mutations in the KRAS gene drove uncontrolled cell division in most pancreatic cancers
- Pancreatic cancer remains difficult to treat because it is usually detected late and resists standard chemotherapy
- The KRAS protein was long considered undruggable because its smooth surface lacks pockets for traditional small-molecule drugs
- Daraxonrasib works by locking various RAS proteins into a nonfunctional state to inhibit unregulated cancer cell division
- Recent clinical trials showed daraxonrasib significantly reduced tumour size in most patients with advanced pancreatic cancer
- The FDA has granted daraxonrasib priority status because it offers a promising new treatment for aggressive pancreatic cancers

Data presented in April suggested daraxonrasib may be more effective than previous treatments for pancreatic cancer. SCIENTIFIC ANIMATIONS, INC. (CC BY-SA)

### How Daraxonrasib Works

Daraxonrasib is a new experimental drug developed by Revolution Medicines that aims to overcome this long-standing challenge. Unlike earlier drugs, daraxonrasib targets KRAS and related proteins when they are in their active “on” state. The drug works by first attaching to another protein called cyclophilin-A which then forms a complex that locks KRAS into a non-functional state, preventing it from continuous cell growth and division. This helps slow down or stop the growth of cancer cells. Furthermore, Daraxonrasib can target multiple variants of RAS-related mutations which increases its potential usefulness across different types of cancers, not just pancreatic cancer alone.

### Trial Results and Effectiveness

Daraxonrasib has shown encouraging results in clinical trials involving patients with advanced cancers caused by KRAS mutations. The drug demonstrated particularly strong results in pancreatic cancer patients with tumour size reduced in 51% of patients receiving the treatment. In nearly 97% of patients, the cancer either shrank or stopped growing further. The growing significance of daraxonrasib was further reflected when the U.S. Food and Drug Administration included it among the first group of therapies to receive “National Priority Voucher” status to match the urgent health needs of the nation. It allows the FDA to accelerate its review process dramatically which means the drug may now be reviewed within one or two months.

**PRELIMS CORNER :**

1) Consider the following activities:  
(2025)

- I. Production of crude oil
- II. Refining, storage and distribution of petroleum
- III. Marketing and sale of petroleum products
- IV. Production of natural gas

How many of the above activities are regulated by the Petroleum and Natural Gas Regulatory Board in our country?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All the four

2) Consider the following statements:

Statement I: Of the two major ethanol producers in the world, i.e., Brazil and the United States of America, the former produces more ethanol than the latter.

Statement II: Unlike in the United States of America where corn is the principal feedstock for ethanol production, sugarcane principal the is feedstock for ethanol production in Brazil.

Which one of the following is correct in respect of the above statements? (2025)

- (a) Both Statement I and Statement II are correct and Statement explains Statement I II
- (b) Both Statement I and Statement II are correct but Statement II does not explain Statement I
- (c) Statement I is correct but Statement II is not correct
- (d) Statement I is not correct but Statement II is correct

**WONDERS OF INDIA**

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**Dhosi Hill**

The Dhosi Hill, also known as Pahadi Dhusran, is a unique blend of natural beauty, mythology, geology, and spiritual heritage. Located on the border of Haryana and Rajasthan, this extinct volcanic hill remains one of India's lesser-known heritage destinations. Surrounded by forests and marked by caves, forts, temples, and seasonal waterfalls, Dhosi Hill occupies an important place in ancient Indian tradition and is frequently mentioned in texts such as the Mahabharata and the Puranas.

Geologically, the hill is significant because traces of solidified lava can still be seen, indicating its volcanic origin. Mythological traditions associate the eruption of the volcano with the transition between the Treta and Dwapara Yugas. The hill is also deeply connected with Ayurveda and sage traditions. It is believed to be the site where the famous herbal formulation Chyawanprash was first prepared for Rishi Chyavana by royal physicians, helping him regain youth through the process of Kayakalp. Visitors reach the summit by climbing over 450 steps through the village of Thana. At the top lie the remains of a fort built by Hem Chandra Vikramaditya to protect the sacred ashrams. The hill also houses temples dedicated to Shiva, Vishnu, Krishna, and Sage Chyavana, along with sacred water pools believed to possess healing properties due to the presence of minerals and medicinal herbs. Dhosi Hill thus stands as a fascinating meeting point of India's geological history, spiritual traditions, and Ayurvedic heritage.



# Prelims Corner: Explanations

1) The correct answer is (b)

The Petroleum and Natural Gas Regulatory Board Act, 2006 established the **Petroleum and Natural Gas Regulatory Board (PNGRB)** to regulate downstream activities in the petroleum and natural gas sector and to protect consumer interests. The Board regulates activities relating to refining, processing, storage, transportation, distribution, marketing, and sale of petroleum, petroleum products, and natural gas.

However, the Act explicitly excludes the production of crude oil and natural gas from the jurisdiction of PNGRB. Exploration and production activities remain outside the Board's regulatory framework.

Therefore:

- Statement I (Production of crude oil) — Not regulated by PNGRB.
- Statement II (Refining, storage and distribution of petroleum) — Regulated by PNGRB.
- Statement III (Marketing and sale of petroleum products) — Regulated by PNGRB.
- Statement IV (Production of natural gas) — Not regulated by PNGRB because production/exploration activities are specifically excluded under the Act.

Thus, only statements II and III fall under the regulatory ambit of PNGRB.



2) The correct answer is (d) Statement I is not correct but Statement II is correct.

Statement I is incorrect because the United States is currently the world's largest producer of ethanol, not Brazil. According to the U.S. Department of Energy, the United States produced more than 16 billion gallons of ethanol in 2024. The United States and Brazil together account for nearly 80% of global ethanol production, but U.S. production exceeds that of Brazil.

Statement II is correct. The principal feedstock used for ethanol production differs in the two countries:

- In the United States, ethanol is produced mainly from corn.
- In Brazil, ethanol is produced primarily from sugarcane.

Thus, while both countries are major ethanol producers, their raw material base differs significantly due to differences in climate, agriculture, and cropping patterns.

## Significance of Ethanol as a Fuel

Ethanol is an important renewable and cleaner-burning biofuel blended with petrol to reduce dependence on fossil fuels. It helps:

- reduce greenhouse gas and vehicular emissions,
- improve air quality,
- enhance energy security by reducing oil imports,
- support farmers through additional demand for agricultural produce such as corn and sugarcane,
- promote rural employment and biofuel industries.

