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# DAILY CURRENT AFFAIRS

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## SOURCES



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## Polity

### Child betrothals are a ploy to evade punishment: Supreme Court

#### Why in News?

Top court urges Parliament to outlaw child betrothals, drawing attention to how they threaten laws like POCSO Act; issues guidelines on sex education in schools, compensation scheme for girls

#### Context

The Supreme Court of India, in its recent judgment, condemned child betrothals, considering them a ploy to evade punishment under the Prohibition of Child Marriage Act (PCMA), 2006.

The Court called for stronger legislation to address this issue, recognizing the detrimental impact of child marriages on the autonomy and rights of minors.

The bench also emphasized the importance of sex education and community-driven initiatives to prevent child marriages.

#### Important Aspects

Aspect	Details
<b>Issue Addressed</b>	Child betrothals used to bypass PCMA.
<b>Main Concern</b>	Lack of clarity in PCMA on child betrothals.
<b>Legal Provisions</b>	PCMA, POCSO Act, Juvenile Justice Act.
<b>International Convention</b>	Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).
<b>Guidelines Issued</b>	Recommendations for sex education, child marriage reporting, compensation schemes.

#### Supreme Court Observations on Child Betrothals

##### 1. Child Betrothals:

- Recognized as a loophole bypassing legal consequences

under the Prohibition of Child Marriage Act (PCMA).

- Urged Parliament to classify children with fixed marriages as “minors in need of care and protection” under the Juvenile Justice Act.
- Impact on Personal Laws:**
    - Noted the conflict between personal laws and PCMA.
    - Central government seeks judicial declaration for PCMA to prevail over personal laws; an Amendment Bill from December 2021 is pending in Parliament.
  - Boys as Victims:** Highlighted that boys also suffer from child marriages, facing societal pressures and patriarchal norms.
  - Violation of POCSO Act:** Clarified that child marriages violate the Protection of Children from Sexual Offences (POCSO) Act, exposing minors to sexual abuse.

#### Recommendations from the Court

- Age-Appropriate Sex Education:** Suggested implementing culturally sensitive sexuality education in schools to raise awareness about child marriage and sexual rights.
- Community-Driven Initiatives:** Recommended a ‘Child Marriage Free Village’ campaign, engaging local leaders similar to the ‘Open Defecation Free Village’ initiative.
- Government Action Plan:**
  - Establish a designated portal for reporting child marriages (Ministry of Home Affairs).
  - Introduce a compensation scheme for girls opting out of child marriages (Ministry of Women and Child Development).
  - Allocate an annual budget to prevent child marriages and support affected minors.



## Prohibition of child marriage Act 2006

### Whom Does it Apply to?

- It applies to all citizens of India irrespective of religion, without and beyond India.
- it is not applicable to Jammu and Kashmir.
- It excludes Pond cherry from its application.
- What Does this Law Provide for?
- Age must be at least 21 for boys and 18 for girls.
- The provisions of this law can be classified into three broad categories:
  - A. Prevention
  - B. Protection
  - C. Prosecution of Offenders

### Additional Facts and Analysis

- 1. Child Marriage Statistics in India:** According to UNICEF (2023), 23.3% of girls in India are married before the age of 18. Child marriage rates are particularly high in rural areas and among marginalized communities.
- 2. Global Comparison:** Countries like Nepal, Bangladesh, and Ethiopia have launched national strategies to end child marriage, including community involvement and education drives.
- 3. CEDAW and India:** India ratified CEDAW in 1993, committing to eliminate

discrimination against women, including the issue of child marriage.

### Conclusion

The Supreme Court's ruling on child betrothals highlights the need for stronger laws against child marriage, promoting comprehensive education and community initiatives to protect minors' rights and autonomy in India.

**Question:** Discuss the legal and societal challenges posed by child marriages in India. How does the Supreme Court's recent judgment address the issue of child betrothals?

**Source :** [The Hindu](#)

## Benami law: Supreme Court recalls 2022 judgment that declared amendments unconstitutional

### Why in News?

The Bench, headed by Chief Justice of India D.Y. Chandrachud, referred the case for fresh adjudication

### Context

The Benami Transactions (Prohibition) Act, 1988, was enacted to curb the practice of holding property in another person's name, commonly known as **benami transactions**.

The 2016 Amendment significantly expanded the original Act, allowing stringent actions like imprisonment and property confiscation.

However, in 2022, the Supreme Court ruled parts of the amendment unconstitutional, citing concerns over retrospective application and violation of constitutional rights. On October 18, 2024, the Supreme Court recalled this 2022 judgement, referring the case for fresh adjudication.



### Supreme Court Action (October 2024)

1. **Recall of 2022 Judgment:** The Special Bench, led by Chief Justice recalled its earlier judgment from August 23, 2022, concerning benami transactions.
2. **Background:** The recall followed review petitions from the Union Government and the Deputy Commissioner of Income Tax (Benami Prohibition).
3. **Issues with 2022 Judgment:**
  - The 2022 ruling declared Section 3(2) of the Benami Transactions

- (Prohibition) Act, 1988, and Section 5 of the 2016 Amendment unconstitutional due to their retrospective application, violating Article 20(1) (prohibition of retrospective punishment).
- Section 3(2) imposed a three-year imprisonment for transactions between 1988 and 2016, despite the 2016 amendment's enactment date.
  - Section 5 permitted government confiscation of properties involved in benami transactions.

### Provisions in Benami Law

Provision	Original Act (1988)	Amendment (2016)	2022 Judgment
Section 3(2)	No retrospective punishment	Punishment for benami transactions between 1988-2016	Declared unconstitutional
Section 5	No confiscation of property	Confiscation of any property under benami transaction	Declared unconstitutional
Retrospective Application	Not applicable	Retrospective for transactions prior to 2016	Violated Article 20(1)

### Additional Facts

1. **Benami Transactions:** A benami transaction refers to an arrangement where the property is held by one person but paid for by another, typically to hide illicit wealth.
2. **Retrospective Legislation:** Retrospective laws apply to actions that occurred before the law was passed, which often creates constitutional challenges, particularly concerning fundamental rights like Article 20(1).

### Conclusion

The 2024 Supreme Court decision highlights the need for clarity on the constitutional validity of retrospective legislation in financial and property-related laws.

The Benami Transactions (Prohibition) Act plays a crucial role in curbing illicit property holdings, but its amendments need careful scrutiny to balance constitutional rights with the objective of curbing black money.

**Question:** Evaluate the legal and ethical dimensions of retrospective legislation with reference to the Benami Transactions (Prohibition) Amendment Act, 2016.

Source : [The Hindu](#)



## International Relation

### Israel versus the UN: On Tel Aviv's move and India's response

#### Why in News?

India's stand must keep in mind the UN's importance in the global order

#### Context

India's decision to stay away from a letter supporting UN Secretary-General António Guterres amidst Israeli criticism raises concerns about New Delhi's position. The criticism stems from Israel's actions against the UN system following its conflict with Hamas and broader military actions.

Aspect	Details
<b>Event Trigger</b>	Israel's October 2023 military operations post Hamas terror attacks, expanding into attacks on Lebanon, Yemen, and covert operations.
<b>Israel's Stance on UN</b>	Israel accused the UN and its agencies of bias, with Israeli leaders labeling the UN as "anti-semitic." Attacks were even directed at UN peacekeepers.
<b>India's Position</b>	India abstained from supporting a UN letter signed by 104 countries that criticized Israel's actions against the UN and Secretary-General Guterres.
<b>UNRWA Targeting</b>	Israel targeted UNRWA (United Nations Relief and Works Agency), accusing it of links with Hamas. India has historically supported UNRWA.
<b>Risks to India</b>	Indian soldiers are part of the UNIFIL (UN Interim Force in Lebanon), which has been under attack by Israeli forces, increasing security risks for them.
<b>Global South's Unease</b>	Many countries from the Global South, along with European nations, signed letters expressing concern over Israel's actions against the UN.
<b>India's Strategic Calculation</b>	India's diplomatic stance is likely influenced by its close bilateral ties with Israel and its desire to balance realpolitik with UN engagement.

#### United Nations Interim Force in Lebanon (UNIFIL)

**Establishment:** 1978, in response to Israeli invasion of Lebanon.

#### Objective

- Monitor the cessation of hostilities.
- Assist the Lebanese government in restoring authority in southern Lebanon.
- Ensure peace and security along the Israel-Lebanon border.

#### Composition

- Over 10,000 personnel from around 50 nations.
- India is a key contributor with 903 soldiers deployed.

#### Key Role

- Acts as a buffer between Israel and Lebanon, preventing escalation of conflicts.
- Provides humanitarian aid and assists in conflict-affected regions.

#### Relevance for India

- India's participation strengthens its global peacekeeping profile.
- Risks involved: Recent Israeli attacks on UNIFIL forces highlight dangers, particularly for Indian troops.

#### Challenges

- Increasing tensions in the region pose threats to peacekeepers.
- The effectiveness of the mission is often questioned due to recurrent violence.

#### Significance

- Reflects India's commitment to global peacekeeping under the UN framework.
- Enhances India's diplomatic standing and involvement in international security.

#### Conclusion

India's abstention on a UN letter critiquing Israel raises concerns about its multilateralism amid strategic partnerships and global order commitments.

**Question:** Examine the role of India in UN peacekeeping operations, particularly in conflict zones such as Lebanon, and how emerging geopolitical situations could impact India's engagement with the UN.

**Source:** [The Hindu](#)



## All eyes on Modi, Xi at BRICS summit in Russia as Delhi and Beijing announce visits

### Why in News?

PM Modi's second Russia visit in 2024 will feature bilateral meetings with BRICS leaders and invited global counterparts.

### Introduction

The Indian Prime Minister is set to attend the 16th BRICS Summit in Kazan, Russia, from October 22-23, 2024, at the invitation of the Russian President.

The summit is expected to focus on strengthening multilateralism and addressing key global issues.

### Theme for 16th BRICS Summit in Russia

“Strengthening Multilateralism for Just Global Development and Security”

### Expected Outcomes

- **Bilateral Meetings:** Focusing on regional and global issues.
- **China's Participation:** Anticipation of a bilateral meeting between India and China.
- **Strategic Dialogue:** Discussions will cover ongoing international challenges, particularly concerning the India-China border standoff.

### Background Context

- **Original Members:** Brazil, Russia, India, China, South Africa
- **Expanded Membership:** Egypt, Ethiopia, Iran, United Arab Emirates

**Economic Significance:** Russia emphasizes that BRICS nations are poised to drive global economic growth, reducing reliance on Western influence and enhancing economic sovereignty.

### Russia's Vision

- The position of BRICS as a counterweight to Western powers in global politics and trade.
- The countries which are associated with BRICS are essentially the drivers of global economic growth.
- Emphasis on increasing freight transportation through the Arctic Sea route and North-South corridor, linking Eurasia with the Indian Ocean.

### BRICS Summit

BRICS is an acronym for the grouping of five major emerging economies: Brazil, Russia, India, China, and South Africa.

**Purpose:** To promote peace, security, and development in a multipolar world. Enhance cooperation in various sectors, including

economy, trade, investment, and cultural exchange.

### Objectives:

- Strengthening economic ties among member countries.
- Reforming global governance structures to reflect contemporary geopolitical realities.
- Addressing issues like poverty alleviation, sustainable development, and climate change.

### India and BRICS

India is an important member of the BRICS group, and its participation in the organisation has been beneficial in many ways. Some of the key reasons why BRICS is important for India are:

- **Strategic cooperation:** BRICS offers India a key platform for global engagement on security, terrorism, climate, and trade.
- **Economic benefits:** As a BRICS member, India gains access to a large market of 3+ billion people, offering vast business opportunities.
- **Reform of multilateral institutions:** India has been able to work with other member countries to promote a more inclusive and equitable global order by promoting multilateral reforms.
- **South-South cooperation:** India has been able to use the platform to promote south-south cooperation in areas such as trade, investment, and technology transfer.
- **Pillar of the New World Order:** In the fifteenth BRICS, the leaders called BRICS the pillar of the New World Order.
- **Dilemma:** However, the challenge before India is to choose between a China-centric or a West-centric world order or balance the two.

### Conclusion

The BRICS summit in Kazan is vital for India's diplomacy and collaboration, impacting geopolitical dynamics against Western policies.

**Question:** Analyse the strategic importance of BRICS in the context of global economic governance.

**Source:** [The Indian Express](#)



## Science

### House panel to study armed forces' preparedness to deal with 'non-kinetic warfare'

#### Why in News?

The committee picked the subject on urging of Leader of Opposition in Lok Sabha, who argued that the future warfare will be fought using these methods

#### Context

The Parliamentary Standing Committee on Defence has selected the issue of Indian armed forces' preparedness to deal with "hybrid and non-kinetic warfare" for deliberations.

The Leader of Opposition highlighted the growing threat of such warfare, citing ongoing conflicts like the Russia-Ukraine war and the Israel-Palestine conflict.

#### What is Non-Kinetic Warfare?

- Non-kinetic warfare refers to methods of warfare that go beyond traditional military tactics, including electronic, cyber, information, psychological, and economic warfare.
- This concept is rapidly evolving and is seen as a critical future threat. Non-kinetic warfare can involve non-military stakeholders and can be more deadly than traditional methods.
- For example, cyberattacks on critical infrastructure such as power grids or hospitals can cripple a nation without the use of physical force.

#### Differences Between Kinetic and Non-Kinetic Warfare

Kinetic Warfare	Non-Kinetic Warfare
Relies on physical force, weapons, and troops	Involves cyber, electronic, psychological, and information warfare
Direct military engagement	Can be carried out remotely (e.g., cyberattacks)
Examples: Conventional battles, air strikes	Examples: Cyberattacks, misinformation campaigns, economic sabotage

#### Counter-Drone Technologies

The Indian Armed Forces are working on both kinetic and non-kinetic solutions to neutralize drones and drone swarms, which have emerged as disruptive elements in recent conflicts like the Ukraine war.

- Kinetic Solutions: Destroying drones physically using weapons.
- Non-Kinetic Solutions: Using jamming technologies, lasers, and electromagnetic waves to disrupt drone operations.

**Strategic Operational Preparedness :** The House panel will also review the armed forces' preparedness in terms of cyber, kinetic, and non-kinetic warfare. Other aspects such as anti-drone capabilities and the India-China border stand-off along the Line of Actual Control (LAC) will be assessed.

**Indigenous Defence Production:** The committee will review progress in indigenous defence production and related issues such as resettlement policies for ex-servicemen and healthcare facilities.

**Key Initiatives in Future Warfare Training :** A notable development is the tri-services "future warfare" This course covers the operational and technological aspects of modern warfare, preparing officers from Major General to Major ranks across services for the complexities of contact and non-contact warfare.





### Additional Relevant Facts

- **Cybersecurity Infrastructure:** India needs to significantly upgrade its cybersecurity infrastructure to defend against non-kinetic threats, particularly from state and non-state actors.
- **Artificial Intelligence (AI):** AI is increasingly being integrated into warfare for both defensive and offensive non-kinetic strategies, including automated response systems to cyberattacks and intelligence gathering.

### Recommended Steps for Armed Forces:

1. Capacity building in cyber warfare.
2. Investment in AI and machine learning technologies.

3. Collaboration with the private sector for developing indigenous defence technologies.

### Conclusion

Studying non-kinetic warfare is vital for India's defense readiness, emphasizing cyber, psychological, and electronic strategies for future conflicts without traditional arms.

**Question:** Evaluate the role of indigenous defence production in enhancing India's preparedness for modern warfare. What steps can be taken to improve self-reliance in defence technologies?

**Source:** [The Hindu](#)

## How 'smart insulin' promises to revolutionise diabetes treatment

### Why in News?

Scientists have developed a breakthrough "smart" insulin that responds in real-time to blood sugar fluctuations, termed the "holy grail" of diabetes treatments.

### Overview

The development of "smart insulin," which reacts to real-time fluctuations in blood sugar levels, marks a significant breakthrough in diabetes management. This innovation aims to ease the burden of constant blood sugar monitoring and insulin dosage adjustments for millions affected by diabetes globally.

### Global Diabetes Statistics

**Prevalence:** Over 500 million individuals suffer from diabetes worldwide.

**Mortality:** Approximately 7 million deaths occur annually due to diabetes-related complications.

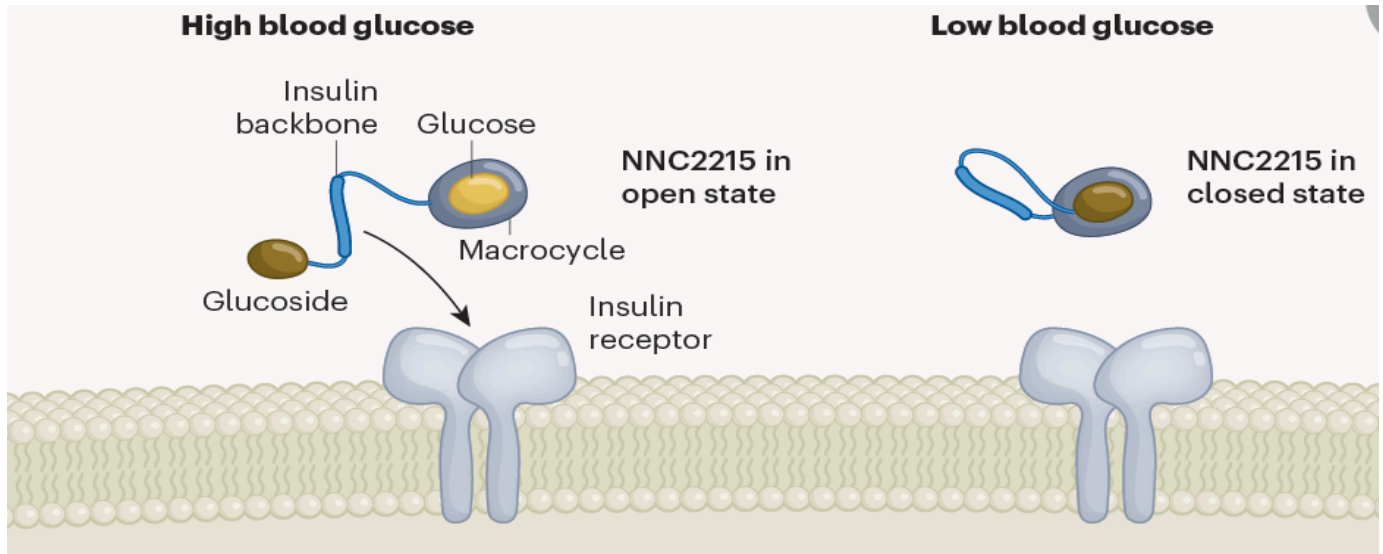
### Types of Diabetes

Type	Description	Insulin Dependency
Type 1 Diabetes	Autoimmune condition leading to insufficient insulin production.	Requires lifelong insulin therapy.
Type 2 Diabetes	Insulin resistance, often associated with obesity.	May require insulin in advanced stages.

### Current Treatment Challenges

Patients with diabetes must constantly monitor blood sugar levels and adjust insulin dosages, which can lead to severe health risks, including hypoglycemia (dangerously low blood sugar).





### Smart Insulin: NNC2215

Recent research published in Nature highlights the creation of a new insulin variant, NNC2215, engineered to be glucose-sensitive.

#### Mechanism of Action:

1. **Structure:** NNC2215 consists of:
  - A ring-shaped structure
  - A glucoside that mimics glucose
2. **Functionality:**
  - At low blood sugar levels, the glucoside keeps insulin inactive.
  - As glucose levels rise, glucose is displaced by glucoside, activating insulin to lower blood sugar levels.

#### Clinical Implications

- **Initial Results:** Demonstrated effectiveness in lowering blood glucose levels in animal models (rats and pigs).
- **Future Directions:** Human trials are anticipated, focusing on refining the activation mechanism to ensure a gradual insulin response.

#### Conclusion

Smart insulin represents a potential shift in diabetes treatment paradigms, aiming to improve the quality of life for millions of patients. Ongoing research and human trials will determine its efficacy and safety in long-term diabetes management.

**Question:** Evaluate the ethical considerations associated with advanced diabetes treatment technologies.

**Source:** [The Indian Express](https://www.thehindu.com/news-international/smart-insulin/article17111111e.html)



## Economy

### Usurious pricing by NBFCs, apps: Why the RBI acted against 4 entities and how borrowers end up paying excessive interest

#### Why in News?

The main complaint against the four lenders is about exorbitant interest charges levied by them.

#### What is a Non-Banking Financial Company (NBFC)?

- A NBFC is a financial institution that provides banking services without meeting the legal definition of a bank, i.e. one that does not hold a banking license.
- It is established as a company registered under the Companies Act, 1956 but its operations are often still covered under a country's banking regulations.
- NBFCs may be engaged in the business of loans and credit facilities, savings products, investments and money transfer services.
- The Reserve Bank of India is entrusted with the responsibility of regulating and supervising the Non-Banking Financial Companies by virtue of powers vested under Reserve Bank of India Act, 1934

#### Current Scenarion

The Reserve Bank of India (RBI) has taken significant action against four non-banking finance companies (NBFCs) for engaging in unethical lending practices, particularly usurious interest rates. This move aims to protect borrowers from exorbitant charges and ensure a transparent lending environment.

#### Background

In recent years, there has been a surge in complaints regarding high interest rates and exploitative recovery methods employed by NBFCs and digital lending applications. This issue has raised serious concerns about borrower protection and the integrity of financial systems.

#### Regulatory Concerns

The RBI's actions stem from multiple violations observed in the pricing policies of these NBFCs. The main complaints include:

- **Excessive Interest Rates:** High Weighted Average Lending Rates (WALR) and interest spreads over the cost of funds.
- **Non-Compliance:** Failure to adhere to regulatory guidelines concerning household income assessment and repayment capabilities.

- **Irregular Loan Recovery Practices:** Aggressive and unethical loan recovery methods, including harassment and misuse of borrower data.

#### Recent Developments

In September 2022, the RBI introduced guidelines to safeguard customers from predatory lending practices, which included:

- **Transparent Pricing:** Mandatory upfront disclosure of interest rates.
- **Informed Borrowing:** Ensuring borrowers understand the terms before loan disbursement.
- **Economic Assessment:** Evaluating the economic profile of borrowers prior to loan approval.

#### Digital Loan App Repository

- To combat illegal lending practices, the RBI has decided to create a public repository of digital lending apps (DLAs) associated with regulated entities.
- This initiative aims to help customers identify legitimate lending platforms and avoid fraudulent apps.

#### Case Study: Harassment Incident

In a notable case, a woman was inundated with calls from 25 different numbers, demanding repayment for a loan she never took. Such incidents highlight the urgent need for regulatory oversight and borrower protection.

#### Conclusion

The RBI's proactive measures aim to create a safer lending environment in India, safeguarding consumers from usurious practices prevalent in the digital lending landscape. With the establishment of a digital lending app repository, it is hoped that transparency and accountability will improve in the financial sector.

**Question:** Critically evaluate the effectiveness of the RBI's recent measures to combat predatory lending in the digital space. What additional steps could be taken to protect consumers?

**Source:** [The Indian Express](#)



## Environment

### A perilous highway to salvation in the Himalayas

#### Why in News?

*There is growing scientific evidence that the Char Dham Highway Project will have catastrophic consequences for the mountain ecology*

#### Overview

The Char Dham Highway Project aims to boost religious tourism and improve military logistics. However, growing scientific evidence suggests that the project poses severe risks to the fragile Himalayan ecosystem.

The 900-km long highway, spanning four sacred shrines, risks landslides, subsidence, and ecological degradation, while neglecting scientific assessments.

This raises concerns about the sustainability and safety of infrastructural projects in the Himalayas.

#### Aspects of the Char Dham Highway Project

Aspect	Details
<b>Cost</b>	₹12,000 crore
<b>Purpose</b>	Enhance connectivity for religious tourism and military transport in Uttarakhand.
<b>Concerns</b>	Increased landslides, ecological damage, non-compliance with environmental norms, and bypassing impact assessments.
<b>Locations Affected</b>	Rishikesh, Joshimath, and other areas in Uttarakhand Himalayas.
<b>Main Cause of Landslides</b>	Road-widening activities leading to doubled landslide incidents (309 landslides along a 247-km stretch).

#### Impact of the Char Dham Highway Project

##### 1. Increased Landslides:

The road-widening has caused a spike in landslides.

A study documented an average of 1.25

landslides per kilometre between Rishikesh and Joshimath.

##### 2. Environmental and Geological Fraud:

The project ignored geological and environmental norms. Encroachment and blasting have destabilized the region's ecosystem, leading to irreversible environmental damage, as confirmed by a series of expert reports overruled by authorities.

##### 3. Climate Change and Increased Risk:

The Himalayan region is predicted to experience more extreme rainfall events due to climate change, exacerbating landslides and fatalities.

##### 4. Displacement and Land Abandonment:

Census data shows that many villages are depopulated due to migration, further aggravated by infrastructural projects. The shift from agriculture to tourism-driven livelihoods has led to local distress.

#### Additional Facts

**Himalayan Ecology:** The Himalayas are highly sensitive to seismic activity, weather patterns, and human-induced disturbances due to their young and fragile geological composition.

**Monsoon Variability:** Studies predict that the intensity of the Indian summer monsoon will increase, leading to higher rainfall and landslides.

**Legal Provisions:** The Environment Protection Act, 1986, and Forest Conservation Act, 1980, are relevant laws, but often bypassed using technical loopholes in large infrastructure projects.

**Local Migration Trends:** Migration in Uttarakhand is also driven by limited livelihood opportunities in agriculture, which are further reduced by environmental degradation caused by projects like Char Dham Highway.

**Question :** Discuss the environmental and socio-economic impacts of large-scale infrastructure projects in the Indian Himalayas with specific reference to the Char Dham Highway Project.

**Source :** [The Hindu](#)



## Forecasting better in India, come rain or shine

### Why in News?

With improvements, the 'Mausam Mission' will transform how weather information can help India become climate smart

### Overview

India faces a rising frequency of extreme weather events, necessitating improved weather forecasting to safeguard its population. The government has launched the "Mission Mausam" in 2024, aimed at enhancing weather observation systems and weather forecasting models to tackle these challenges.

### Objectives of Mission Mausam

- **Expand India's Weather Observation Network:** Installation of Doppler Weather Radars (DWRs) and other platforms in regions lacking coverage, especially in high-risk urban areas and the western coast.
- **Improve Weather Forecasting Models:** Utilize advanced techniques like machine learning and improved understanding of atmospheric physics.
- **Open Access to Weather Data:** Facilitate innovation by making weather data available to researchers, institutions, and entrepreneurs.
- **Strengthen Communication Tools for Early Warning Systems:** Improve user experience and capacity to interpret weather warnings through accessible platforms and educational tools.

### Issues and Proposed Solutions

Issue	Current Scenario	Proposed Improvements
<b>Radar Coverage</b>	39 DWRs across India; only 5 on the western coast, none in key cities like Ahmedabad and Bengaluru.	Prioritize installation of new DWRs in under-monitored regions and urban centers at risk of extreme weather.
<b>Data Access</b>	IMD provides data but with restrictions, limiting access to researchers and entrepreneurs	Make weather data from radars, wind profilers, and radiometers openly accessible, similar to the US and European models. This will promote innovation in early warning systems and analytical tools.
<b>Communication of Warnings</b>	IMD's web and mobile apps provide district-level warnings but lack clear instructions on how to act on these warnings.	Enhance the user interface and provide guidance on interpreting warnings. Include videos, tutorials, and media campaigns to build capacity in understanding and responding to weather alerts.
<b>Extreme Weather Forecasting</b>	Two-thirds of India's population is exposed to flood risks, but only one-third has access to early warning systems.	Expand forecasting systems similar to cyclone warnings and extend coverage for floods, heatwaves, and droughts.



### Enhancing Weather Preparedness

#### 1. Mission Focus Areas

- Strengthen radar coverage in high-risk areas.
- Democratize weather data for public and research use.
- Modernize the communication channels to ensure last-mile connectivity in remote regions.

#### 2. Technological Integration

- Leverage machine learning and artificial intelligence to refine models for hyper-local weather forecasting.

#### 3. Potential Benefits







- Improved early warnings will reduce the economic and social impacts of climate-related disasters.
- Data-driven decisions in sectors like agriculture, energy, and urban planning will foster resilience.

### Way Forward for Weather Forecasting in India

1. **Expand Infrastructure:** Increase Doppler Weather Radars (DWRs) in vulnerable areas.
2. **Open Data Access:** Ensure public access to weather data for innovation.
3. **Leverage Technology:** Use AI for forecasting and enable crowdsourced monitoring.
4. **Improve Communication:** Develop user-friendly weather tools and public education.
5. **Foster Collaboration:** Enhance inter-agency coordination and private sector involvement.
6. **Invest in Research:** Boost funding for meteorological research and explore weather modification techniques.

**Question:** Analyze the importance of integrating advanced technology in India's weather forecasting systems and discuss its potential impact on disaster management.

**Source:** [The Hindu](#)

INSTRUMENT		FUNCTION	UNIT
Thermometer		Measures the air temperature, which is the measure of how hot or cold an area is.	Celsius (°C)
Hygrometer		Measures the water vapor content of air or the humidity.	%
Rain gauge		Measures the precipitation, which is the amount and form in which water falls (rain, hail, sleet and snow)	Millimetres (mm)
Barometer		Measures atmospheric pressure, which is the weight of air pressing down on us.	Millibars
Wind vane		Measures the wind direction, which is the direction from which the wind is blowing.	-
Anemometer		Measures the wind speed, which is a measure of how fast or slow the wind is blowing.	Mile per hour (Mph)

## Editorial, Opinions & Ideas

### There is a start-up revolution in India

#### Why in News?

Government's impetus to innovation has taken entrepreneurship beyond Tier-1 cities

#### Overview

India is witnessing a remarkable transformation in its start-up ecosystem, driven by government initiatives that extend beyond Tier-1 cities to democratize entrepreneurship. The country has emerged as a global leader in innovation and technology, now hosting the third-largest start-up landscape worldwide.

#### Facts and Statistics

Indicator	Data
Global Innovation Index ranking (2015)	81st
Global Innovation Index ranking (2024)	40th
Ranking in ICT services exports	5th
Ranking in venture capital received	6th
Ranking in graduates in science and engineering	11th
Ranking in global corporate R&D investors	13th

#### Contributing Factors to the Start-Up Ecosystem

India's ascent in the start-up space can be attributed to several key initiatives:

##### 1. Robust Innovation Ecosystem:

- Development of technology business incubators and science parks through the NIDHI program.
- Collaboration between public institutions and private start-ups to commercialize innovations.

##### 2. Government Initiatives:

- The Atal Innovation Mission (AIM) has established over 4,880 operational Atal Tinkering Labs and 102 incubation centers

across the country, nurturing more than 900 startups.

- Public-private partnerships for redeveloping railway stations initiated by NITI Aayog.

**3. Policy-Driven Innovation:** Focus on strategic sectors such as electric vehicles, biotechnology, and alternative energy to optimize innovation.

##### 4. Notable Progress Indicators:

- Significant advancements in patent origination and cultural service exports.
- High innovation quality compared to other lower-middle-income countries.

#### Impacts of the Initiatives

- The initiatives have not only improved rankings but also fostered a culture of innovation at the grassroots level, with young innovators and entrepreneurs emerging across the nation.
- This cultural shift indicates a promising future for India's innovation ecosystem, potentially creating a cascade effect that will enhance its global standing.

#### Conclusion

India's transformation into a start-up powerhouse reflects the vision and commitment of its leadership. The concerted efforts in fostering innovation are paving the way for a more inclusive and dynamic entrepreneurial landscape.

**Question:** Discuss the factors contributing to the rise of the start-up ecosystem in India and its implications for economic growth.

**Source:** [The Indian Express](#)



## Daily Quiz

**Q1. Consider the following statements about the United Nations Interim Force in Lebanon (UNIFIL):**

1. UNIFIL was created in response to the Israel-Palestine conflict.
2. India is one of the largest troop contributors to UNIFIL.
3. UNIFIL operates along the Israel-Syria border to enforce peace.

**Which of the statements given above is/are correct?**

- A. 1 only
- B. 2 only
- C. 1 and 3 only
- D. 2 and 3 only

**Q2. With reference to the environmental risks associated with infrastructure projects in the Indian Himalayas, consider the following factors:**

1. Steep slope gradients
2. Rainfall variability
3. Lithology

**Which of the factors above are responsible for landslides in the region?**

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2, and 3
- D. 1 and 3 only

**Q3. Consider the following statements regarding Doppler Weather Radars (DWRs):**

1. Doppler Weather Radars provide long-term forecasts of extreme weather events.
2. India currently has a total of 39 Doppler Weather Radars in operation.
3. DWRs are especially useful in detecting cyclones and heavy rainfall events.

**Which of the above statements is/are correct?**

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2, and 3

**Q4. Which of the following methods are examples of non-kinetic warfare?**

1. Cyberattacks
2. Drone strikes
3. Psychological operations
4. Conventional airstrikes

**Select the correct answer using the code given below:**

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 2, and 3 only
- D. 1, 2, 3, and 4

**Q5. Which of the following Acts are relevant in addressing child marriage in India?**

1. Prohibition of Child Marriage Act, 2006
2. Juvenile Justice (Care and Protection of Children) Act, 2015
3. Protection of Children from Sexual Offences (POCSO) Act, 2012
4. Domestic Violence Act, 2005

**Select the correct answer using the code given below:**

- A. 1 and 2 only
- B. 1, 2, and 3 only
- C. 1, 2, 3, and 4
- D. 1 and 4 only

**Q6. With reference to the 'Prohibition of Benami Property Transactions Act, 1988 (PBPT Act)', consider the following statements: (2017)**

1. A property transaction is not treated as a benami transaction if the owner of the property is not aware of the transaction.
2. Properties held benami are liable for confiscation by the Government.
3. The Act provides for three authorities for investigations but does not provide for any appellate mechanism.

**Which of the statements given above is/are correct?**

- A. 1 only
- B. 2 only
- C. 1 and 3 only
- D. 2 and 3 only





**Q7. Consider the following statements regarding Type 1 diabetes?**

1. It is primarily caused by insulin resistance.
2. It occurs when the pancreas produces insufficient insulin.
3. It is a reversible condition with lifestyle changes.
4. It affects primarily adults.

**How many of the above statements are correct?**

- A. Only one
- B. Only two
- C. Only three
- D. All are correct

**Q8. What is the purpose of the public repository of digital lending apps being established by the RBI?**

- A. To promote new lending apps
- B. To regulate interest rates
- C. To facilitate loan recovery processes
- D. To help customers identify legitimate apps and avoid illegal ones

**Q9. What is the theme of the 16th BRICS Summit held in Kazan, Russia?**

- A. Economic Development through Cooperation
- B. Strengthening Multilateralism for Just Global Development and Security
- C. Sustainable Development Goals
- D. Climate Change and Energy Security

**Q10. Assertion (A):** India has emerged as the third-largest start-up landscape worldwide.

**Reason (R):** The government's initiatives have democratized entrepreneurship by extending support beyond Tier-1 cities.

**Select the correct answer using the code given below:**

- A. Both (A) and (R) are true, and (R) is the correct explanation for (A).
- B. Both (A) and (R) are true, but (R) is not the correct explanation for (A).
- C. (A) is true, but (R) is false.
- D. (A) is false, but (R) is true



## Solutions

### 1. Option B is Correct

#### Explanation:

**Statement 1 : Incorrect :** UNIFIL was established in 1978 by the UN Security Council to confirm the withdrawal of Israeli forces from Lebanon and to assist the government of Lebanon in restoring its authority in the area. It was created in response to the Israel-Lebanon conflict, not the Israel-Palestine conflict.

**Statement 2 : Correct :** India has been one of the major contributors of troops to UNIFIL over the years, playing a significant role in the mission's peacekeeping efforts in southern Lebanon.

**Statement 3 : Incorrect :** UNIFIL operates along the Israel-Lebanon border, not the Israel-Syria border. Its mandate is primarily focused on maintaining peace and security in southern Lebanon and monitoring the cessation of hostilities between Hezbollah and Israel.

### 2. Option C is Correct

#### Explanation:

**Steep slope gradients:** Steep slopes are a key factor in the instability of the terrain in mountainous regions. The Himalayan region is characterized by steep gradients, which increase the likelihood of soil and rock movement. This makes areas with steep slopes particularly susceptible to landslides.

**Rainfall variability:** The variability in rainfall, especially intense and concentrated rainfall, can trigger landslides by increasing soil saturation, reducing cohesion, and generating surface runoff. In the Indian Himalayas, unpredictable monsoonal rains and cloudbursts exacerbate the risk of landslides.

**Lithology:** Lithology, or the composition of rocks, plays a critical role in determining the stability of slopes. Weak and fractured rock types, such as sedimentary rocks or highly weathered rocks, are more prone to breaking apart and causing landslides. The Indian Himalayas are composed of diverse rock types, many of which are prone to weathering and erosion, contributing to landslide risk.

### 3. Option B is Correct

#### Explanation:

**Statement 1: Incorrect :** Doppler Weather Radars (DWRs) are primarily used for short-term weather monitoring and forecasting. They provide real-time data on weather patterns, such as precipitation intensity and wind speed, which helps in predicting immediate weather conditions (e.g., thunderstorms, cyclones). They are not designed for long-term forecasting but are crucial for nowcasting or short-range forecasts.

**Statement 2: Correct :** As of recent updates, India has been steadily increasing the number of Doppler Weather Radars to strengthen its ability to monitor extreme weather events. Currently, the country has around 39 DWRs in operation, mainly placed in cyclone-prone and other vulnerable areas to improve disaster preparedness.

**Statement 3: Correct :** DWRs are highly effective in tracking cyclones, heavy rainfall, and other severe weather conditions. They provide crucial data on wind speeds and precipitation, which are key in detecting and monitoring such weather events.

### 4. Option A is Correct

#### Explanation:

**Non-kinetic warfare** refers to the use of tactics that do not involve physical force or direct violence to achieve objectives, often targeting the psychological, informational, or technological aspects of an opponent's capability. It contrasts with kinetic warfare, which involves physical actions such as strikes, attacks, and force application.

#### Let's break down the options:

**Cyberattacks:** This is an example of non-kinetic warfare. Cyberattacks can disrupt communication, steal sensitive data, or cripple infrastructure without any physical engagement.

**Drone strikes:** This is an example of kinetic warfare. Drone strikes involve physical force, such as missile or bomb attacks, to destroy targets.

**Psychological operations:** These are a key aspect of non-kinetic warfare. They involve influencing the morale or decision-making of



the enemy without physical violence, often through propaganda, disinformation, or manipulation.

**Conventional airstrikes:** This is an example of kinetic warfare. Airstrikes involve the physical use of bombs or missiles to destroy enemy targets.

#### 5. Option B is Correct

##### Explanation:

**Prohibition of Child Marriage Act, 2006:** This is the primary legislation aimed specifically at prohibiting child marriage in India. It defines child marriage and sets penalties for those who facilitate it. Therefore, it is directly relevant.

**Juvenile Justice (Care and Protection of Children) Act, 2015:** This act addresses various aspects of child welfare, including care and protection for children in need. While it does not specifically target child marriage, it is relevant in the context of protecting children from all forms of exploitation, including those arising from child marriages.

**Protection of Children from Sexual Offences (POCSO) Act, 2012:** This act provides a legal framework for protecting children from sexual offenses. Given that child marriage often leads to sexual exploitation and abuse, this act is relevant in addressing the consequences and protections surrounding child marriage.

**Domestic Violence Act, 2005:** While this act provides protection to women from domestic violence, it does not specifically address child marriage. However, it can indirectly relate to cases where child brides face domestic violence.

#### 6. Option B is Correct

##### Explanation:

**Statement 1 : Incorrect :** Under the PBPT Act, a transaction is considered "benami" if the property is held by one person, but the consideration for it is provided by another person, irrespective of whether the legal owner is aware of the benami nature of the transaction.

**Statement 2 : Correct :** The PBPT Act provides that properties held benami can be confiscated by the government. The Act empowers the authorities to take action against such properties.

**Statement 3 : Incorrect :** While the PBPT Act establishes authorities for investigation, it also provides for an appellate mechanism through which aggrieved parties can appeal

against the orders of the adjudicating authorities.

#### 7. Option A is Correct

##### Explanation:

**Statement 1 : False :** Type 1 diabetes is an autoimmune condition where the immune system attacks and destroys insulin-producing beta cells in the pancreas, leading to insufficient insulin production. Insulin resistance is more characteristic of Type 2 diabetes.

**Statement 2 : True :** Type 1 diabetes results from the destruction of pancreatic beta cells, which leads to little or no insulin production. As a result, the body cannot effectively regulate blood glucose levels.

**Statement 3 : False :** Type 1 diabetes is not reversible; it is a chronic condition requiring lifelong insulin therapy for blood glucose management. While lifestyle changes can help manage the condition, they do not reverse it.

**Statement 4 : False :** Type 1 diabetes can occur at any age, but it is commonly diagnosed in children and young adults. While adults can also develop Type 1 diabetes, it is not accurate to say it primarily affects adults.

#### 8. Option D is Correct

##### Explanation:

The Reserve Bank of India (RBI) is establishing a public repository of digital lending apps to enhance transparency and consumer protection in the digital lending space.

So, **"To help customers identify legitimate apps and avoid illegal ones" is correct** because the primary purpose of the public repository is to assist customers in identifying authorized and genuine digital lending apps. It aims to protect consumers from fraudulent and unregulated lending practices, thereby enhancing consumer awareness and safety in the digital lending landscape.

#### 9. Option B is Correct

##### Explanation:

The theme of the 16th BRICS Summit which would be held in Kazan was focused on strengthening multilateralism to ensure fair global development and enhance security.

The discussions revolved around the importance of collaborative efforts among BRICS nations to address global challenges.



**10. Option A is Correct**

**Explanation:**

**Assertion (A): true**, as India has indeed become one of the leading countries in terms of the number of start-ups, ranking third globally after the United States and China. This growth is supported by numerous factors, including a booming technology sector, an increase in funding, and a vibrant entrepreneurial culture.

**Reason (R): also true & correct explanation of Assertion**, as the Indian government has implemented various initiatives, such as the Atal Innovation Mission, Start-Up India, and the NIDHI program, which aim to support entrepreneurs not only in major cities (Tier-1) but also in smaller towns and rural areas (Tier-2 and Tier-3 cities). This has made entrepreneurship more accessible to a broader population, fostering innovation across diverse regions.





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