

# DAILY CURRENT AFFAIRS

By



SOURCES



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## **Important News Articles**

1. India's re-emergence in field of art and architecture will benefit entire world, says PM - The Hindu
2. Private Bill seeks power for Assemblies to remove Governors - The Hindu
3. RBI keeps repo rate at 6.5%, raises GDP growth forecast - The Hindu/ RBI raises GDP growth forecast to 7%, points to risk of food inflation - Indian Express
4. RBI enhances UPI payment limits, to set rules for online loan aggregators - The Hindu
5. India climate action fourth strongest, says report - Indian Express
6. U.S. FDA approves pair of gene therapies for sickle cell disease - The Hindu
7. Research Symposium at the Global Partnership on Artificial Intelligence - GPAI 2023 – PIB

## **Editorials, Gists and Explainers**

1. India's alarming 'fixed dose combination' problem - The Hindu
2. An icy warning - The Hindu
3. How Google DeepMind's AI breakthrough could revolutionise chip, battery development - Indian Express

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1. Oil and Gas Decarbonization Charter (OGDC)
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6. Indian Pharmacopoeia Commission

## Important News Articles

### GS I

#### 1. India's re-emergence in field of art and architecture will benefit entire world, says PM - The Hindu

**Relevance:** Indian culture will cover the salient aspects of Art Forms, literature and Architecture from ancient to modern times.

**News:**

- Prime Minister **inaugurated the first India Art, Architecture, and Design Biennale (IAADB) 2023** at the Red Fort
- It emphasises **India's re-emergence in art and architecture** on a global scale.

**Prelims Takeaway**

- Indira Gandhi National Centre for Arts

**Key Points**

**Global Cultural Initiative**

- The government is **working to establish a modern system** akin to cultural events in cities like Venice, London, and Sao Paulo.

**Cultural Spaces**

- The Prime Minister mentioned **ongoing cultural space projects in Delhi, Kolkata, Mumbai, Ahmedabad, and Varanasi**, aiming to enrich these cities culturally.

**Biennale Themes**

- The **maiden biennale will feature exhibitions** in seven themes, including :
  - Doors of India
  - Gardens of India
  - Baolis (step-wells) of India
  - Temples of India
  - Architectural Wonders of Independent India
  - Indigenous Design
  - Women in Architecture and Design.

**Immersive Experience**

- **Exhibitions will be presented in both physical and digital formats** to offer an immersive experience, featuring interactive installations.

**Educational Component**

- The event includes panel discussions and interactive sessions to **raise awareness about India's built heritage** among audiences.

**Atma Nirbhar Bharat Centre for Design**

- A special gallery curated by the **Indira Gandhi National Centre for Arts** called '**Atma Nirbhar Bharat Centre for Design**' will showcase rare and unique crafts of India, providing a platform for promotion.

### GS II

#### 2. Private Bill seeks power for Assemblies to remove Governors - The Hindu

**Relevance:** Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

**News:**

- There was **discussion in Rajya Sabha on a private member's Bill to amend Constitution**, moved by Communist Party of India (Marxist) Member of Parliament
- The Bill sought to provide powers for **State Assemblies to recall Governors**.

**Prelims Takeaway**

- Governors

**Key Points**

- Members emphasise **the need for a system to fix the accountability of Governors..**

**Proposed Amendments to Constitution****Election Process**

- **Governors to be elected by an electoral college** comprising Legislative Assemblies and elected members of local bodies.

**Term Limit**

- Suggests a **fixed five-year term for Governors**, allowing resignation by writing to the Speaker, and removal through a two-thirds majority resolution by the Legislative Assembly.

**Federal Rights**

- **Parliament's intervention is deemed necessary** to safeguard the federal rights of States.

**Governors as Political Agents**

- **Accusations that Governors** are acting as political agents of the ruling party at the Centre.

**GS III****3. RBI keeps repo rate at 6.5%, raises GDP growth forecast - The Hindu/ RBI raises GDP growth forecast to 7%, points to risk of food inflation - Indian Express**

**Relevance:** Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

**News:**

- The RBI's Monetary Policy Committee unanimously decided to maintain key interest rates.

**Prelims Takeaway**

- Monetary Policy Committee (MPC)

**Key Points**

- The GDP growth projection for **2023-24 was raised to 7% from 6.5%**.

**Current Inflation Scenario**

- Despite progress, **inflation remains above the 4% target**, with warnings of potential spikes in November and December.
- RBI Governor emphasised that **headline inflation is volatile due to supply shocks**, particularly in the context of uncertain food prices.

**Food Inflation Moderation**

- **food inflation has moderated from double-digit levels**, its outlook is uncertain, necessitating caution in monetary policy.

**Withdrawal of Accommodation**

- **Five out of six MPC members voted** for a policy stance focusing on the "**withdrawal of accommodation.**"

**Rate Cut Uncertainty**

- No **clear indication of when interest rates** might be reduced, with the key repo rate on pause for five successive reviews.

**Growth Forecasts**

- **Real GDP growth for 2023-24 is projected** at 7%, prompted by a strong second-quarter uptick of 7.6%.
- **Despite global uncertainties**, RBI asserted that **India is better positioned** to withstand impacts compared to other emerging economies.



#### 4. RBI enhances UPI payment limits, to set rules for online loan aggregators - The Hindu

**Relevance:** Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

**News:**

- RBI announced increased UPI payment limits for healthcare and education from ₹1 lakh to ₹5 lakh.

**Prelims Takeaway**

- Fintech Repository

**Key Points**

- **RBI Limits on recurring e-payment mandates** for credit card, insurance premiums, and mutual fund investments raised to ₹1 lakh from ₹15,000.
- In late 2022, **RBI introduced a regulatory framework for digital lending.**
- To address concerns and **enhance customer centricity and transparency**, RBI decided to lay down a regulatory framework for web-aggregation of loan products.
- RBI Aims to improve the overall digital lending landscape.
- RBI proposed the creation of a **Fintech Repository by April 2024.**
- **Fintechs are encouraged to voluntarily provide relevant** information to the Repository for better regulatory oversight.

#### 5. India climate action fourth strongest, says report - Indian Express

**Relevance:** Conservation, environmental pollution and degradation, environmental impact assessment.

**News:**

- **India's climate actions were ranked as the fourth strongest** in the annual Climate Change Performance Index by Germanwatch.

**Prelims Takeaway**

- Greenhouse gas

**Key Points**

- This marks **an improvement of one place from the previous year's** ranking.
- The index **ranks 59 countries and the European Union** based on their performance in climate actions.
- **None of the countries have achieved a "very high"** rating in recent years, leaving the first three ranks vacant.
- **Denmark retains its top position** as the best performer for the second consecutive year.
- **India's ranking in the top five reflects** a positive shift, with only Estonia and the Philippines outperforming.
- **The index assesses countries based on four indicators**—total emissions, renewable energy deployment, energy use, and climate policy.
- **India received high rankings on greenhouse gas** emissions and energy use indicators.
- **Medium ratings were given for climate policy** and renewable energy deployment.
- **The report suggests India should agree to :**
  - a **faster coal phase-out**
  - reduce reliance on gas
  - expand its renewable energy capacity.
- Additionally, **advancing its 2070 net-zero target is emphasised.**

#### 6. U.S. FDA approves pair of gene therapies for sickle cell disease - The Hindu

**Relevance:** Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

**News:**

- The U.S. Food and Drug Administration (FDA) recently approved a **pair of gene therapies for sickle cell disease.**
- The agency **approved Lyfgenia** from bluebird bio, and **Casgevy** by Vertex Pharmaceuticals and CRISPR Therapeutics for the illness.
- Both therapies are **approved for individuals aged 12 years and older.**

**Prelims Takeaway**

- Casgevy
- Sickle Cell Disease

**CRISPR Gene Editing Technology**

- Casgevy utilizes the breakthrough **CRISPR gene editing technology**, awarded the Nobel Prize in 2020.
- Casgevy **edits the faulty gene** responsible for sickle cell disease **using the patient's own blood stem cells**.
- It **targets the BCL11A gene**, promoting the production of foetal haemoglobin, which does not carry the same abnormalities as adult haemoglobin.

**Sickle Cell Disease**

- Sickle cell disease is an **inherited blood disorder** causing pain, organ failure, and premature death.
- Approximately 100,000 people in the US, **predominantly Black individuals, are affected by the disease**.
- Sickle cell disease results in **flawed, sickle-shaped haemoglobin**, impairing oxygen transport by red blood cells.
- **Sickle cells can clump together**, blocking blood vessels and causing severe pain, strokes, and organ failure.

**One-Time Treatments**

- Both therapies are marketed as **one-time treatments**, but the duration of their effectiveness is uncertain.
- Doctors express skepticism, preferring to term them "**transformative therapy**" rather than a cure.
- The **only longer-term treatment** for sickle cell disease is a **bone marrow transplant**.

## 7. Research Symposium at the Global Partnership on Artificial Intelligence - GPAI 2023 - PIB

**Relevance:** Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

**News:**

- India will be hosting the **Annual Global Partnership on Artificial Intelligence (GPAI) Summit** from December 12 - 14, 2023.

**Global Partnership on Artificial Intelligence (GPAI)**

- It is a **multi-stakeholder** initiative focusing on **AI research and practical applications**.
- **Objective:** To bridge the gap between theory and practice on AI by supporting cutting-edge research and applied activities on AI-related priorities.
- Launched in **June 2020 with 15 members**, it has now expanded to 28 member countries and the European Union.
- Membership in GPAI is **open to all countries**, including emerging and developing countries.
- **India** is one of the **founding members of GPAI**.
- Its **secretariat** is hosted at the **Organisation for Economic Co-operation and Development (OECD), Paris**.

**Organisation Structure**

- It has a **Council and a Steering Committee**.
- It has **two Centres of Expertise** namely in Montreal and Paris.
  - These Centres of Expertise **facilitate GPAI's four working groups** and their research and practical projects, across various sectors and disciplines.
- The working groups will **initially focus on four themes** viz.
  - Responsible AI

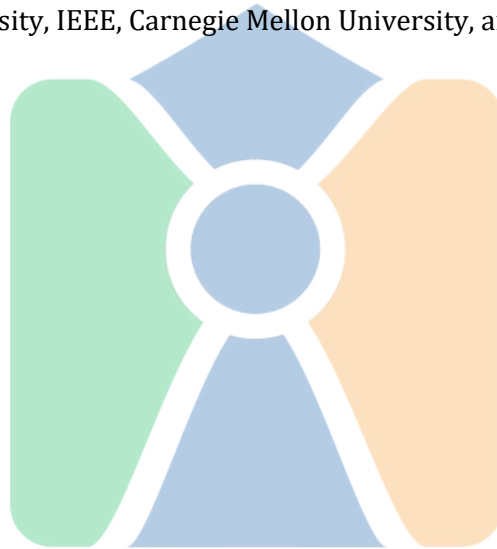
**Prelims Takeaway**

- Global Partnership on Artificial Intelligence (GPAI)
- Artificial Intelligence

- Data Governance
- the Future of Work
- Innovation and Commercialization

**Research Symposium on Responsible AI**

- The Ministry of Electronics and Information Technology (MeitY) and Centre for Responsible AI (CeRAI), IIT Madras, are organizing a **Research Symposium** during the Summit.
- **Theme:** Advancing Responsible AI in Public-Sector Applications.
- **Objective:** To provide a platform for Indian and International academicians and researchers to
  - collaborate with other AI experts
  - present actionable research on Responsible AI in front of a global audience
  - enhance cross-sectoral research on responsible AI.
- The **Symposium has two tracks**; one with invited expert speakers, and the other, conference shortlist track.
- Both tracks include **distinguished scholars and practitioners** from institutions like New York University, Oxford University, IEEE, Carnegie Mellon University, and others.

**Mentorship**  
India

## Editorials, Gists and Explainers

### 1. India's alarming 'fixed dose combination' problem - The Hindu

**Relevance:** Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

**Context:**

- Academics from **India, Qatar, and the UK** recently published a study in the Journal of Pharmaceutical Policy and Practice.
- The study highlighted the concerning **prevalence of unapproved and banned Fixed Dose Combination (FDC) antibiotics** in India.

**Key Findings**

- In 2020, **60.5% of antibiotic FDCs** (with 239 formulations) were unapproved, and **9.9%** (with 39 formulations) were being **sold despite being banned**.
- **Antibiotic FDCs are worrisome** due to the **growing antibiotic microbial resistance (AMR) in India**.

#### Purpose and Risks of FDCs

- FDCs combine multiple drugs to improve patient compliance, reducing the chance of missing doses.
- For diseases such as AIDS, FDCs have proven to be very useful in improving patient compliance, which improves treatment outcomes.
- However, formulating FDCs is complex, as interactions between active ingredients and excipients can impact efficacy or create toxic elements.

#### Pharmaceutical Industry's Motivation

- The Indian pharmaceutical companies use these FDCs to escape liability under multiple laws without much concern for public health.
- They use FDCs to evade drug price control regulations under the Drugs (Prices Control) Order (DPCO).
  - Under DPCO, the government fixes the prices of individual drugs.
- The industry introduced a vast array of FDCs lacking medical rationale, combining unrelated drugs.
- For example, anti-inflammatory drugs were combined with vitamins.

#### Pricing Strategy

- Creating FDCs provide companies the opportunity to charge higher prices for drugs, avoiding intense market competition.
- Pseudo-innovation through FDCs is rewarded by the regulatory structure, allowing higher pricing until similar products emerge.

#### Regulatory Issues

- Regulatory problems with FDCs date back to 1978, with the first committee acknowledging the issue.
- At the time, there was no system under the colonial-era Drugs and Cosmetics Act, 1940 to vet drugs for safety and efficacy prior to their sale in India.
- Amendments in 1982 and 1988 gave the central government power to prohibit and require safety and efficacy proof for new drugs, respectively.

#### Regulatory Framework Inefficiency

- Despite clear laws, State drug controllers have ignored regulations, issuing manufacturing licenses for unapproved FDCs.
- The Ministry of Health has issued numerous orders to prohibit specific FDCs, engaging in legal battles but with inconsistent outcomes.

**Conclusion**

- The **study underscores the urgency for immediate action**, as unregulated FDCs may contribute to the AMR problem in India.
- The **Ministry of Health must address the issue promptly**, considering the potential public health risks associated with unapproved and banned antibiotic FDCs.

### 2. An icy warning - The Hindu

**Relevance:** Conservation, environmental pollution and degradation

**Context:**

- Recently, the **World Meteorological Organization** released a report titled **"The Global Climate 2011-2020"**.
- It gives a broad view of the **planet's response to greenhouse gas emissions**.



#### The Global Climate 2011-2020 report

- It reveals a global trend of glaciers thinning by an average of one metre annually from 2011 to 2020.
- Despite regional variability, glaciers worldwide are consistently shrinking, with some reference glaciers having already disappeared.
- Reason: The nourishing winter snow is completely melting away during summer.

#### Projected Disappearances

- Glaciers in Africa, including those on the Rwenzori Mountains and Mount Kenya are expected to vanish by 2030 and those on Kilimanjaro by 2040.
- Rapid growth of pro-glacial lakes raises the risk of glacier lake outburst floods (GLOF), impacting ecosystems and livelihoods.
- Glaciers, a crucial part of the cryosphere, serve as a barometer for the climate crisis.

#### GLOF Events and Recent Catastrophes

- The Chungthang dam in Sikkim was destroyed due to a GLOF event caused by a melting glacier, emphasising the real-time impact.
- The 2013 Uttarakhand floods were cited as an example of glacier melt contributing to a major flooding disaster.

#### Alarming Rate of Glacier Disappearance

- Report by the International Centre for Integrated Mountain Development
  - It indicates that glaciers in the Hindu Kush Himalayas disappeared 65% faster in the 2010s compared to the previous decade.
- Predictions suggest a 55% to 75% decline in glacier volume by the end of the century due to global greenhouse gas emissions.
- This means sharp reductions in freshwater supply in the immediate vicinity of 2050.

#### Way Forward

- Lack of awareness and early warning systems for glacier-related risks, such as GLOF events, pose significant threats.
- The glacier-related risks should be elevated to the same category as cyclones, floods, and earthquakes.
- There is a need to make comprehensive risk assessments, map regions of vulnerability and commission infrastructure development with the highest standards of care.

### 3. How Google DeepMind's AI breakthrough could revolutionise chip, battery development - Indian Express

**Relevance:** Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

**Context:**

- Google DeepMind researchers recently unveiled a breakthrough in materials discovery using AI called **Graph Networks for Materials Exploration (GNoME)**.

#### AI's Role in Predicting Structures

- GNoME utilized AI to predict the structures of over 2 million new materials.
- The potential applications extend to renewable energy, battery research, semiconductor design and computing efficiency.

#### Significance of the Breakthrough

- GNoME increases the number of 'stable materials' known to humanity by tenfold.
- These materials include inorganic crystals that modern tech applications from computer chips to batteries rely on.
- To enable new technologies, crystals must be stable otherwise they can simply decompose.
- However, these materials will still need to undergo the process of synthesis and testing.

#### Output and Filtering

- GNoME identified 381,000 of the 2.2 million crystal structures as most stable.
- The breakthrough aids ongoing research, such as finding
  - Stable solid electrolytes for Li-ion batteries
  - New layered compounds similar to graphene.

#### How does GNoME actually work?

- GNoME is a graph neural network model using active learning to scale up its dataset.
- This makes the algorithm "well suited" to the science of discovering new materials, which requires searching for patterns not found in the original dataset.

#### Training Data and Collaboration

- GNoME was trained on crystal structure data from The Materials Project, a collaborative initiative providing data for inorganic materials research.
- The model underwent repeated assessments using Density Functional Theory (DFT) to understand atomic structures and crystal stability.

#### Precision Improvement

- GNoME assesses structural and compositional pipelines, evaluating candidates with known crystal structures and based on chemical formulas.
- Its precision rate for predicting material stability increased from 50% to around 80%.
- It claims equivalent knowledge to nearly 800 years of traditional computational methods, with 380,000 stable predictions available for further research.

#### Potential Impact on Materials Discovery

- The breakthrough accelerates the materials discovery process by filtering potential candidates.
- This enables researchers to focus on synthesizing materials with specific properties.

## Quick Look

### 1. Oil and Gas Decarbonization Charter (OGDC)

- Recently, Conference of Parties (COP28) President and Saudi Arabia announced the official launch of the Oil and Gas Decarbonization Charter (OGDC).
- It is a dedicated initiative for the oil and gas sector.
- It aims to induce substantial impact in addressing climate challenges.
- Currently, 50 companies, collectively responsible for over 40 percent of global oil production, have committed to the OGDC.
- National Oil Companies have shown historic participation, constituting over 60 percent of the total signatories, marking a noteworthy shift towards decarbonization within this sector.
- It is integral to the Global Decarbonization Accelerator (GDA).

### 2. National Automated Fingerprint Identification System (NAFIS)

- It is a pan-India searchable database of crime and criminal-related fingerprints.
- It is managed by the Central Fingerprint Bureau at the National Crime Records Bureau (NCRB), based in New Delhi.
- It functions as a central information repository by consolidating fingerprint data from all states and Union Territories.
- It assigns a unique 10-digit National Fingerprint Number for each criminal, based on biometrics.
- It enables law enforcement agencies to upload, trace and retrieve data from the database in real time on a 24×7 basis.
- With the help of this it is possible to locate a person of interest in a matter of minutes.

#### DRESS Syndrome

- Recently, the Indian Pharmacopoeia Commission (IPC) issued a drug safety alert about the use of painkiller mefenamic acid that it can lead to Drug Reactions with Eosinophilia and Systemic Symptoms (DRESS) Syndrome.
- It is a type of drug allergy that can occur as a reaction to a large variety of medications.
- This syndrome causes a diverse array of clinical symptoms, anywhere from 2 to 8 weeks after initiating the offending drug.
- Symptoms
  - Patients typically present with a rash, fever, and eosinophilia but can have a variety of symptoms including liver, lung, or kidney involvement.
  - Also have a visceral involvement (hepatitis, pneumonitis etc.) which is the major cause of morbidity and mortality in this syndrome.
- Treatment
  - Stop the medication involved in the reaction, and sometimes, no further treatment is needed.
  - It is largely supportive and symptomatic; corticosteroids are often used and sometimes immunosuppressants like cyclosporine.

### 3. Ibu Volcano

- Recently, the Ibu volcano in Indonesia's North Maluku province erupted.
- It is one of the most isolated and least accessible volcanoes in Indonesia.
- It is a stratovolcano located in the province of Maluku, East Indonesia.
- The stratovolcano is a tall, steep, and cone-shaped type of volcano.
- At their peak, stratovolcanoes usually have a small crater.
- The crater may be filled with water or ice, or it may contain a volcanic dome during a period of relative inactivity.
- Stratovolcanoes comprise the largest percentage (~60%) of the Earth's volcanoes, and most are characterised by eruptions of andesite and dacite, lavas that are cooler and more viscous than basalt.
- These volcanoes often suffer explosive eruptions.

#### 4. Assam Accord

- The Assam Accord was a Memorandum of Settlement (MoS) signed between representatives of the Government of India and the leaders of the Assam Movement.
- The Assam Movement (also Anti-Foreigners Agitation) (1979–1985) was a popular uprising in Assam that demanded the Government of India to detect, disenfranchise and deport illegal aliens.
- The protestors demanded the identification and deportation of all illegal foreigners – predominantly Bangladeshi immigrants.
- The movement ended in 1985 with the Assam Accord.
- the Government of India agreed to secure the international border against future infiltration

#### 5. Hatti community

- The Hattis are a close-knit community who take their name from their traditional occupation of selling home-grown crops, vegetables, meat, and wool at small-town markets known as 'haats'.
- Hatti men traditionally don a distinctive white headgear on ceremonial occasions.
- The Hatti homeland straddles the Himachal-Uttarakhand border in the basin of the Giri and Tons rivers, both tributaries of the Yamuna.
- The Tons marks the border between the two states
- The Hattis living in the Trans-Giri area in today's Himachal Pradesh and Jaunsar Bawar in Uttarakhand were once part of the royal estate of Sirmaur.
- Jaunsar Bawar was conquered by the British in 1814.

#### 6. Indian Pharmacopoeia Commission

- It is an autonomous Institution of the Ministry of Health and Family Welfare, of India.
- It is created to set standards of drugs in the country.
- Its basic function is to regularly update the standards of drugs commonly required for treatment of diseases prevailing in this region.
- It publishes official documents for improving Quality of Medicines by way of adding new and updating existing monographs in the form of Indian Pharmacopoeia (IP).
- It further promotes rational use of generic medicines by publishing National Formulary of India.



## Prelims Track Question

**Q1. Consider the following statements regarding the Indira Gandhi National Centre for the Arts (IGNCA)**

1. IGNCA was established with the aim of preserving, promoting, and disseminating the diverse cultural heritage of India.
2. IGNCA operates under the Ministry of Culture, Government of India.

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

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

**Q2. Consider the following statements regarding the discretionary powers of Governors in India:**

1. Governors have powers to act independently of the advice of the Council of Ministers in certain situations.
2. These are explicitly outlined in the Constitution of India.
3. The exercise of these powers by Governors is immune from judicial review.

**How many of the statements given above is/are correct?**

- A. Only one
- B. Only two
- C. All three
- D. None

**Q3. Consider the following statements regarding the Monetary Policy Committee (MPC) in India:**

1. MPC is a statutory and institutionalised framework under the Reserve Bank of India Act, 1934.
2. The MPC is responsible for fixing the benchmark policy interest rate in India.
3. The Governor of the Reserve Bank of India is the sole decision-maker in the MPC, and other members only provide recommendations.

**How many of the statements given above is/are correct?**

- A. Only one
- B. Only two

C. All three

D. None

**Q4. Consider the following statements regarding the Fintech Repository:**

1. It is a proposed initiative by the Reserve Bank of India (RBI) to gather information voluntarily provided by FinTech companies.
2. The repository aims to enhance regulatory oversight by collecting relevant data on the operations and partnerships of banks and non-banking finance companies (NBFCs) with FinTechs.

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

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

**Q5. Consider the following statements regarding greenhouse gases (GHGs):**

1. Carbon dioxide (CO<sub>2</sub>) is the only greenhouse gas produced by human activities.
2. Methane (CH<sub>4</sub>) is a potent greenhouse gas, and its primary sources include agriculture, livestock, and fossil fuel extraction.
3. Water vapour is considered a significant anthropogenic greenhouse gas contributing to climate change.

**How many of the statements given above is/are correct?**

- A. Only one
- B. Only two
- C. All three
- D. None

**Q6. With reference to Casgevy, consider the following statements**

1. It is the first licensed therapy in the world based on the Crispr-Cas9 gene editing technology.
2. It edits the faulty gene responsible for sickle cell disease using a closely matched donor's bone marrow.
3. The therapy targets the BCL11A gene, promoting the production of foetal haemoglobin.



**How many of the statements given above is/are correct?**

- A. Only one
- B. Only two
- C. All three
- D. None

**Q7. Consider the following statements about the Global Partnership on Artificial Intelligence (GPAI)**

1. It is a multi-stakeholder initiative to bridge the gap between theory and practice on AI.
2. Membership in GPAI is open to all countries including emerging and developing countries.
3. India is not a member of GPAI.

**How many of the statements given above is/are incorrect?**

- A. Only one
- B. Only two
- C. All three
- D. None

**Q8. Consider the following statements about Fixed Dose Combination (FDC)**

1. FDCs combine multiple drugs to improve patient compliance, reducing the chance of missing doses.
2. In India, antibiotic FDCs are worrisome due to the growing antibiotic microbial resistance (AMR) in the country.

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

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

**Q9. Who released the State of the Global Climate Report seen in the news recently?**

- A. United Nations Development Programme (UNDP)
- B. International Union for Conservation of Nature (IUCN)
- C. United Nations Environment Programme (UNEP)
- D. World Meteorological Organization (WMO)

**Q10. Consider the following statements regarding GNoME seen in the news recently**

1. It is an AI tool developed by Google DeepMind in collaboration with ISRO.
2. It predicted the structures of over 2 million new materials using machine learning techniques.

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

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

## Prelims Track Answer

**Ans. 1 Option C is correct**

**Explanation**

- IGNCAs were indeed established with the primary objective of preserving, promoting, and disseminating the rich and diverse cultural heritage of India. It acts as a repository of knowledge and resources on the arts, both traditional and contemporary. **Hence, statement 1 is correct**
- IGNCAs operate under the Ministry of Culture, Government of India. It was inaugurated on November 19, 1987, by the then Prime Minister, Rajiv Gandhi. **Hence, statement 2 is correct**

**Ans. 2 Option A is correct**

**Explanation**

- Governors do not have discretionary powers to act independently of the advice of the Council of Ministers, especially in situations where the Constitution provides for their independent judgment. However, this discretion is not absolute and is exercised within constitutional limits. **Hence, statement 1 is correct**
- The Constitution of India does not explicitly outline the discretionary powers of Governors. Instead, it provides a framework within which these powers are to be exercised. The discretionary powers are more a matter of convention and constitutional interpretation. **Hence, statement 2 is incorrect**
- The exercise of discretionary powers by Governors is not immune from judicial review. Courts can review the actions of Governors to ensure they are within the constitutional framework and do not violate the principles of democratic governance. **Hence, statement 3 is incorrect**

**Ans. 3 Option B is correct**

**Explanation**

- The Monetary Policy Committee (MPC) is indeed a statutory and institutionalised framework established under the Reserve Bank of India Act, 1934. It was introduced

through amendments in 2016. **Hence, statement 1 is correct**

- The primary responsibility of the MPC is to fix the benchmark policy interest rate (repo rate) in India. The committee considers various economic factors and aims to achieve the target inflation rate set by the government. **Hence, statement 2 is correct**
- The Governor of the Reserve Bank of India is not the sole decision-maker in the MPC. The committee consists of six members, including three from the RBI (Governor, Deputy Governor, and an officer) and three external members appointed by the government. All members have an equal vote in deciding the policy rates. **Hence, statement 3 is incorrect**

**Ans. 4 Option D is correct**

**Explanation**

- The Fintech Repository is indeed a proposed initiative by the Reserve Bank of India (RBI) to collect relevant information voluntarily provided by FinTech companies. It aims to create a comprehensive database of the fintech sector's activities. **Hence, statement 1 is correct**
- The primary objective of the Fintech Repository is to enhance regulatory oversight by collecting data on the operations and partnerships of banks and non-banking finance companies (NBFCs) with FinTechs. This would enable the RBI to have better insights into the dynamics of the financial technology sector. **Hence, statement 2 is correct**

**Ans. 5 Option A is correct**

**Explanation**

- While carbon dioxide (CO<sub>2</sub>) is a significant greenhouse gas produced by human activities, it is not the only one. Other human-produced greenhouse gases include methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), fluorinated gases, and more. **Hence, statement 1 is incorrect**

- Methane (CH<sub>4</sub>) is indeed a potent greenhouse gas. Its sources include agriculture (rice paddies), livestock digestion, and fossil fuel extraction (natural gas production and distribution). **Hence, statement 2 is correct**
- Water vapour is a natural component of the Earth's atmosphere and is not considered a significant anthropogenic greenhouse gas. Its concentration in the atmosphere is mainly controlled by natural processes and is not directly influenced by human activities. **Hence, statement 3 is incorrect.**

**Ans. 6 Option B is correct**

**Explanation**

- Casgevy is the first licensed therapy in the world based on the Crispr-Cas9 gene editing technology, awarded a Nobel Prize in 2020. **Hence, statement 1 is correct.**
- It edits the faulty gene responsible for sickle cell disease and thalassaemia using the patient's own blood stem cells. **Hence, statement 2 is incorrect.**
  - So far, the only permanent treatment has been a bone marrow transplant, for which a closely matched donor is needed.
- The therapy targets the BCL11A gene, promoting the production of foetal haemoglobin, which does not carry the same abnormalities as adult haemoglobin. **Hence, statement 3 is correct.**
- Casgevy is a one-time treatment that involves collecting blood stem cells from the bone marrow through apheresis.
- The edited cells are then transplanted back into the patient after undergoing a six-month editing and testing process.
- Side effects from the treatment are similar to those associated with autologous stem cell transplants, including nausea, fatigue, fever and increased risk of infection.

**Ans. 7 Option A is correct**

**Explanation**

- The Global Partnership on Artificial Intelligence (GPAI) is a multi-stakeholder

initiative focusing on AI research and practical applications.

- Objective: To bridge the gap between theory and practice on AI by supporting cutting-edge research and applied activities on AI-related priorities. **Hence, statement 1 is correct.**
- Launched in June 2020 with 15 members, it has now expanded to 28 member countries and the European Union.
- Membership in GPAI is open to all countries, including emerging and developing countries. **Hence, statement 2 is correct.**
- India is one of the founding members of GPAI. **Hence, statement 3 is incorrect.**
- Its secretariat is hosted at the Organisation for Economic Co-operation and Development (OECD), Paris.
- It has two Centres of Expertise namely in Montreal and Paris.
- These Centres of Expertise facilitate GPAI's four working groups and their research and practical projects, across various sectors and disciplines.

**Ans. 8 Option C is correct**

**Explanation**

- Academics from India, Qatar, and the UK recently published a study that highlighted the concerning prevalence of unapproved and banned Fixed Dose Combination (FDC) antibiotics in India.
- FDCs combine multiple drugs to improve patient compliance, reducing the chance of missing doses. **Hence, statement 1 is correct.**
- However, formulating FDCs is complex, as interactions between active ingredients and excipients can impact efficacy or create toxic elements.
- Antibiotic FDCs are worrisome due to the growing antibiotic microbial resistance (AMR) in India. **Hence, statement 2 is correct.**
- The Indian pharmaceutical companies use FDCs to evade drug price control regulations under the Drugs (Prices Control) Order (DPCO).

- Manufacturers often provide their own testing protocols to government laboratories.
- Creating FDCs provide companies the opportunity to charge higher prices for drugs, avoiding intense market competition.

**Ans. 9 Option D is correct**

**Explanation**

- Recently, the World Meteorological Organization released a report titled “The Global Climate 2011-2020”. **Hence, option D is correct.**
- It gives a broad view of the planet’s response to greenhouse gas emissions.
- It reveals a global trend of glaciers thinning by an average of one metre annually from 2011 to 2020.
- Glaciers in Africa, including those on the Rwenzori Mountains and Mount Kenya are expected to vanish by 2030 and those on Kilimanjaro by 2040.

**Ans. 10 Option B is correct**

**Explanation**

- Google DeepMind researchers unveiled a breakthrough in materials discovery using AI called Graph Networks for Materials Exploration (GNoME). **Hence, statement 1 is incorrect.**
- GNoME utilized AI to predict the structures of over 2 million new materials. **Hence, statement 2 is correct.**
- The potential applications extend to renewable energy, battery research, semiconductor design and computing efficiency.
- It increases the number of 'stable materials' known to humanity by tenfold.
- GNoME is a graph neural network model using active learning to scale up its dataset.
- This makes the algorithm “well suited” to the science of discovering new materials, which requires searching for patterns not found in the original dataset.



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