



PLUTUS IAS

Weekly Current Affairs

Weekly Current Affairs 06-Nov-2023 to 12-Nov-2023



The Indian **EXPRESS**

Corporate Office

Basement 8, Apsara Arcade, Karol Bagh Metro Station
Gate No. 6, New Delhi 110005

17A/41, 1st Floor, WEA Karol Bagh, New Delhi 110005

706 1st Floor Dr. Mukherjee Nagar Near Batra Cinema
Delhi - 110009

C 59 Noida Sector 2, Noida, Uttar Pradesh 201301

Phone: 08448440231

Email: info@plutusias.com

Web: www.plutusias.com



CONTENTS

Polity and Governance 1

Pirated Content on Digital Platforms 1

Composite Water Management
Index (CWMI) 2

Online Betting..... 3

Central Information Commission..... 4

Net Neutrality..... 6

Comptroller And Auditor General (CAG) 7

International Relations 12

India-Bhutan 12

Science and Technology 14

Deepfake Technology 14

Cloud Seeding..... 15

Ecology and Environment 18

Loss and Damages (L&D) Fund 18

Social Justice 20

Pradhan Mantri Garib Kalyan Ann Yojana
(PMGKAY) Scheme 20

POLITY AND GOVERNANCE

PIRATED CONTENT ON DIGITAL PLATFORMS

Why in the news?

The government has recently appointed nodal officers responsible for issuing orders to remove pirated content from digital platforms and has introduced robust measures to combat film piracy.

Background:

- The recent decision to combat film piracy comes after the passing of the Cinematograph Amendment Bill 2023 in Parliament.
- Currently, there exists no direct institutional framework for addressing pirated film content, except for legal action under the Copyright Act and the Indian Penal Code (IPC).

Key Information:

- The government has appointed 12 nodal officers within the Ministry of Information and Broadcasting and the Central Bureau of Film Certification (CBFC) to handle complaints related to film piracy. These officers are mandated to take action within 48 hours upon receiving a complaint.
- Those involved in piracy may now face fines ranging from INR 3 lakh to five percent of the gross audited value of production.
- Copyright holders or their authorized representatives can apply to the nodal officers to have pirated content removed.
- If a complaint is submitted by a non-copyright holder, the Nodal Officer may conduct hearings to determine the complaint's validity before issuing directives.

Targeted Platforms:

- Digital platforms such as YouTube, Telegram channels, websites, and other online platforms

are legally required to remove internet links containing pirated content.

Understanding Content Piracy:

- Content piracy involves the unauthorized duplication of copyrighted content, which is then distributed in the 'grey' market at significantly lower prices.
- The proliferation of the internet and the widespread desire for free access to film content have contributed to the rampant growth of piracy.



Rationale for Regulation:

- The increase in piracy is attributed to easy access to technology and the desire for free access to film content. These measures aim to empower authorities to swiftly address piracy, providing relief to the industry.
- The Cinematograph Amendment Bill 2023 aims to address film piracy, a long-standing demand of the film industry. This Act was last significantly amended in 1984 and has been updated after 40 years to include provisions against film piracy, encompassing digital piracy.
- In India, legal actions against piracy are covered by various laws, including the Indian Penal Code, the Cinematograph (Amendment) Bill 2023, and the Information Technology Act

of 2000. These statutes prescribe penalties, imprisonment, and fines for those involved in film piracy and unauthorized online distribution of copyrighted content

COMPOSITE WATER MANAGEMENT INDEX (CWMI)

Why in the news?

NITI Aayog is considering discontinuing a Composite Water Management Index introduced five years ago. The Aayog has reportedly designated the reports on states' water management progress for 2018-19 and 2019-20 for "internal use" after making the earlier editions publicly available.

India's Water Scenario at Glance

- India is experiencing a severe water crisis with significant economic, livelihood, and ecological consequences.
- India has approximately 17% of the world's population but only 4% of the world's fresh-water resources.
- Over 82 Crore people in India live in areas with per capita water availability close to or lower than 1000m³, the threshold for water scarcity.
- Approximately 60% of this population resides in the Ganges river basin, responsible for nearly 40% of the country's GDP.
- The Ganges River has witnessed unprecedentedly low water levels in recent summer seasons, and groundwater contribution to the river is expected to continue decreasing in the next 30 years.
- India has annual utilisable water resources of 690 Billion Cubic metres (BCM) from surface sources and 447 BCM from groundwater.
- Despite possessing surface water resources, groundwater contributes nearly 62% to irrigation, 85% to rural water supply, and 45% to urban water supply in India.

- Inefficient cropping patterns, especially the cultivation of water-intensive crops like sugarcane and paddy, exacerbate water-related issues.
- India's international trade in water-intensive crops, such as Basmati rice, contributes to significant virtual water loss.

Composite Water Management Index (CWMI)

- The NITI Aayog introduced the Composite Water Management Index (CWMI) to facilitate efficient water resource management in Indian states amidst the escalating water crisis.
- This initiative is a collaborative effort involving two key ministries: the Ministry of Jal Shakti and the Ministry of Rural Development.

Objectives of CWMI:

- **Improve Water Resource Management:** It aims to enhance water resource management in India through a collaborative approach.
- **Public Accountability:** The CWMI serves as a public platform, providing an annual overview of the water sector and states' performance.
- **Progress Measurement:** This index evaluates states' progress in water management and performance improvements over time.

Importance of the CWMI:

- **Evidence-Based Policy:** It encourages a culture of evidence and data-driven decision-making for sustainable and efficient water resource management.
- **Promoting Federalism:** The CWMI is expected to promote the spirit of 'competitive and cooperative federalism' across the country, encouraging states to compete and cooperate in improving water management.
- **Data Accessibility:** Data incorporated in the index will be made accessible to researchers and entrepreneurs, thereby stimulating innovation within the sector.
- **Addressing Water Risk:** The collection and com-

pilation of this strategic dataset represent a significant stride towards addressing the projected water risk and shortfall in the country.

CWMI Indicator themes

The CWMI is structured around nine themes, each assigned a specific weight and encompasses 28 indicators. These themes cover a broad spectrum of water management aspects, including:

1. Groundwater and surface water restoration
2. Major and medium irrigation
3. Watershed development
4. Participatory irrigation management
5. On-farm water use
6. Rural and urban water supply
7. Policy and governance

Categorisation of states

To accommodate the varying hydrological conditions across different groups of reporting states, the CWMI classified them into three distinct categories:

- Non-Himalayan states
- North-Eastern and Himalayan states
- Union Territories (UTs)

Way Forward

- Addressing India's intricate water challenge demands a comprehensive perspective, including the hydrological system and its interactions with climate change, as well as the impact of human activities in agriculture, industry, and energy production.
- It is essential to enhance our understanding of finite water resources and how they are utilised, implementing measures to ensure efficient and sustainable water use.
- The nation must take immediate and decisive actions to promote responsible water management.

ONLINE BETTING

Why in the news?

The IT ministry has issued a blocking order targeting 22 betting applications, which includes Mahadev Book Online and Reddyannaprestopro. This action aligns with the ongoing investigation by the Enforcement Directorate (ED) into the Mahadev betting app case.

Background:

- The Enforcement Directorate (ED) conducted raids on Mahadev Book in Chhattisgarh under the Prevention of Money Laundering Act (PMLA).
- Illegal Betting Websites Ban: Sites like Mahadev Book Online and Reddyannaprestopro were banned by the ED due to illegal betting app syndicates.

Online Betting Apps:

- **Potential Aspects:**
 - Convenience and Accessibility: Online betting apps provide easy access to betting from any location using internet-connected devices.
 - Entertainment Value: Users find these apps entertaining for sports betting and gambling.
 - Economic Opportunities: Some view online betting as a potential income source.
 - Technological Advancements: These platforms leverage technology for an engaging user experience.
- **Risks Associated:**
 - Addictive Nature: Convenience may lead to addictive behavior and associated problems.
 - Illegal Activities: Unregulated betting apps can be linked to money laundering and illicit

activities.

- Financial Risks: Users face potential financial losses due to the high-risk nature of gambling.
- Regulatory Concerns: Varied regulatory frameworks lead to concerns about uniform standards and consumer protection.

Enforcement Directorate Overview:

- **Origin:** Established as the 'Enforcement Unit' in 1956 under the Department of Economic Affairs.
- **Responsibilities:** Mandated to enforce special fiscal laws like the Foreign Exchange Management Act (FEMA) and the Prevention of Money Laundering Act (PMLA).
- **Intervention Criteria:** Steps in when a crime generates proceeds exceeding 1 crore rupees.
- **Powers:** Authorized to conduct searches and seizures if money laundering is suspected.

Note:

- Ill-gotten property acquired before 2005 falls outside the PMLA's scope, enacted in 2005.

CENTRAL INFORMATION COMMISSION

Why in the news?

Mr. Heeralal Samariya (IAS) has assumed the role of Chief Information Commissioner within the Central Information Commission.

Central Information Commission

- The Central Information Commission, established in 2005 under the **Right to Information Act of 2005**, holds **jurisdiction over all Central Public Authorities**.
- **Specific powers and functions:**
 - Adjudicating second appeals for information disclosure

- Issuing directives for record maintenance
- Proactively disclosing information
- Investigating complaints regarding the inability to file RTI requests and imposing penalties
- Overseeing and reporting on various matters, including preparing an Annual Report

● Composition of CIC:

- Chief Information Commissioner
- Ten Information Commissioners
- The decisions of the Commission are final and binding.

Right to Information Act (RTI), 2005

- The Indian Parliament passed the Right to Information Act (RTI) in May 2005.
- It gives citizens the right to access information held by public authorities, except in cases where the information is exempted under the Act.
- The RTI Act aims to promote transparency and accountability in government and to combat corruption.

Chief Information Commissioner (CIC) and Information Commissioners (IC):

● Appointment:

- The President appoints the Chief Information Commissioner (CIC) and Information Commissioners (ICs) on the recommendations of the Appointments Committee.

● Committee for the appointment of the CIC/IC:

- The Prime Minister serves as the Committee Chairperson.
- The Leader of the Opposition in the Lok Sabha.
- A Union Cabinet Minister is nominated by the Prime Minister.

● Qualifications for CIC/IC

- Individuals eminent in public life with extensive knowledge and experience in various fields, including law, science and technology, social service, management, journalism, mass media, or administration and governance.
- **Disqualifications**
 - They cannot be a Member of Parliament or Member of the Legislature of any State or Union Territory.
 - They must not hold any other office of profit, be connected with any political party, or be engaged in any business or profession.
- **Term of Office**
 - The CIC/ICs are appointed for a **fixed term of three years**, starting from the date they assume office.
- **Retirement from Parent Service**
 - In cases where the Central or a State Government previously employed a CIC/ICs at the time of their appointment, they are considered to have retired from their prior service with effect from the date of their appointment to the Central Information Commission.
- **Salaries**
 - The Chief Information Commissioner receives a fixed monthly salary of Rs. 2,50,000 (Rupees two lakh and fifty thousand).
 - Information Commissioners are entitled to a fixed monthly salary of Rs. 2,25,000 (Rupees two lakh and twenty-five thousand).
- **Removal:**
 - An Information Commissioner can only be removed from office upon the order of the **President based on proven misbehaviour or incapacity**.
 - This action can only be taken after the Supreme Court inquiry following a reference made to it by the President.

- President can also order the removal of the Chief Information Commissioner or any Information Commissioner if they meet any of the following criteria:
 - Are adjudged insolvent.
 - Have been convicted of an offence which, in the President's opinion, involves moral turpitude.
 - Engage in paid employment outside the duties of their office during their term of office.
 - Are, in the President's opinion, unfit to continue in office due to infirmity of mind or body.
 - Acquire financial or other interests that are likely to adversely affect their functions as the Chief Information Commissioner or an Information Commissioner.

Issues related to the Central Information Commission

- **Limited Reach:** While the Commission has jurisdiction over all Central Public Authorities, it lacks control over state public authorities, which restricts its reach.
- **Dependence on Public Information Officers:** The effectiveness of the CIC relies on the appointment and cooperation of Public Information Officers. If an officer declines to accept an information request or if no officer has been appointed, the CIC's ability to function effectively is compromised.
- **Limited Resources:** The CIC faces resource constraints due to its budget, potentially impeding its capacity to carry out its functions effectively.

While the CIC plays a crucial role in promoting transparency and accountability in public authorities, it faces challenges regarding its reach, dependence on Public Information Officers and resource constraints. However, it can leverage opportunities such as digital transformation and awareness programs to overcome these challenges. It must also navigate threats such as non-compliance by public

authorities and legal challenges to its decisions.

NET NEUTRALITY

Why in the news?

In response to the government's request, the Telecom Regulatory Authority of India (TRAI) initiated an extensive consultation process to examine the necessity and potential approaches for regulating Over-The-Top (OTT) services.

Introduction:

Net neutrality is the principle that Internet Service Providers (ISPs) should provide equal and unbiased access to all online content, applications, and services, without discriminating or giving preferential treatment to any specific data. This concept holds significant importance for both consumers and the telecommunications industry.

Importance of Maintaining Net Neutrality:

- Net neutrality ensures that users have unfettered access to the entirety of the internet, promoting transparency and freedom in content consumption. It guarantees that all online services and applications are equally accessible.

Challenges for Telecom Companies:

Over the years, telecom companies have faced several challenges related to net neutrality:

- **Shift in Revenue Streams:** Traditional revenue streams, such as voice calls and SMS, have dwindled due to the emergence of Over-The-Top (OTT) services, which often offer free or cheaper alternatives.
- **Infrastructure Investment:** Telecom companies have had to invest significantly in upgrading their infrastructure to handle the increased data traffic generated by OTT services, without a proportional increase in revenue.
- **Taxation and Licensing:** Telecom companies argue that OTT services are not subject to the same level of taxation and licensing fees, creating an uneven playing field.
- **Data Consumption:** On the flip side, the use of OTT services has led to a surge in data consumption, which has become a growing revenue stream for telecom companies as they provide the connectivity for these services.

Basis of TRAI Regulation in India:

The Telecom Regulatory Authority of India (TRAI) has been at the forefront of regulating net neutrality in India. TRAI's actions have influenced the adoption of net neutrality in the country and have been recognized globally. TRAI's regulation on discriminatory tariffs for data services, introduced in 2016, played a pivotal role in shaping the net neutrality landscape in India.

Flawed Arguments Affecting Net Neutrality:

Several flawed arguments have been raised by tele-

What is net neutrality?

All traffic on the internet should be treated equally.

NO BLOCKING

Your internet access provider (IAP) cannot block you from accessing legal content of your choice.



NO THROTTLING

Your IAP cannot intentionally throttle legal internet traffic to slower speeds than others traffic.

NO PAID PRIORITIZATION

Your IAP cannot sell 'fast lane' service to content providers who can pay more than others.

com companies in their bid to challenge net neutrality:

- **OTT Platforms Sharing Bandwidth Costs:** Telecom companies demand that content providers like Netflix, Amazon Prime, and Disney+ Hotstar share the costs of bandwidth, but this argument is fundamentally flawed and undermines net neutrality principles.
- **OTTs Running on Telecom Infrastructure:** Telecom companies claim that OTT platforms are free riders benefiting from the infrastructure they maintain. However, this disregards the fact that OTT platforms invest in content delivery networks (CDNs) that enhance internet capacity.
- **Telecom Capitalizing on Data Demand:** Telecom companies capitalize on the demand generated by OTT platforms by providing internet connectivity to consumers. If they fail to cover costs, they can raise their prices, as is customary in a fair market.
- **Competition Within OTTs:** OTT services compete based on the quality and variety of content, streaming quality, user experience, and multi-device availability, and telecom companies charging both consumers and content providers creates an unfair situation.
- **Increased Costs for Consumers:** If OTT platforms concede to telecom companies' demands, the costs could be transferred to consumers through higher subscription fees or reduced service quality, affecting those relying on OTT services for entertainment, education, and work.

The Way Forward:

It is crucial for all stakeholders, including policymakers, to understand the long-term implications of acceding to the short-sighted demands of telecom companies. Upholding net neutrality principles is not only about preserving an open internet but also fostering an environment conducive to innovation, competition, and consumer welfare, particularly in countries like India where the internet plays a crucial role in Digital Public Infrastructure (DPI).

COMPTROLLER AND AUDITOR GENERAL (CAG)

Why in the news?

As Indian democracy has evolved, the significance of the Comptroller and Auditor General (CAG) has heightened, playing a crucial role in advancing good governance and protecting the interests of the people.

Constitutional Provisions:

- **Article 148:** Specifies that the Comptroller and Auditor General of India (CAG) shall be appointed by the President through a warrant under his hand and seal.
- **Article 149:** Grants powers to the CAG for auditing accounts related to government accounts, recognized as part of the Basic Structure of the Constitution in the case of Association of Unified Tele Services Providers v. Union of India.
- **Article 150:** Defines the form of accounts for the Union and States.
- **Article 151:** Mandates the submission of audit reports related to Union accounts by the CAG to the President.

Emerging Importance of the Office of CAG:

- **Ensuring Transparency and Accountability:** The CAG plays a pivotal role in a democratic framework by ensuring transparency, accountability, and professional integrity in the government's functioning.
- **Separation of Powers:** Helps maintain the separation of powers between the legislature and the executive by ensuring alignment between the government's financial activities and its legislative intentions.
- **Promoting Good Governance:** Through audit findings and recommendations, the CAG promotes good governance practices, contributing to streamlined government operations.
- **Efficiency Enhancement:** By enforcing financial

discipline, the CAG reduces inefficiency within the executive, fostering better resource utilization.

- **Contribution to Sustainable Development Goals:** Collaborating with international agencies like the UN, the CAG audits and assesses the performance of Sustainable Development Goals.
- **Capacity Building and Support:** Provides hand-holding and capacity-building for state-level auditors and local fund auditors, offering technical guidance and support in audit planning and methodologies.

Issues Arising from the Functioning of CAG:

- **Selection and Appointment Issues:**
 - Executive Monopoly: The appointment process lacks specific criteria, leading to an executive monopoly, where the Cabinet Secretary shortlists candidates submitted to the Prime Minister via the Finance Minister.
 - Conflict of Interest: The executive's control over appointments raises concerns about a conflict of interest, particularly when the CAG audits the government headed by the Prime Minister.
 - Inter-Services Conflict: The dominance of IAS officers in appointments raises questions of whether IAAS officers should have a more substantial presence.
- **Performance Audit Limitations:**
 - Competence Concerns: Doubts exist about the CAG's ability to conduct performance audits effectively.
 - Judicial Limitation: The Supreme Court has ruled in *Arun Kumar Agrawal v Union of India* that the CAG cannot question the merits of the State government's policy objectives.
- **Procedural Challenges:**
 - Post-facto Analysis: Audit reports provide post-facto analysis, offering prospective value for improving future systems and processes.

dures.

- Lack of Focused Findings: Findings, often presented as scattered observations, create media attention without addressing micro-level issues in departmental functioning.
- Unaddressed Systemic Issues: While known problems are identified, systemic issues in public organizations remain unaddressed.

● **Audit Perceived as Policing Mechanism:**

- Government Indifference: Poor response from the government to external audits reduces the effectiveness of the CAG's role.
- Delayed Report Presentation: Delays in tabling finance reports before Parliament deprive the legislature of crucial information before the budget session.
- Reduced Output: The substantial reduction in the number of audit reports prepared by the CAG raises concerns about its output.

Way Forward:

● **Reforming the Appointment Process:**

- International Best Practices: Adopting best practices from countries like the UK, USA, and Canada for the appointment of the CAG.
- Search Committee: Establishing a search committee comprising the Prime Minister, Home Minister, and Leader of Opposition for recommendations.

● **Enlarging the Scope of Audit:**

- Inclusion of Panchayati Raj Institutions: Bringing Panchayati Raj Institutions and State-funded societies under the ambit of CAG audit.

● **Empowering the CAG:**

- Liability Powers: Providing CAG with the power to demand liability for losses from the government and other parties, akin to the setup in New Zealand.

- Amending CAG Act 1971: Amending the CAG Act 1971 to include the pre-audit of defense expenditure exceeding ₹3000 Crores and granting State Auditors General the status of High Court Judges.
- **Improving Accessibility and Responsiveness:**
 - RTI-like Time Limit: Establishing a time limit, similar to RTI, for auditors to access records promptly.
 - Accountability for Delay: Requiring heads of departments to explain delays in providing access to records.

These recommendations aim to enhance the effectiveness, transparency, and independence of the CAG, ensuring its continued significance in upholding financial accountability and good governance in India.

PRELIMS QUESTIONS

Q1. Consider the following statements regarding the measures to combat film piracy in India:

1. Twelve nodal officers have been appointed to manage piracy-related complaints, with a mandatory 48-hour response time.
2. Those involved in piracy may face fines ranging from INR 3 lakh to five percent of the gross audited value of production.
3. Cinematograph Amendment Bill 2023 deals with piracy related matters

How many of the above statement/s is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q2. With reference to Composite Water Management Index (CWMI), consider the following statements:

1. The NITI Aayog has published the Composite Water Management Index (CWMI).
2. It aims to enhance water resource management in India through a collaborative approach.
3. CWMI classified the states into three distinct categories: Large states, small states, and Union Territories (UTs).

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) None

Q3. Consider the following:

1. India has 17% of the world's population but 40% of the world's freshwater resources.
2. Water scarcity is encountered when the annual water supply falls below 1,000 m³ per individual.
3. India has annual utilisable water resources from surface sources greater than groundwater.

How many of the statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q4. Consider the following statements regarding the Enforcement Directorate (ED):

1. The Enforcement Directorate was founded as the 'Enforcement Unit' in 1956 under the Department of Economic Affairs.
2. The Enforcement Directorate intervenes in cases where the crime generates proceeds exceeding 1 crore rupees.

Which of the statements given above is/are correct?

- (a) 1 only

- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q5. With reference to the Central Information Commission, consider the following statements:

1. The Central Information Commission is a statutory body under the Information Commission Act 2005.
2. The Central Information Commission holds jurisdiction over all Central and State Public Authorities.
3. The decisions of the Central Information Commission are final and binding.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) None

Q6. Consider the following statements regarding Information Commissioners:

1. The President appoints the Chief Information Commissioner (CIC) and Information Commissioners on the recommendation of the Cabinet.
2. The CIC/ICs are appointed for a fixed term of five years.
3. The terms of service and salaries of CIC and ICs are equal to the Chief Election Commissioner and Election Commissioners.

How many of the abovementioned statements are correct ?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q7. Consider the following statements about the

concept of net neutrality:

1. Allowing Internet Service Providers (ISPs) to prioritize certain online content and applications over others.
2. Providing equal and unbiased access to all online content, applications, and services by ISPs, without discrimination or preferential treatment.
3. Regulating the prices of Internet service plans to ensure affordability for consumers.
4. Promoting the use of virtual private networks (VPNs) for secure online browsing.

How many of the above statement/s is/are correct?

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

Q8. Which of the following objectives are associated with the “Digital India” initiative of the Government of India? (2018)

1. Developing India’s own Internet companies similar to China’s approach.
2. Creating a policy framework to incentivize international corporations collecting Big Data to establish large data centers within India.
3. Extending Internet access to many villages and providing Wi-Fi in schools, public areas, and popular tourist destinations.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Q9. Consider the following articles of the Constitution:

- Article 148

- Article 151
- Article 226
- Article 74

How many of the above statement/s is/are correct?

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

ANSWERS

S. No.	Answers
1.	C
2.	A
3.	B
4.	C
5.	C
6.	D
7.	A
8.	C
9.	B

MAINS QUESTIONS

Q1. Discuss the impact of digital piracy on intellectual property rights (IPR) and the creative industries. How can governments and international organizations enhance the protection of IPR in the digital age while also balancing the right to access information.

Q2. Discuss the significance of NITI Aayog's of Composite Water Management Index (CWMI) in the context of India's severe water crisis.

Q3. Online betting has become a prominent phenomenon in the digital age, providing both convenience and entertainment to users. However, it

also raises various socio-economic and regulatory concerns. In the context of online betting, discuss the impact on society, the economy, and the challenges of regulating this industry.

Q4. Central Information Commission plays a crucial role in promoting transparency and accountability in public authorities. Discuss.

Q5. Discuss the significance of net neutrality in ensuring an open and fair internet ecosystem. How does the principle of net neutrality impact the rights of consumers and the business practices of Internet Service Providers (ISPs)? Provide examples and arguments to support your answer.

Q6. The appointment method and the extensive powers vested in the Comptroller and Auditor General (CAG) underscore the crucial role this office plays in governance. Elaborate on the significance of these aspects in defining the CAG's role and responsibilities. (2018)

INTERNATIONAL RELATIONS

INDIA-BHUTAN

Why in the news?

Bhutan's King, Jigme Khesar Namgyel Wangchuck, has arrived in New Delhi amidst critical border discussions with China, sparking some apprehension in the Indian capital.

Border Dynamics:

- India and Bhutan share a 649-km-long border, with a significant 267-km boundary adjacent to Assam, India.

India-Bhutan Diplomatic Relations:

- Diplomatic relations were formalized in 1968 when India appointed a resident representative in Thimphu, taking over the role previously managed by the Political Officer in Sikkim.
- The cornerstone of their bilateral ties is the 1949 Treaty of Friendship and Cooperation, updated in 2007 during the visit of Bhutan's King Jigme Khesar Namgyel Wangchuck to India.



Economic Relations:

- India stands as Bhutan's primary trading partner and export destination.
- Bhutan leverages its hydropower potential for substantial revenue, with India's active support in developing its hydropower projects.
- India offers financial assistance for Bhutan's development projects.

Significance of Bhutan for India:

- Bhutan holds strategic importance for India due to its location between India and China, serving as a buffer state that aligns with India's security interests.
- India has played a pivotal role in preserving Bhutan's sovereignty and territorial integrity.
- Assistance from India has bolstered Bhutan's defense, infrastructure, and communication capabilities, reinforcing its territorial integrity.
- In the 2017 Doklam standoff, Bhutan facilitated Indian troops' entry into its territory to counter Chinese incursions, highlighting Bhutan's strategic significance for India.

Challenges and Concerns:

- China's Growing Influence:** The expanding presence of China in Bhutan, especially along the disputed Bhutan-China border, is a matter of concern for India. China's economic and military influence in the region poses challenges to India's strategic interests in Bhutan.
- Border Disputes:** While the India-Bhutan border has generally been peaceful, there have been sporadic instances of border incursions by Chinese forces. The Doklam standoff in 2017, a tri-junction issue involving India, China, and Bhutan, raised tensions. Escalation of such disputes has the potential to strain India-Bhutan relations.

PRELIMS QUESTIONS

Q.1 Which of the following Indian states shares the longest border with Bhutan?

1. Assam
2. Arunachal Pradesh
3. Sikkim
4. Tripura

Q.2 Which of the following statements about India-Bhutan diplomatic relations is correct?

1. Diplomatic relations were established before Indian Independence.
2. Relations formalized in 1968 with the appointment of a resident representative in Thimphu.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2

ANSWERS

S. No.	Answers
1.	A
2.	B

MAINS QUESTIONS

Q1. Discuss the strategic importance of India-Bhutan relations and their impact on regional stability. Analyze the recent developments and challenges in these relations, particularly in the context of China.

SCIENCE AND TECHNOLOGY

DEEFAKE TECHNOLOGY

Why in the news?

Following the viral spread of a deepfaked video featuring a celebrity, the Ministry of Electronics and Information Technology (MeitY) reminded social media companies of their legal obligation to remove such content from their platforms under the IT Act 2000 and IT Rules 2021.

What are deepfakes?

- Deepfakes, a fusion of “deep learning” and “fake,” represent the result of artificial intelligence (AI) and machine learning advancements.
- They can effectively modify individuals’ visual and auditory aspects, including their appearances, speeches, and actions, within video and audio content.
- Deepfake technology relies on a complex interplay of two key algorithms, a generator and a discriminator, operating within a generative adversarial network (GAN). These algorithms use deep learning techniques like neural networks to create highly realistic and convincing fake content.
 - **Generator Algorithm:** The generator’s primary role is to produce initial fake digital content, including audio, photographs, or videos. It aims to closely mimic the target individual’s appearance, voice, or behaviour.
 - **Discriminator Algorithm:** The discriminator evaluates the generator-generated content to assess its authenticity or fakeness.
- The generator and discriminator engage in a continuous feedback loop, repeating the process multiple times to enhance the quality and realism of the generated content. This iterative cycle drives the improvement of deepfakes.

Concerns About Deepfakes:

- **Spread misinformation and disinformation:** Deepfakes can create false content that misrepresents individuals, organisations, or events, leading to the dissemination of inaccurate information.
- **Undermine trust in institutions:** Distrust in online content can erode confidence in institutions like the media, government, and law enforcement.
- **Damage reputations:** Fake videos and audio can tarnish a person’s image, affecting their professional and personal life.
- **Enable blackmail and extortion:** Threats to release fabricated content can be used for blackmail and extortion.
- **Inciting social and political unrest:** Deepfakes can fuel division by depicting individuals from various groups engaging in actions designed to provoke anger or offence.
- **Invasion of privacy:** Deepfakes violate personal privacy by creating explicit content using regular images or videos.
- **Financial fraud:** Deepfakes may facilitate fraud by impersonating individuals in video calls or creating fraudulent money requests.

Preventing and Detecting Deepfakes

Preventing the creation and spread of deepfakes and identifying them when they appear is crucial in mitigating their potential harm.

Prevention:

- **Education and Awareness:** Educating the public about the existence and implications of deepfakes can reduce the likelihood of people believing or sharing them.
- **Watermarking and Authentication:** Content creators can add digital watermarks or authentication

tication mechanisms to their media to verify authenticity.

- **Blockchain Technology:** Implementing blockchain to track the provenance of digital media can help verify its source and integrity.
- **Secure Storage:** Storing original media in secure and tamper-proof environments can make it more challenging for malicious actors to access and manipulate content.
- **Strengthening Copyright Laws:** Enhancing legal protections for content creators and stricter enforcement of copyright laws can deter the creation and distribution of deepfakes.

Detection:

- **Deepfake Detection Tools:** Developing and utilizing AI-based tools and software designed to identify inconsistencies or anomalies in audio, video, or image content that may indicate deepfake manipulation.
- **Media Forensics:** Experts in media forensics can scrutinise content for irregularities in lighting, shadows, reflections, and facial features that may indicate manipulation.
- **Metadata Analysis:** Analyzing the metadata of media files, such as timestamps and geolocation data, can help confirm the authenticity of the content.
- **Comparative Analysis:** Comparing the suspected deepfake with known, authentic content of the same subject can reveal discrepancies.
- **User Verification:** Implement user verification mechanisms on social media platforms and websites to ensure the authenticity of content creators.
- **Algorithm Development:** Continuously improve AI algorithms for detecting deepfakes to keep pace with evolving deepfake technology.
- **Reporting Mechanisms:** Establish clear and accessible reporting mechanisms for users to flag suspicious content on social media and online platforms.

- **Legislation and Regulation:** Enact laws and regulations that hold creators and distributors of deepfakes accountable for their actions.

A comprehensive approach to prevention and detection involves a combination of technological advancements, public awareness, legal measures, and collaborative efforts by tech companies, law enforcement, and the general public to combat the potential harm caused by deepfakes.

CLOUD SEEDING

Why in the news?

Delhi is considering the implementation of artificial rain techniques as a measure to address the escalating air pollution levels.

Overview of Cloud Formation:

- Comprised of minuscule water droplets or ice crystals.
- Form when atmospheric water vapor cools and condenses around particles like dust or salt.
- Water droplets or ice crystals require condensation or ice nuclei.
- Without these particles, precipitation in the form of raindrops or snowflakes cannot occur.

Cloud Seeding:

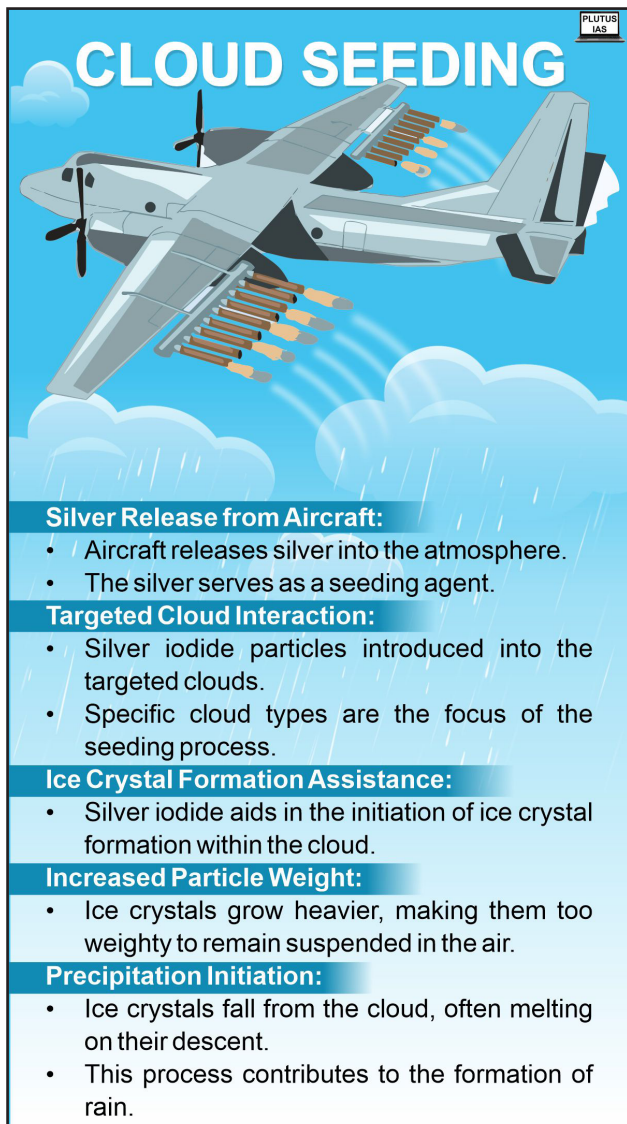
- Artificial method to boost rainfall by introducing specific substances into clouds.
- Aircraft release chemicals (e.g., silver iodide, potassium iodide, dry ice) into the atmosphere.
- Attracts water vapor, leading to the formation of rain clouds.
- Takes approximately half an hour for cloud seeding to induce rainfall.

Cloud Seeding Techniques:

- **Hygroscopic Cloud Seeding:**
 - Objective: Accelerate droplet coalescence

in liquid clouds.

- Seeding agents act as efficient cloud condensation nuclei (CCN) or Giant Cloud Condensation Nuclei (GCCN).
- Strengthens condensation and collision-coalescence process, increasing precipitation efficiency.
- **Glaciogenic Cloud Seeding:**
 - Centers on prompting the generation of ice in clouds that exist in a supercooled state.
 - Involves dispersing efficient ice nuclei (e.g., silver iodide, dry ice) into the cloud.
 - Enhances ice particle production, leading to increased rainfall.



Utility of Cloud Seeding:

- Reducing drought impact.
- Forest fire prevention.
- Augmenting precipitation levels.
- Improving air quality.

Success Story: Cloud Seeding Experiment in Solapur:

- Location: Solapur city, known for low rainfall on the leeward side of the Western Ghats.
- Outcome: Achieved an 18% relative enhancement in rainfall through a cloud seeding experiment.

PRELIMS QUESTIONS

Q1. With reference to the Deepfakes, consider the following statements:

1. Deepfakes use artificial intelligence (AI) to create highly realistic and convincing manipulations.
2. They can effectively modify individuals' visual and auditory aspects, not their actions.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None

Q2. Consider the following:

1. Media Forensics
2. Comparative Analysis
3. Metadata Analysis
4. AI based tools

How many of the above techniques can be used to detect Deepfakes?

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

Q3. In the context of which of the following scenarios do some scientists propose the utilization of cirrus cloud thinning technique and the introduction of sulfate aerosol into the stratosphere? (2019)

- (a) Initiating artificial rains in specific regions.
- (b) Mitigating the frequency and severity of tropical cyclones.
- (c) Alleviating the detrimental impacts of solar wind on Earth.
- (d) Mitigating global warming.

Q4. Regarding cloud seeding or artificial rain techniques, evaluate the following statements:

1. It is a synthetic method aimed at diminishing condensation nuclei in the atmosphere.
2. Utilizes substances such as silver iodide, potassium iodide, and sulfate aerosols.
3. It amplifies the collision-coalescence mechanism of droplets, thereby promoting increased precipitation.

How many of the above statement/s is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

ANSWERS

S. No.	Answers
1.	A
2.	D

3.	D
4.	A

MAINS QUESTIONS

Q1. Explain the concept of deepfakes and their potential societal impact. Discuss the strategies and technologies that can be employed to prevent and detection.

Q2. Discuss the role and ethical considerations associated with implementing large-scale geoengineering projects as a strategy to mitigate the effects of climate change.

ECOLOGY AND ENVIRONMENT

LOSS AND DAMAGES (L&D) FUND

Why in the news?

As the climate crisis escalates, attention is centred on two critical terms: adaptation and 'loss and damage' (L&D). Adaptation involves proactive responses and deliberate choices made by communities and countries to prepare for and cope with climate-related challenges.

Understanding Loss and Damage

- Loss and damage encompass negative consequences from unavoidable climate change risks such as rising sea levels, prolonged heatwaves, desertification, sea acidification, and extreme events like bushfires, species extinction, and crop failures.
- With the climate crisis escalating, these events are expected to occur more frequently, leading to increasingly severe consequences.

Loss and Damages (L&D) Fund

- In 2013, at the **19th Conference of the Parties (COP 19) to the United Nations Framework Convention on Climate Change (UNFCCC)** in Warsaw, Poland, representatives of member countries formally agreed to establish the **Loss and Damage (L&D) fund**.
- The Loss and Damage Fund aims to provide financial assistance to nations most vulnerable and significantly impacted by the effects of climate change.
- It targets filling gaps left by existing climate finance institutions, including the Green Climate Fund, which fell short by at least US\$17 billion in 2020 against the pledged US\$100 billion for developing countries.

Key Developments related to Loss and Damages (L&D) Fund

COP 19	2013	Warsaw, Poland	Representatives agreed to establish the Warsaw International Mechanism for Loss and Damage (WIM) fund for financial and technical assistance to developing nations facing climate-induced Loss and Damage.
COP 25	2019	Santiago, Chile	Santiago Network for Loss and Damage was set up, but no fund commitments were made.
COP 26	2021	Glasgow, United Kingdom	Glasgow Dialogue on finance for Loss and Damage initiated for ongoing discussions.
COP 27	2022	Sharm el-Sheikh, Egypt	UNFCCC member states agreed to set up the Loss and Damage Fund and a Transitional Committee (TC) for new funding mechanisms. TC will provide recommendations for consideration at COP 28.

Challenges and Prerequisites for Effectiveness

- To be effective, the **fund must address the root cause of climate change**, which involves reducing emissions.
- Without a drastic reduction in emissions, more countries will experience the devastating effects of climate change.
- Urgent action is needed to allocate resources** for mitigation, adaptation, and loss and damage, en-

ensuring climate change does not undermine efforts to achieve the Sustainable Development Goals.

UN Framework Convention on Climate Change (UNFCCC)

- The UN Framework Convention on Climate Change (UNFCCC), initiated in 1994, lays down broad principles guiding the global effort to combat climate change.
- It explicitly acknowledges the **differentiated responsibility** of nations, emphasising that **affluent countries have an obligation to provide both financial assistance and technological support** to developing nations in their climate change mitigation and adaptation endeavours.

Financial Commitments and Technological Support

- In 2009, a significant commitment was made by developed countries to contribute US\$100 billion annually from 2020 onwards.
- This commitment aimed to assist developing nations in combatting climate change, recognising their financial challenges.

Warsaw International Mechanism (WIM)

- The Warsaw International Mechanism (WIM) for Loss and Damages was established in 2013.
- It represents the first formal acknowledgement of the need to compensate developing countries struck by climate disasters.
- The mechanism recognises the unique challenges faced by these nations and underscores the importance of addressing loss and damages resulting from climate-related disasters.

PRELIMS QUESTIONS

Q1. With reference to Loss and Damages Fund, consider the following statements:

1. The Loss and Damages Fund was agreed to establish under the Warsaw International Mechanism.
2. The Fund aims to provide financial assistance

to all nations impacted by the effects of climate change.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None

Q2. Consider the following:

1. UN Framework Convention on Climate Change (UNFCCC) has near universal membership (198 Parties) and is the parent treaty of the Cartagena Protocol and Nagoya Protocol.
2. UNFCCC was established in the 1992 United Nations Conference on Environment and Development (UNCED), also known as the Rio Earth Summit.
3. The Convention acknowledges the differentiated responsibility of nations.

How many of the abovementioned statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

ANSWERS

S. No.	Answer
1.	A
2.	B

MAINS QUESTIONS

Q3. Evaluate the significance of the Loss and Damage (L&D) Fund and its role in providing financial assistance to vulnerable nations.

SOCIAL JUSTICE

PRADHAN MANTRI GARIB KALYAN ANN YOJANA (PMGKAY) SCHEME

Why in the news?

The PM Garib Kalyan Ann Yojana (PMGKAY) scheme, originally set to conclude in December, has now been extended for an additional five years.

About PMGKAY

Pradhan Mantri Garib Kalyan Ann Yojana, is part of the broader Pradhan Mantri Garib Kalyan Package (PMGKP) designed to assist the economically disadvantaged in their battle against the challenges posed by Covid-19. This scheme offers crucial support through the following key points:

- **Additional Grain Allocation:** PM-GKAY seeks to provide each individual covered under the National Food Security Act 2013 with an extra 5 kilograms of grains, which can be either wheat or rice. This allocation is provided free of cost, in addition to the 5 kilograms of food grains already available at subsidized rates through the Public Distribution System (PDS).
- **Duration:** Initially introduced for a three-month period encompassing April, May, and June of 2020, PM-GKAY was aimed at benefiting 80 crore ration cardholders. However, recognizing the prolonged effects of the pandemic, it was subsequently extended until December 2023.
- **Nodal Ministry:** The Ministry of Finance is responsible for the implementation and administration of the PM-GKAY scheme.
- **Portability Feature:** The benefits of free rations offered under PM-GKAY are made accessible to beneficiaries through the concept of portability. This means that migrants and eligible individuals can avail these rations from nearly 5 lakh ration shops located across the country. This feature is facilitated by the One Nation One Ration Card (ONORC) plan, ensuring that indi-

viduals can access their entitled provisions conveniently, even when they are away from their registered place of residence.

Positive Impacts:

- **Food Security:** The PMGKAY scheme ensures continued food security for vulnerable sections of society. It plays a crucial role in addressing the issue of hunger in the country by providing free food grains to approximately 80 crore beneficiaries.
- **Social Welfare:** This scheme serves as a vital social welfare program, offering essential food items at highly subsidized rates. It plays a critical role in alleviating poverty and malnutrition among underprivileged individuals.

Negative Impacts:

- **Economic Implications:** Sustaining the PMGKAY scheme may raise concerns about its long-term economic implications. The substantial cost of providing free food grains poses challenges in terms of budgetary allocation and fiscal pressure.
- **Dependency:** Continuous extension of free food distribution may potentially create a sense of dependency among certain sections of society, reducing their self-sufficiency and economic independence.
- **Highlights Economic Distress and Inequality:** The PMGKAY scheme reflects the prolonged financial struggles faced by a significant portion of the populace. It underscores the lack of substantial income growth in parallel with the rising prices of essential goods, signifying persistent economic distress and growing economic inequality across the country.

Way Ahead:

- **Empowerment Programs:** The government can initiate skill development and empowerment programs alongside the PMGKAY to facilitate

the transition of beneficiaries towards self-sustainability.

- **Long-term Planning:** There should be a focus on initiatives for economic growth and job creation that can uplift the living standards of individuals, reducing their dependence on welfare schemes.
- **Monitoring and Evaluation:** Strong monitoring mechanisms should be implemented to ensure that the benefits of these welfare schemes are reaching the intended beneficiaries and making a positive impact.
- **Rationalization:** Periodic evaluations should be considered to rationalize the scheme, ensuring that it remains targeted, efficient, and caters to those who need it the most while preventing misuse or leakage of resources.

PRELIMS QUESTIONS

Q.1 Which of the following statements regarding the Pradhan Mantri Garib Kalyan Ann Yojana (PM-GKAY) is/are correct?

1. It provides additional free food grains to beneficiaries covered under the National Food Security Act (NFSA) in addition to the regular subsidized grains provided through the Public Distribution System (PDS).
2. The Ministry of Rural Development is the nodal ministry responsible for the implementation of PM-GKAY.
3. The Scheme can also be availed by migrants not living in their home state.

How many of the above statement/s is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

ANSWERS

S. No.	Answers
1.	B

MAINS QUESTIONS

Q1. Food security is a critical aspect of India's socio-economic development. How has the National Food Security Act contributed to addressing the issue of food security? Analyze the role of food distribution systems, public policies, and their impact on food security in India.