

## DAILY CURRENT AFFAIRS 11-07-2024

## <u>GS-1</u>

1. Mudras

## <u>GS-3</u>

- 2. What is draft Digital Competition Bill
- 3. Regenerative braking
- 4. Biosphere Reserves
- 5. What are new provisions for police officers?

## <u>Mudras</u>

## Syllabus: GS-1: Indian Art and Culture – Buddhism

#### **Context:**

> The article here discusses about various Mudras

#### About

Mudras are symbolic hand gestures used in Buddhist rituals and art to convey specific meanings and spiritual teachings. Each Mudra has its own significance and is associated with different deities and practices.

#### Abhaya Mudra

#### 1. Meaning and Symbolism:

- > Abhaya means fearlessness or protection in Sanskrit.
- > **Mudra** refers to a symbolic hand gesture or seal used in Buddhist iconography.

#### 2. Gesture Description:

- > The Abhaya Mudra is typically depicted with the **right hand raised** and the palm facing outward, **fingers pointing upward**.
- > The arm is usually bent at the elbow, making a gentle, reassuring gesture.



#### 3. Symbolic Interpretations:

> Fearlessness: The gesture signifies protection, fearlessness, and peace. It is a gesture of reassurance and safety.

Absence of Fear: In Buddhist teachings, fear is seen as an obstacle to spiritual progress. The Abhaya Mudra represents the absence of fear and the dispelling of fear in others.

#### 4. Historical and Cultural Context:

- **Buddha's Teachings:** It is believed that the Buddha often used the Abhaya Mudra during his teachings to assure and calm his disciples.
- Iconographic Representation: The gesture is prominently featured in Buddhist art and statues across various traditions, emphasizing its universal significance in Buddhism.

#### **5. Variations and Depictions:**

- > **Position of the Hand:** While the basic form involves the right hand raised with the palm outward, variations exist where the hand might be positioned slightly differently.
- Combined Mudras: Sometimes, the Abhaya Mudra is combined with other mudras or symbols to convey specific teachings or aspects of Buddhist philosophy.

#### Here are some key Mudras commonly found in Buddhist iconography:

#### 1. Dharmachakra Mudra (Wheel of Dharma)

- Description: This gesture symbolizes the turning of the wheel of Dharma (Buddha's teaching). Both hands are held at the chest level with the thumbs and index fingers forming circles, representing the wheel.
- Significance: It signifies the teaching of the path to enlightenment and the Buddha's first sermon at Sarnath.



#### 2. Bhumisparsha Mudra (Earth Touching)

- > **Description**: The right hand reaches down to touch the earth, while the left hand rests in the lap, palm up.
- Significance: This Mudra represents the moment of Buddha's enlightenment when he called upon the earth to witness his realization. It symbolizes steadfastness and the unshakable nature of enlightenment.

#### 3. Varada Mudra (Gesture of Giving)

- > **Description**: The right hand is extended downward, palm open and facing outwards, often with fingers slightly curved.
- Significance: It symbolizes charity, compassion, and the granting of wishes. It represents the Buddha's readiness to grant blessings and forgiveness.

#### 4. Abhaya Mudra (Fearlessness)

- > **Description**: The right hand is raised to shoulder height, palm facing outward, with fingers extended upward. The left hand is often hanging down or in the lap.
- Significance: This Mudra signifies protection, peace, and the dispelling of fear. It conveys the Buddha's reassurance to his followers.

#### 5. Dhyana Mudra (Meditation)

- > **Description**: Both hands are placed in the lap with palms facing upwards, the right hand resting on the left. Sometimes, the thumbs touch to form a triangle.
- Significance: It represents the meditative state and the attainment of spiritual perfection. This Mudra is often depicted in images of the meditating Buddha.

#### 6. Vajra Mudra (Thunderbolt)

- > **Description**: The index finger of the left hand is wrapped around by the five fingers of the right hand.
- Significance: It symbolizes the union of the spiritual and physical worlds. It is often associated with tantric practices and signifies the power of compassion and wisdom.

#### 7. Uttarabodhi Mudra (Supreme Enlightenment)

- > **Description**: Both hands are held near the chest, with the index fingers touching and pointing upward, and the remaining fingers intertwined.
- Significance: This Mudra signifies the realization of the ultimate truth and enlightenment. It is associated with the transcendence of duality.

#### 8. Anjali Mudra (Salutation)

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- > **Description**: Both hands are pressed together in a prayer-like gesture at the chest or forehead.
- Significance: It represents respect, devotion, and the greeting of the divine. It is commonly used in daily rituals and ceremonies.

### 9. Karana Mudra

- **Gesture Description**: Karana Mudra is performed by raising the index finger and the little finger, while the other fingers remain folded or curled into the palm.
- Symbolism: It symbolizes warding off negativity or evil forces. In classical dance, it is used to depict various actions like cutting, tearing, or separating.
- Yoga and Meditation: In yoga and meditation, Karana Mudra is believed to help in purifying negative emotions and thoughts, promoting clarity of mind and focused intention.
- **Benefits:** It is said to have therapeutic benefits such as improving concentration, reducing restlessness, and aiding in mental clarity.

## 10. Vitarka Mudra

- Gesture Description: Vitarka Mudra is formed by joining the tips of the thumb and the index finger, while the other fingers remain extended. The thumb and index finger form a circle, symbolizing the union of wisdom and consciousness.
- Meaning: It symbolizes teaching, discussion, transmission of knowledge, and intellectual argumentation. It represents the transmission of Buddha's teachings and the communication of the Dharma.

#### **11. Mahamudra Mudra:**

Cosmic Mudra, also known as **Mahamudra or Maha Mudra**, is a symbolic hand gesture used in yoga and meditation practices.

- Gesture Description: Cosmic Mudra is formed by placing the hands in the lap, with the right hand resting on top of the left hand. The thumbs lightly touch, forming a subtle oval or circle shape.
- Meaning: It symbolizes the unity of wisdom and compassion, the integration of duality into oneness, and the balance of masculine (right hand) and feminine (left hand) energies.

#### **Importance in Buddhist Art and Rituals**

- Symbolic Representation: Mudras are a crucial part of Buddhist iconography, conveying complex spiritual concepts through simple gestures.
- > **Ritual Usage**: In Buddhist rituals and meditation practices, Mudras are used to invoke specific deities or to channel spiritual energy.

Cultural Influence: Mudras have influenced art, dance, and spiritual practices across Asia, becoming an integral part of the cultural heritage in regions where Buddhism has spread.

# What is draft Digital Competition Bill

## Syllabus: GS-3: Indian Economy – Laws and policies related to fair competition.

#### **Context:**

> What is the draft Digital Competition Bill? | Explained.

## **Digital Competition Law: An Overview**

#### Introduction

- In February 2023, the Ministry of Corporate Affairs (MCA) constituted a Committee on Digital Competition Law (CDCL).
- > **Purpose:** To examine the need for a separate law on competition in digital markets.
- **Outcome:** CDCL concluded the need to supplement the existing ex-post framework under the Competition Act, 2002, with an ex-ante framework.
- > **Result**: Draft Digital Competition Bill was created.

## Competition Act, 2002:

- > Primary legislation for preventing **anti-competitive practices**.
- Establishes the Competition Commission of India (CCI) as the national competition regulator.
- Operates on an ex-post framework, enforcing actions after anti-competitive conduct occurs.

#### **Ex-Ante Framework:**

- Suggested for digital markets to allow CCI to pre-emptively prevent anticompetitive conduct.
- **European Union is the only jurisdiction** with a comprehensive ex-ante competition framework under the Digital Markets Act.

#### **Reasons for Ex-Ante Regulation in Digital Markets:**

Economies of Scale and Scope: Digital enterprises grow rapidly due to cost reductions per unit and reduced total costs with increased services.

- Network Effects: The utility of digital services increases with the number of users, leading to quick and irreversible market tipping in favor of incumbents.
- Timeliness: Current ex-post framework is time-consuming, allowing offending actors to avoid timely scrutiny.

## **Draft Digital Competition Bill: Basic Framework**

- > **Template:** Based on the EU's Digital Markets Act.
- Scope: Targets only "dominant" digital enterprises, not all digital enterprises.
- Core Digital Services: Identifies ten services like online search engines, social networking services, video-sharing platforms, etc.

#### **Identification of Dominance:**

#### **Quantitative Standards**:

- > Significant Financial Strength Test: Based on financial parameters.
- Significant Spread Test: Based on the number of users in India.
- Qualitative Standards: CCI can designate an entity as a "systemically significant digital enterprise (SSDE)" even if it does not meet quantitative standards.

#### **Obligations of SSDEs:**

> Operate in a fair, non-discriminatory, and transparent manner.

#### **Prohibitions:**

- Self-preferencing: Favoring own products over third-party products on its platform.
- > Restricting third-party applications and default settings changes.
- > Anti-steering: Restricting business users from directly communicating with end users.
- > Tying or bundling non-essential services with demanded services.
- > Cross-utilizing user data from core digital service for another service.
- *Using non-public user data to give an unfair advantage to SSDE's own services.*

#### **Response to the Draft Bill**

#### **Opposition:**

- Skepticism: Concerns about the efficacy of the ex-ante model of regulation in India.
- > **Investment Impact**: Potential negative effects on start-up investments and growth.
- Solution MSMEs: Restrictions on tying, bundling, and data usage could adversely affect MSMEs that rely on big tech.

#### Support:

A group of Indian start-ups supports the draft Bill to curb monopolistic practices by big tech.

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Call for revision of financial and user-based thresholds to avoid bringing domestic start-ups under the regulatory net.

### Conclusion

- > The draft Digital Competition Bill aims to address the unique challenges posed by digital markets through an ex-ante regulatory framework.
- > While it has garnered mixed responses, it reflects a significant shift towards proactive competition regulation in the digital age.

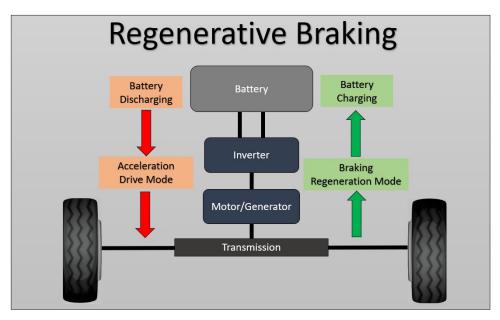
# **Regenerative braking**

## Syllabus: GS-3; Science and Technology

#### Context

- Electric vehicles are the site of many of these changes, aided by state-led incentives and subsidies.
- Regenerative braking is an important mechanism in these vehicles that increases their energy use efficiency.

## What is braking?



> Braking is the mechanism by which an automotive vehicle in motion slows down.

- A vehicle moving faster has more kinetic energy than a vehicle moving slower, so the process of braking removes (mostly) kinetic energy from the vehicle.
- > The law of energy conservation means this removed energy has to go somewhere.

## **Types**

- > Disc brake
  - **The disc brake** is one type of mechanical brake: it works by pressing brake pads against a disc attached to spinning wheels, and uses friction to convert some of the wheels' kinetic energy into heat.
  - This is why the discs of disc brakes have holes cut into them, to dissipate heat better.
- Induction brake
  - a magnet induces circular electric currents in a spinning wheel (made of a conducting material, like metal).
  - These currents produce their own magnetic field, which opposes that of the external magnet.
  - The opposition acts like a drag on the wheel and forces it to slow down.
  - In terms of energy: the metal resists the flow of the circular currents and dissipates heat.

## What is regenerative braking?

- Regenerative braking is a brake system designed to convert the kinetic energy of the wheels to a form that can be stored and used for other purposes.
- As such, it creates a process in which at least part of the energy delivered to the vehicle's wheels can be recovered in a situation when the vehicle doesn't need it.
- Regenerative braking is one type of dynamic braking. In an electric vehicle, of the types becoming common on Indian roads, a battery onboard the vehicle draws electric power from the grid and stores it. When the vehicle moves, the battery powers an electric motor that propels the vehicle, converting electrical to mechanical energy. This motor is called the traction motor.
- During regenerative braking, the motor operates as a generator, turning mechanical energy back to electrical energy.
- In the vehicle, this means an electric current will be produced as the vehicle brakes, which is stored separately in a battery.
- > In some other vehicles, especially trains, the current is fed back into the traction motor.
- The other type of dynamic braking is rheostatic braking, where the current is sent to an array of resistors that dissipate the electrical energy as heat.
- It is often necessary for a vehicle to have both regenerative and rheostatic braking in case the electrical energy recovered can't be stored or used right away.

#### Does regenerative braking have downsides?

- > While it is a simple energy recovery mechanism, regenerative braking has some downsides.
- For example, it alone often doesn't suffice to bring an electric vehicle to a halt. It has to be used together with a conventional system that dissipates some of the kinetic energy as heat.
- Such a system is also required to prevent vehicles from backsliding downhill, which many regenerative brakes won't prevent.
- Another example is that the amount of energy a regenerative brake can recover drops as the vehicle's velocity drops as well.
- > This said, a regenerative brake can be beneficial for an electric vehicle's energy-use efficiency in stop-start traffic.

#### Are there other ways to recover energy?

- > The design of a regenerative brake depends on the energy form to which the mechanical energy from the wheels is to be converted.
- An electric vehicle funnels it into a generator and obtains a current, which is stored in a battery or a supercapacitor.
- Similarly, the mechanical energy can be used to increase the angular momentum of a rotating flywheel.
- Flywheels are especially useful because they can receive energy much faster than other such systems.
- For every unit increase in speed, they also store exponentially more energy. Engineers have been able to build flywheels with carbon-composites that, in a vacuum, can spin at up to 50,000 rpm.
- The flywheel can be linked to a reciprocating engine to manage or augment its output, like in Formula One racing, or to a gyroscope to help submarines and satellites navigate.
- Recovered kinetic energy can also be fed to a pump that compresses air, which can be useful to start internal combustion engines.

## **Biosphere Reserves**

Syllabus: GS-3; Biodiversity

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#### Context

UNESCO (United Nations Educational, Scientific and Cultural Organisation) has named 11 new sites to join its World Network of Biosphere Reserves, bringing its global total to 759 sites across 136 countries.

#### These are the 11 new UNESCO biosphere reserves for 2024

- Kempen-Broek Transboundary Biosphere Reserve, Belgium & the Kingdom of the Netherlands
- > Darién Norte Chocoano Biosphere Reserve, Colombia
- > Madre de las Aguas Biosphere Reserve, Dominican Republic
- > Niumi Biosphere Reserve, The Gambia
- > Colli Euganei Biosphere Reserve, Italy
- > Julian Alps Transboundary Biosphere Reserve, Italy & Slovenia
- > Khar Us Lake Biosphere Reserve, Mongolia
- yApayaos Biosphere Reserve, Philippines
- > Changnyeong Biosphere Reserve, South Korea
- Val d'Aran Biosphere Reserve, Spain
- Irati Biosphere Reserve, Spain

#### About

- Biosphere reserves are designated areas of terrestrial and coastal ecosystems promoting solutions to reconcile the conservation of biodiversity with its sustainable use.
- They were established by UNESCO under the Man and the Biosphere (MAB) Programme in 1971 to foster a balanced relationship between people and nature.

#### Key features of biosphere reserves include:

- > **Core Area:** This is the strictly protected part of the reserve where ecosystems are allowed to evolve naturally with minimal human intervention.
  - It serves as a reference area for monitoring and research.
- Buffer Zone: Surrounding the core area, this zone is used for activities compatible with conservation objectives, such as education, research, tourism, and sustainable agriculture.
  - It helps mitigate external pressures on the core area.
- Transition Zone: This outermost zone includes the human settlements and activities that are integrated with the conservation and sustainable development objectives of the biosphere reserve.
  - It aims to foster socio-economic development that is culturally and ecologically sustainable.

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#### **Biosphere reserves aim to achieve three interconnected functions:**

- **Conservation:** Protecting biodiversity, ecosystems, and landscapes.
- **Development:** *Promoting sustainable economic and human development.*
- **Logistic Support:** *Providing support for research, monitoring, education, and information exchange related to local, national, and global issues of conservation and development.*
- As of now, there are over 700 biosphere reserves in over 120 countries around the world, forming a global network dedicated to sustainable development and conservation of biodiversity.
- Each reserve is unique in its ecological, cultural, and socio-economic context, reflecting local challenges and opportunities in achieving sustainable development goals.

## What are new provisions for police officers?

Syllabus: GS-3: Internal Security – law and order.

#### **Context:**

The new criminal laws have become effective from July 1. SOPs have been issued by the Bureau of Police Research and Development (BPRD) to guide police officers in implementing the new provisions.

#### **Rules for Registering FIRs**

#### **General Rules**

- Jurisdiction: The officer in-charge of a police station cannot refuse to register a First Information Report (FIR) based on jurisdictional issues.
- > **Zero FIR**: Officers are legally bound to register a zero FIR and transfer it to the appropriate police station.
- > **Penal Action:** Non-registration of FIRs can lead to penal action under various sections of the law (Section 173 of BNSS).

## **Methods of Registration**

- Modes of Information: FIRs can be registered based on information given orally, in writing, or electronically.
- Electronic Registration: Electronic information must be signed within three days by the person providing it.
- > Immediate Enquiry: Police can immediately enquire into sensitive information.

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Electronic Means: Electronic modes for FIR registration include the Crime and Criminal Tracking Network and Systems (CCTNS) portal, police websites, or official email IDs.

#### Videography Provisions

### **Mandatory Videography**

- Searches: Videography is required during police searches (Section 185).
- > **Crime Scenes:** Videography of crime scenes is mandated (Section 176).
- Property Searches: Videography during searches and possession of property (Section 105).

#### Implementation

- **Equipment and Training**: Investigating officers (IOs) must be provided with electronic devices and proper training.
- eSakshya App: A cloud-based mobile app, 'eSakshya', allows enforcement agencies to capture multiple photos and videos, ensuring data integrity through geo-tagging and time-stamping.
- Data Accessibility: Data collected via eSakshya is available to the judiciary, prosecution, and cyber forensic experts through the Inter-operable Criminal Justice System (ICJS).

#### **Provisions of Arrest**

#### **Display of Arrest Information**

- Mandatory Display: Police stations must prominently display information about arrested persons (Section 37).
- Details: Display boards should include names, addresses, and the nature of offences, available in both physical and digital formats.

#### Arrest of Frail or Sick and Elderly Persons

- Permission for Arrest: Arresting frail, sick, or elderly persons (above 60 years) for offences punishable by less than three years imprisonment requires permission from an officer of DySP rank (Section 35(7)).
- Use of Handcuffs: Handcuffs should be used cautiously, in line with Supreme Court guidelines, and only if there is a risk of escape or harm.

#### **Timelines**

#### **Medical Examination**

- **Rape Victims:** Medical reports for rape victims must be forwarded to the investigating officer within seven days (Section 184(6)).
- Doctor Sensitisation: Doctors need to be aware and sensitised about these new legal requirements.

### Investigation Timelines

POCSO Cases: Investigations of cases under the Protection of Children from Sexual Offences (POCSO) Act must be completed within two months of recording the offence.

## **Electronic Evidence**

#### **Custody of Electronic Devices**

- Chain of Custody: Investigating officers must maintain the sequence of custody for electronic devices (Section 193(3)(h)).
- Integrity: Emphasis on maintaining the integrity of electronic evidence, which is prone to tampering.
- > **Cyber Experts:** Increased roles and responsibilities for cyber experts due to new mandatory provisions.

#### **Progress of Investigation**

Informing Stakeholders: Investigating officers must inform the informant or victim about the progress of the investigation within 90 days.

#### **Terrorist Acts**

#### **Definition and Duties**

- Terrorist Act Definition: Defined under Section 113 of the Bharatiya Nyaya Sanhita (BNS).
- > **Decision-Making:** An officer of SP rank is responsible for deciding whether to register a case under Section 113 or the Unlawful Activities (Prevention) Act (UAPA).
- Considerations: Factors include whether the organization is notified under UAPA, the time needed for investigation, the rank of the IO, the level of scrutiny required, and the danger posed by the accused.