

## Today's Prelims Topics

### Sixth Schedule

#### Context

Sonam Wangchuk and other leaders joined a **hunger strike** in Kargil demanding **Ladakh's statehood** and its inclusion in the **Sixth Schedule** of the Constitution.

#### Provisions of the Sixth Schedule

- **Article 244(2):** Applies to the administration of tribal areas in **Assam, Meghalaya, Tripura, and Mizoram**.
- **Autonomous Districts & Regions:**
  - Tribal areas are designated as *Autonomous Districts*.
  - If multiple Scheduled Tribes live in a district, the Governor can create *Autonomous Regions*.
  - Governor can organize, reorganize, alter boundaries, or rename districts.
- **District & Regional Councils:**
  - **District Council:** Max 30 members (4 nominated by Governor, rest elected through adult suffrage).
  - **Regional Council:** For each autonomous region.
- **Law-making powers:**
  - Can legislate on land, forests (except reserved), property inheritance, money-lending, trade by non-tribals.
  - All laws need Governor's assent.
- **Judicial powers:**
  - Can set up *Village & District Council Courts* for cases where all parties are Scheduled Tribes.
  - Cannot try cases with punishments of death or 5+ years imprisonment.
- **Revenue & Taxation:**
  - Can assess land revenue, impose taxes on trades, animals, vehicles, etc.
  - Can grant mining licenses and leases.
- **Development powers:**
  - Can manage schools, dispensaries, markets, fisheries, roads, transport, and waterways.
- **Applicability of laws:**
  - Parliamentary/State laws apply with modifications or exceptions.
- **Governor's oversight:**
  - Can appoint a commission to review district/region administration.

#### Benefits of the Sixth Schedule

- **Protection of Tribal Rights & Identity:**
  - Safeguards land, culture, and traditions of tribal communities from external exploitation.
- **Local Self-Governance:**
  - Empowers Autonomous District and Regional Councils to legislate on local matters, ensuring governance is tailored to community needs.
- **Cultural Preservation:**
  - Helps preserve indigenous languages, customs, and festivals through local decision-making.
- **Control over Natural Resources:**
  - Allows tribal councils to regulate land use, forests, and minerals, ensuring sustainable use and preventing outsider exploitation.

- **Judicial Autonomy:**
  - Special courts for tribal disputes provide culturally appropriate justice systems.
- **Economic Empowerment:**
  - Councils can levy taxes, manage markets, and grant licenses for resource extraction, generating local revenue.
- **Education & Infrastructure Development:**
  - Powers to establish schools, dispensaries, fisheries, roads, and transport systems enable targeted development.
- **Administrative Flexibility:**
  - Ability to adapt laws and governance structures to local customs and needs rather than rigid state-wide policies.
- **Conflict Prevention:**
  - By giving decision-making power to local bodies, reduces tensions between the state and tribal communities.
- **Environmental Protection:**
  - Local control over forests and resources promotes ecological conservation aligned with traditional practices.

#### Recent Ladakh Demand

- Ladakh's **97% tribal population** meets criteria for Sixth Schedule inclusion.
- Rapid developmental projects (geothermal, hydropower, hydrogen plants) threaten Ladakh's fragile ecosystem.
- Inclusion sought to protect environment and tribal rights.

Source: [TheHindu](#)



## What are the new rules on chemically contaminated sites?

### Context

The Environment Ministry has notified the ***Environment Protection (Management of Contaminated Sites) Rules, 2025*** to legally address sites contaminated by hazardous chemicals and wastes.

### About the Rules

- **Definition:** Contaminated sites are areas where hazardous waste dumping has caused pollution of soil, water, and air, posing health and environmental risks.
- **Current status:** 103 contaminated sites identified; only 7 under active remediation.
- **Origins:** Based on the 2010 *Capacity Building Program for Industrial Pollution Management* and the *National Program for Remediation of Polluted Sites*.
- **Objectives:**
  - Create inventory of probable contaminated sites.
  - Develop guidelines for assessment and remediation.
  - Establish legal, institutional, and financial frameworks for cleanup.
- **Process under the new rules:**
  - Districts submit half-yearly reports on suspected sites.
  - State boards/reference organisations assess and declare contamination.
  - Responsible polluters bear remediation costs; otherwise, the Centre and State arrange cleanup.
  - Public disclosure if contamination exceeds safe limits.
- **Accountability:** Criminal liability applies under *Bharatiya Nyaya Sanhita (2023)* if contamination causes harm.
- **Exemptions:** Radioactive waste, mining waste, sea oil pollution, and dump-site solid waste handled under other laws.
- **Gap:** No fixed timeline for cleanup completion after identification.

Source: [TheHindu](#)

## Section 436-A of CrPC

### Context

Delhi court rejected Christian James Michel's plea for release under **Section 436-A of the CrPC**, ruling he was ineligible due to additional charges carrying higher maximum sentences.

### Section 436A of the CrPC

- **Introduction:**
  - Added to the CrPC, 1973, through a 2005 amendment.
- **Main provision:**
  - An undertrial who has spent **half of the maximum prescribed sentence** in detention must be released on bail.
- **Scope:**
  - Applies to offences under any law, except those punishable with **death** as one of the possible punishments.
- **Conditions for release:**
  - The undertrial must have been detained during investigation, inquiry, or trial for half of the maximum imprisonment term for the offence.
  - Release is on **personal bond**, with or without sureties.
- **Court's discretion:**
  - After hearing the Public Prosecutor and recording reasons in writing, the Court may:
    - Continue detention beyond the half-term mark, **or**
    - Release the person on bail instead of personal bond.
- **Maximum limit:**
  - No person can be detained beyond the **maximum sentence period** for that offence.
- **Exclusion in calculation:**
  - Any detention delays caused by the accused's own actions are **excluded** from the half-term calculation.
- **Applicability to special laws:**
  - The Supreme Court has held that Section 436A applies to **Special Acts** as well, unless the special law contains a specific provision overriding it.

Source: [IndianExpress](#)

## Animal Stem Cell BioBank and Laboratory

### Context

A new state-of-the-art **Animal Stem Cell Biobank and Laboratory** was inaugurated at NIAB Hyderabad by Union Minister Dr. Jitendra Singh, alongside the launch of five groundbreaking veterinary diagnostic tools to boost livestock health and support India's "Evergreen Revolution."

### Key Points

- **A first-of-its-kind facility:**
  - **Animal Stem Cell Biobank and Laboratory** inaugurated at National Institute of Animal Biotechnology (NIAB), Hyderabad.
  - Cost: ₹1.85 crore; covers 9,300 sq ft.
  - Equipped with stem cell culture units, 3D bioprinter, bacterial culture lab, cryostorage, advanced air handling systems, and uninterrupted power.
- **Supporting infrastructure:**
  - Foundation laid for a new hostel block and Type-IV quarters for research scholars, faculty, and staff at a cost of ₹19.98 crore.
- **Veterinary innovations launched:**  
To bolster the 'One Health' approach, five diagnostic tools were unveiled:
  - Rapid detection kit for **Brucellosis** (field-deployable, DIVA-capable)
  - **Mastitis Detection** assay (cost-effective, on-site)
  - **Antimicrobial Sensitivity Testing** device (results in 2 hours)
  - **Toxoplasmosis Detection Kit**
  - **Japanese Encephalitis Detection** strip (for mass surveillance)
- **Policy and Vision:**
  - Highlights PM Modi's Biotechnology **BioE3 policy**, positioning India as an early mover in biotech innovation.
  - Facility expansion supported by the **National Biopharma Mission (NBM)** under DBT–BIRAC.
  - Emphasizes veterinary health as pivotal to rural prosperity, livestock productivity, and an "Evergreen Revolution."

### FIVE VETERINARY TECHNOLOGIES LAUNCHED



**Rapid Brucellosis Detection Kit**  
Field-deployable, DIVA-capable



**Mastitis Detection Technology**  
On-site, cost-effective diagnosis for dairy cattle



**Antimicrobial Sensitivity Testing Device**  
Portable tool giving results in 2 hours



**Toxoplasmosis Detection Kit**  
Accurate testing for *Toxoplasma gondii*



**Japanese Encephalitis Detection Kit**  
Rapid strip for animal and human surveillance

### About Stem Cells

- **Definition & Potential**
  - Cells with the ability to develop into many different cell types in the body.
  - Under suitable conditions (in the body or lab), they divide to form **daughter cells**.
- **Functions of Daughter Cells**
  - Either remain as stem cells.
  - Or transform (differentiate) into specialized cells like blood cells, brain cells, heart muscle cells, or bone cells.
- **Unique Property**
  - No other cell type in the body can naturally generate new cell types.
- **Role in the Body**
  - Act as a **repair system**, replacing damaged or lost cells.
- **Location in the Body**

- Found in various tissues such as brain, bone marrow, blood, and blood vessels, among others.

### Types of Stem Cells

#### 1. Embryonic Stem Cells

- Derived from embryos aged 3–5 days.
- At this stage, the embryo (blastocyst) contains about 150 cells.
- **Pluripotent** – can develop into any cell type in the body.
- Useful for regenerating or repairing damaged tissues and organs due to their versatility.

#### 2. Adult Stem Cells

- Present in small quantities in adult tissues (e.g., bone marrow, fat).
- Have **limited differentiation ability** compared to embryonic stem cells.

Source: [PIB](#)



## Sloth Bear

### Context

The Puliyancholai eco-tourism site in Tamil Nadu was temporarily closed after a sloth bear wandered into the area, prompting safety concerns and a halt to visitor access.

### About Sloth Bear

- **Global Presence:** One of eight bear species found worldwide.
- **Diet:** Myrmecophagous — mainly eat ants, termites, and other insects.
- **Habitat:** Occupy dry and moist forests, as well as tall grasslands, often using boulders, shrubs, and trees for shelter.
- **Geographical Range:** Found mainly in India, Nepal, Sri Lanka, and possibly Bhutan.
- **Physical Traits:**
  - Long, shaggy dark brown or black fur.
  - Long, curved claws — the longest among bear species.
- **Behaviour:** Mostly nocturnal — forage at night, rest in secluded areas during the day.
- **Key Sanctuaries in India:**
  - Daroji Sloth Bear Sanctuary (Karnataka).
  - Jessore Sloth Bear Sanctuary (Gujarat).
- **Conservation Status:**
  - *IUCN Red List*: Vulnerable.
  - *Wildlife Protection Act, 1972*: Schedule I.
  - *CITES*: Appendix I.



Source: [TheHindu](https://www.thehindu.com)

## GPc

### Context

GPc is a new molecule made by scientists at IISc to help spot tumours safely and cheaply.

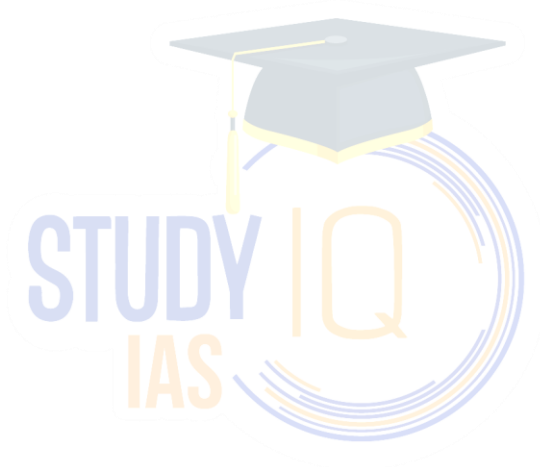
### What is GPc?

- It's built from a zinc-phthalocyanine that works well with near-infrared light.
- Four glucose units are attached so it's water-friendly and easily finds its way to tumours (which love sugar).
- It works with **Photoacoustic Imaging** – a method that uses light and sound, not radiation, to create detailed 3D images of tumours.

### Why is it important?

- **No radiation risk** – Unlike Positron Emission Tomography (PET) scans, it's safer for repeated use.
- **Cheaper** – Could be far more affordable than PET or MRI scans, helping patients in low-income areas.
- **Better for certain cancers** – Works especially well for tumours close to the skin, like in the breast or lymph nodes.
- **Possible PET alternative** – Could one day replace PET scans for many patients.

Source: [South First](#)





## News in Short

→ **Myra**, recently seen in the news, is an **AI-enabled virtual agent** launched by Makemytrip.

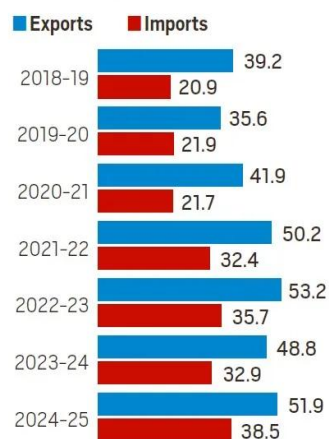
→ **India's Asiatic lion population** has **grown from 674 in 2020 to 891 in 2025**, a 32.2% increase, per the 16th Lion Population Estimation report.

### INDIA'S TOP AGRICULTURAL EXPORT ITEMS (in million dollars)

	2024-25	Apr-Jun 2024	Apr-Jun 2025	% Growth
Marine products	7405.00	1628.87	1945.70	19.45
Basmati rice	5944.48	1544.92	1494.40	-3.27
Non-Basmati rice	6527.58	1263.34	1413.02	11.85
Spices	4451.54	1088.89	1154.04	5.98
Buffalo meat	4060.54	793.28	896.82	13.05
Coffee	1805.57	519.80	588.07	13.14
Fruits & vegetables	2065.39	459.14	522.44	13.79
Tobacco	1979.01	426.86	509.19	19.29
Processed F&V	1805.76	384.37	429.80	11.82
Castor oil	1152.37	348.34	355.31	2.03
Oilseeds	1344.31	332.22	306.01	-7.89
Oilmeals	1344.39	330.69	290.19	-12.25
<b>TOTAL</b>	<b>51940.67</b>	<b>12209.66</b>	<b>12922.32</b>	<b>5.84</b>

Source: Department of Commerce

### INDIA'S AGRICULTURE TRADE (in billion dollars)



## Editorial Summary

### State-Driven Fear Targeting The Urban Poor

#### Context

The poorest — especially **linguistic and religious minorities** (e.g., Bengali-speaking migrants in Gurugram) returning to their native villages out of fear because of the state's arbitrary actions, and targeted crackdowns.

#### What are the Actions?

- **Deliberately manufactured “foreigners” scare** — implying that a section of the urban poor (especially migrants speaking Bengali) are outsiders or illegal immigrants.
- Circulation of suspicion that these groups are **linked to crime or security threats**, creating an atmosphere of distrust.
- Such rumours may not come directly as formal government statements but can be spread through **local enforcement actions, public announcements, or selective targeting** that gives the impression of guilt.
- **Picking up individuals for questioning without clear legal basis** — targeting specific linguistic or religious groups.
- **Selective raids** in migrant-dominated neighbourhoods.
- **Harassment during identity checks**, even when legal documents are in order.
- **Forcing service workers to leave** certain areas or making it harder for them to rent accommodation.
- State bodies acting in a way that **does not follow consistent rules**, leaving people unsure about what might trigger police or administrative action.

#### Consequences

- **Displacement of the Urban Poor:** Migrants, fearing detention or harassment, **return to their native villages** despite having livelihoods in the city.
  - This leads to **massive livelihood disruption** and breaks social networks built in the city.
- **Weakening of Cities’ Social Fabric:** Loss of **diversity of opinions and experiences** that make cities vibrant and innovative.
  - Service sectors — cleaning, construction, domestic work — lose a major part of their workforce, affecting the functioning of the city.
- **Erosion of Trust in the State:** The **state is experienced through fear**, not through constitutional ideals.
  - Those targeted are often the **state’s strongest supporters**, while elites who mistrust the state remain unaffected.
  - This **undermines the state’s legitimacy** in a democracy.
- **Creation of Urban Dystopias:** Cities risk becoming **segregated, suspicious, and unjust spaces**.
  - The displacement of supportive populations leaves space for unchecked **private capital** with weaker public intervention in areas like health, education, and public spaces.
- **Dangerous Precedent of Arbitrariness:** Once the state acts arbitrarily against one section, it sets a precedent for arbitrary action against others.

Source: [Indian Express](#)

## Towards eradicating human trafficking in India

### Context

Two major human trafficking attempts have been foiled in West Bengal, underscoring the grim reality that this heinous crime continues to thrive despite ongoing efforts to eradicate it in India.

**Trafficking data (2018–2022)** shows persistent prevalence:

- **2018:** 2,278 cases
- **2019:** 2,208
- **2020:** 1,714 (Covid dip)
- **2021:** 2,189
- **2022:** 2,250

### Root Causes of Human Trafficking

- **Poverty and Unemployment:** Widespread economic deprivation and lack of local employment opportunities.
  - E.g., Closure of tea gardens in Darjeeling, Kalimpong, and Dooars has left locals without income.
- **Deceptive Recruitment Practices:** Lure of lucrative jobs in garment factories, domestic work, or gold manufacturing units.
  - False promises of better living conditions.
- **Geographical Location & Border Vulnerability:** Porous borders and weak surveillance results in cross border trafficking.
  - E.g., West Bengal's proximity to Nepal, Bhutan, and Bangladesh facilitates cross-border trafficking.
- **Weak Law Enforcement & Data Concealment:** Underreporting of cases due to fear, social stigma, and administrative obfuscation.
  - Traffickers adapting tactics to avoid detection.
- **Social and Gender Vulnerabilities:** Women and children from marginalised communities are disproportionately targeted.
  - Patriarchal norms and lack of education heighten risk.
- **Disaster and Pandemic Impact:** COVID-19 reduced livelihoods, increasing susceptibility to risky migration offers.
  - Natural disasters in the region displace communities, creating fresh vulnerabilities.

### Consequences of Human Trafficking

- **Loss of Freedom and Exploitation:** Victims forced into bonded labour, sex work, or hazardous industries.
  - Deprivation of wages, legal rights, and dignity.
- **Physical and Mental Health Damage:** Exposure to violence, abuse, malnutrition, and lack of healthcare.
  - Long-term trauma and mental health disorders.
- **Breakdown of Families and Communities:** Migration under coercion disrupts family structures.
  - Loss of working-age members impacts local economies.
- **Criminal Network Expansion:** Profits from trafficking fund organised crime.
  - Deepens corruption among local enforcement and border officials.
- **Undermining of State Legitimacy:** Poor governance and weak victim protection erode trust in the administration.
- **Inter-generational Impact:** Children of victims often grow up in poverty, repeating the cycle.

### Way Forward

- **Address Economic Roots:** Promote local job creation in agro-processing, tourism, and handicrafts.
  - Introduce livelihood schemes targeted at vulnerable districts.
- **Strengthen Law Enforcement & Data Transparency:** Mandatory crime data disclosure with independent audits.
  - Special anti-trafficking units trained in victim-sensitive approaches.
- **Border & Placement Agency Regulation:** Monitor and license recruitment agencies.
  - Enhance border surveillance with technology and community patrols.
- **Community-Based Prevention:** Empower local youth clubs, self-help groups, and NGOs for sensitisation drives.
- **Victim Rehabilitation & Protection:** Provide safe housing, legal aid, counselling, and vocational training.
  - Ensure reintegration support for rescued victims to prevent re-trafficking.
- **Use of Technology:** Deploy GPS tracking, digital ID verification, and AI-based alerts in transport hubs.
  - Maintain a centralised database of missing persons and trafficking patterns.

Source: [New Indian Express](#)



## China's Withdrawal of 300 Chinese Employers: Implication for India

### Context

Recently China recalled 300 skilled engineers from Foxconn's iPhone manufacturing in India and restricted rare earths, equipment, and skilled training.

### Possible Reasons Behind Recalling 300 Engineers

- **Curtail Technology Transfer:** Prevent Indian manufacturing units — particularly in high-value electronics like iPhones — from acquiring the specialised know-how these engineers possess (production line setup, optimisation, troubleshooting).
- **Delay India's Manufacturing Take-off:** Slow down India's ambition to become a competitive electronics manufacturing hub.
- **Maintain Supply Chain Dependence:** Ensure India remains reliant on Chinese inputs, equipment, and rare earth materials.
- **Preserve Chinese Economic Hegemony:** Block potential competitors to safeguard Beijing's dominant position in Asia's manufacturing and export markets.
- **Leverage Domestic Economic Pressures:** China's slowing economy, ageing population, and overcapacity make protecting export revenues crucial. Neutralising emerging rivals is part of its survival strategy.

### How India Can Be Impacted

- **Short-term operational disruption:** Loss of skilled engineers will slow down production ramp-ups, delay projects, and increase dependence on foreign (often Chinese) technical support.
- **Higher costs & slower growth:** Alternative sources for inputs and equipment are more expensive and less efficient, increasing Capex/Opex for Indian firms.
- **Global supply chain hesitation:** Companies may hesitate to shift production from China to India, fearing instability and inefficiency.
- **Persistent trade imbalance:** Electronics imports (42% from China) and the \$60 billion trade deficit in electronics could worsen before improving.
- **Longer decoupling timeline:** Achieving self-reliance in electronics could take 5–7 years, even with aggressive policy support.

### What India Can Do

- **High-level coordination:** Create a PMO-led inter-ministerial task force (similar to the 2019 PLI committee) to handle supply chain challenges across ministries and in close consultation with industry.
- **Diversify supply sources:** Build partnerships with Taiwan, Japan, South Korea, the US, and EU for critical minerals, components, and manufacturing equipment.
- **Strengthen domestic ecosystem:** Invest in R&D, skill development, and infrastructure for electronics and component manufacturing, not just assembly.
- **Accelerate PLI & allied policies:** Expand production-linked incentives beyond smartphones to semiconductors, components, and high-tech manufacturing.
- **Strategic stockpiling:** Maintain reserves of critical inputs (rare earths, key components) to withstand supply disruptions.
- **Global alliances:** Work with Quad, Indo-Pacific Economic Framework for Prosperity (IPEF), and other like-minded partners to reduce dependence on China for high-tech inputs.
- **Ease business bottlenecks:** Cut bureaucratic delays, improve logistics, and address "higher disabilities" in costs to make India more attractive for global value chains.

Source: [The Hindu](#)