

01st July DSC

States Told to Finalise Boundary Changes Before Census 2027

Context & Timeline

- The first phase of the upcoming Census—house listing and housing enumeration—is tentatively set to commence on April 1, 2026.
- The process will roll out across all States and Union Territories in stages, ideally completing by September 2026.
- For the first time, India will adopt a **fully digital approach**, with enumerators using tablets and mobile apps rather than traditional paper schedules to collect real-time, geo-tagged data.

Preparations & Resources

- The Office of the Registrar General of India is working closely with State administrations to coordinate this massive operation.
- About 1.3 lakh enumerators will be deployed.
- The 24 lakh Enumeration Blocks defined for the postponed 2021 Census will be reused. Each block typically includes 150–180 households or 650–800 people.

Key Activities in House Listing

- Every building and public space is given a unique census number.
- Data captured includes construction materials, water sources, toilets, electricity access, and usage (residential, commercial, vacant).

Opportunities and Risks

- Although delayed by the pandemic, this digital transition promises faster, more accurate data processing and minimal paper use.
- Challenges include training over 1 lakh staff in digital tools, bridging technological gaps in rural areas, and ensuring data security.
- While reusing 2021 EBs saves time, demographic changes since then could reduce accuracy.

Background

- The Census derives authority from the Census Act of 1948, which protects confidentiality and defines operational norms.
- Managed by the Registrar General and Census Commissioner under the Ministry of Home Affairs.
- Conducted every decade since 1881, with the last full Census in 2011.

Forced Sterilisation During the Emergency (1975–77)

Origins and Policy Drivers

- During the Emergency, the Indian government intensified its birth control efforts as part of the National Family Planning Programme.
- The policy drew support from global institutions such as the World Bank and the Ford Foundation, which were concerned about rapid population growth.

Scale and Impact

- The programme led to a massive spike in sterilisation procedures:
 - ~1.3 million vasectomies in 1975
 - ~2.6 million in 1976
 - ~8.3 million total sterilisations by 1977
- The highest numbers were in northern States like Uttar Pradesh and Rajasthan.

Implementation Tactics

- Local officials, health workers, and police often mobilised people through incentives (money, food, job perks).
- In many areas, access to welfare schemes was made conditional on undergoing sterilisation.

Outcomes and Criticism

- The Shah Commission documented 1,778 deaths linked to procedures and widespread coercion.
- Public protests and legal challenges erupted in many regions.

Global Comparisons

- India's drive paralleled other controversial programmes:
 - U.S. state eugenics policies sterilised ~60,000 people.
 - Sweden sterilised ~63,000 individuals under public health laws.
 - Nazi Germany conducted ~400,000 sterilisations.
 - Peru and China also enforced mass sterilisation during family planning campaigns.

Long-Term Legacy

- The episode remains central to debates about the ethics of population control, consent, and the need for procedural safeguards in public health.

Why ECI Is De-Listing Political Parties

Legal Framework

- Article 19(1)(c) guarantees citizens the right to form associations, including political parties.
- Under Section 29A of the Representation of the People Act, 1951, parties must register by submitting their constitution within 30 days and commit to democracy, secularism, and national unity.
- **Registered Unrecognised Political Parties (RUPPs):** Parties that are registered but have not secured enough votes or seats to be recognised as State or National parties.

Current Situation

- As of May 2025, there were over 2,800 RUPPs, but many were dormant:
 - 281 already de-listed
 - 217 labelled inactive due to no updated records since 2014
- ECI has now de-listed 345 more for never contesting an election since 2019 and being untraceable.

Rationale for De-Listing

- To curb misuse of benefits like tax exemptions, common symbols, and star campaigner slots.
- Under the RP Act and Income Tax Act, RUPPs must disclose major donors and maintain transparent accounts. Failure to comply risks loss of privileges.

Legal Constraints

- As per a 2002 Supreme Court ruling, ECI cannot cancel registration unless a party is fraudulent, unconstitutional, or banned.

Proposals for Reform

- The Law Commission has suggested empowering ECI to de-register inactive parties.
- There is also long-standing concern about the lack of genuine internal democracy.

Implications

- The crackdown aims to reduce “letterhead parties” that exist only on paper, improve compliance, and strengthen the integrity of elections.

Why Axiom-4 Took 28 Hours to Dock with the ISS

Mission Overview

- Axiom-4 is a privately organised mission, launched by SpaceX on June 25, carrying an international crew including Indian Air Force officer Group Captain Shubhanshu Shukla.

Orbit and Approach

- After launch, Dragon entered an elliptical parking orbit ~200 km above Earth, travelling at ~27,000 km/h.
- Over 18 orbits and 28 hours, it gradually adjusted altitude and speed to match the ISS, which flies at ~400 km.

Docking Procedure

- Dragon approached along a designated corridor, pausing at checkpoints 400 m, 220 m, 20 m, and 1 m for system checks and alignment verifications.
- Each phase included go/no-go checks, with fallback options in case of technical issues.

Purpose of the Slow Approach

- To maximise safety and allow for thorough system validation.
- The longer timeline also helped the crew rest, perform preparations, and address contingencies.

Broader Relevance

- Showcases international collaboration and private sector expertise in human spaceflight.
- Group Captain Shukla's role highlights India's growing footprint in global space missions.

DGCA Flags Under-Reporting of Passenger Misconduct

Issue

- The DGCA has noticed airlines often delay or fail to report disruptive passenger behaviour, compromising safety.

Revised Guidelines

- Incidents must be reported within 12 hours via email and fully documented within 24 hours after landing.
- Applies to all airlines with cabin crew.

Types of Incidents

- Alcohol-fuelled aggression, physical altercations, sexual harassment, and behaviour endangering flight safety.

Regulatory Framework

- Airlines must refer cases to an Internal Committee, which decides within 30 days on the duration of a flying ban.
- For serious crimes, police action is mandatory.

Aim of the Advisory

- To promote a safety-first culture, ensure accountability, and deter misconduct in air travel.

Shukla Begins Space Research on Muscle Loss

Mission Update

- Group Captain Shukla, known by his call sign “Shux,” has started scientific experiments aboard the ISS.

Key Experiments

- **Myogenesis Study:** Examines how microgravity affects skeletal muscle, with potential applications in space health and treatments for degenerative diseases.
- **Cerebral Hemodynamics:** Tracks blood flow in the brain, yielding insights into cardiovascular risks.

ISRO's Role

- Seven microgravity experiments were chosen by ISRO as part of India's strategy to build expertise in space-based life sciences.

International Collaboration

- Axiom-4 includes around 60 studies from 31 countries.
- India and NASA are jointly conducting five investigations and two educational experiments.

Significance

- Strengthens India's presence in international space research and has potential benefits for both astronauts and Earth-based medicine.

Noble Rot and Its Fungal Secrets

Agricultural Importance

- Botrytis cinerea, or noble rot, shrivels grapes by draining water while concentrating sugars, producing premium sweet wines like Sauternes and Tokaji.
- This process requires selective, manual harvesting.

Breakthrough in Fungal Biology

- New research has found that Botrytis and a related fungus, Sclerotinia, distribute their chromosomes across several nuclei, with no nucleus containing a full genome.

Implications

- This makes cloning them impossible using standard methods and challenges existing assumptions about nuclear genetics.

Outstanding Questions

- Scientists are exploring how these fungi manage chromosome division and genetic stability.

Broader Impact

- The findings could transform our understanding of genome organisation, with implications for biotechnology and evolution.

01st July Daily MCQs

1. Question

Consider the following statements about Census 2027:

1. It will be India's first census to deploy mobile applications and digital tools extensively.
2. The phase for House Listing and Housing Census is planned to start in April 2027.
3. The Ministry of Statistics and Programme Implementation will oversee the exercise.

Which of the above statement is/are correct?

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

Correct Answer: (a) 1 only

Explanation:

- Statement 1 is correct: This will be India's first fully digital census, utilizing tablets and mobile apps.
- Statement 2 is incorrect: The House Listing phase is scheduled to commence in April 2026, not 2027.
- Statement 3 is incorrect: The Registrar General and Census Commissioner under the Ministry of Home Affairs conduct the census, not the Ministry of Statistics.

2. Question

During the Emergency period (1975–77), India carried out a major sterilisation drive. Consider the following statements about it:

1. The campaign extended the National Family Planning Programme, which originally relied on voluntary sterilisation.
2. The Shah Commission of Inquiry reported over 5,000 deaths resulting from forced sterilisation procedures.
3. Authorities used both incentives and coercive tactics to boost sterilisation numbers.

4. The highest number of procedures were performed in southern states like Kerala and Tamil Nadu.

Which of the above statements are correct?

- (a) 1 and 3 only
(b) 2 and 4 only
(c) 1, 2, and 3 only
(d) 1, 3, and 4 only

Correct Answer: (a) 1 and 3 only

Explanation:

- Statement 1 is correct: The drive built upon an earlier voluntary programme promoting sterilisation as a method of family planning.
- Statement 2 is incorrect: The Shah Commission recorded 1,778 deaths, not over 5,000.
- Statement 3 is correct: Both inducements (like food and cash) and pressure tactics were widely used.
- Statement 4 is incorrect: Northern states such as Uttar Pradesh, Bihar, Haryana, Rajasthan, and Madhya Pradesh saw the most intensive activity, not the southern states.

3. Question

Assertion (A): The Election Commission of India has the authority to de-register political parties that have not contested elections for an extended period.

Reason (R): The Representation of the People Act, 1951, explicitly grants the Commission the power to de-register inactive parties.

Select the correct option:

- (a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

Correct Answer: (c) A is true, but R is false.

Explanation:

- The assertion is true: The Election Commission has begun processes to de-list inactive parties.
- The reason is incorrect: The Representation of the People Act does not explicitly empower the Commission to de-register parties for inactivity. The Commission has asked for legislative amendments to be given this authority.

4. Question

Match the elements of the Axiom-4 mission with their corresponding descriptions:

List I – Component

- A. Falcon 9 rocket
- B. Dragon capsule
- C. 28-hour pre-docking sequence
- D. Group Captain Shubhanshu Shukla

List II – Description

1. Indian Air Force pilot selected for the mission
2. Placed the crew vehicle in low Earth orbit
3. Managed gradual deceleration and safety checks before docking
4. Vehicle responsible for orbital phasing and automated docking with the ISS

Select the correct combination:

- (a) A–2, B–4, C–3, D–1
- (b) A–4, B–2, C–1, D–3
- (c) A–1, B–3, C–4, D–2
- (d) A–2, B–3, C–4, D–1

Correct Answer: (a) A–2, B–4, C–3, D–1

Explanation:

- A. Falcon 9 rocket inserted the capsule into a parking orbit (2).
- B. Dragon capsule conducted automated maneuvers for rendezvous (4).
- C. The 28-hour sequence involved step-wise slowing and alignment checks (3).
- D. Group Captain Shubhanshu Shukla is the Indian astronaut onboard (1).

5. Question

Regarding the experiments conducted by Group Captain Shubhanshu Shukla aboard the ISS, consider the following:

1. The Myogenesis study examines muscle regeneration to benefit astronauts and patients with degenerative disorders.
2. The Cerebral Hemodynamics research uses MRI imaging to study brain changes in microgravity.
3. These experiments are part of ISRO's program to develop a microgravity research ecosystem.

Which of the statements are correct?

- (a) One only
- (b) Two only
- (c) All three
- (d) None

Correct Answer: (b) Two only

Explanation:

- Statement 1 is correct: Myogenesis investigates skeletal muscle degeneration.
- Statement 2 is incorrect: The study employs ultrasound, not MRI.
- Statement 3 is correct: ISRO is supporting microgravity research to build domestic capacity.

