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## Current Affairs - 18 December 2024

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### NATIONAL INVESTIGATION AGENCY



- It was set up under the **National Investigation Agency Act, 2008** as a Central Counter Terrorism Law Enforcement Agency.
  - It was created after the 2008 Mumbai terror attacks, as the need for a central agency to combat terrorism was realised.
  - It **investigates** and **prosecutes offences** affecting the sovereignty, security and integrity of India, security of State, friendly relations with foreign States, matters relating to international treaties etc.
  - It investigates and prosecutes offences related to explosive substances, **atomic energy, nuclear weapons, unlawful activities**, terrorist activities, hijacking, etc.
  - The Government has empowered the NIA through **NIA (Amendment) Act, 2019** to investigate scheduled offences involving Indian citizens or Indian interests **that are committed outside India**.
  - A State Government may request the Central Government to hand over the investigation of a case to the NIA, provided there is reasonable ground to suggest the commission of a scheduled offence under the NIA Act in the said crime.
  - NIA officers have the **power to investigate scheduled offences** and arrest people who are involved in such offences.
    - In relation to this, the officers of the NIA have all the powers, duties, privileges, and liabilities which ordinary police officers have while conducting an investigation.
  - The administration of the NIA **lies with its Director-General**, who enjoys the same powers as a **Director-General of Police**.
  - It comes under the jurisdiction of the **Union Ministry of Home Affairs**.
  - **Headquarters:** New Delhi
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### THE INTRODUCTION OF 'ONE NATION, ONE ELECTION' BILLS AND PARLIAMENTARY PROCEDURES

#### One Nation, One Election

- The concept of "One Nation, One Election" envisions a system in which all state and Lok Sabha elections must be held simultaneously.
- This will entail restructuring the Indian election cycle so that elections to the states and the centre coincide.
- This would imply that voters will vote for members of the LS and state assemblies on the same day and at the same time (or in a phased manner as the case may be).

#### History of Elections in India

- **Era of simultaneous elections**
  - The first general elections of free India held simultaneously to the Lok Sabha and the Legislative Assemblies of the States in 1951.
  - The **next three cycles of elections** also witnessed concurrent Lok Sabha and Legislative Assembly elections barring a few stray cases like:
    - Kerala where a mid-term election was held in 1960 on the pre-mature dissolution of the Assembly, and
    - in Nagaland and Pondicherry where the Assembly was created only after the 1962 general elections.
  - The last occasion when we had **near-simultaneous elections was in 1967**.
- **Beginning of the end of simultaneous elections**
  - The fourth Lok Sabha constituted in 1967 was dissolved prematurely in 1971. This was the beginning of the end of simultaneous elections.
  - Extension of the term of Lok Sabha during the National Emergency declared in 1975 and the dissolution of Assemblies of some States after the 1977 Lok Sabha election further disturbed the cycle of concurrent elections.
- **Current status**

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- After the two pre-mature dissolutions of the Lok Sabha in 1998 and 1999, only four State Assemblies have been going to polls along with the Lok Sabha elections in the last two decades.
- We now have **at least two rounds of Assembly general elections every year.**

### What Does Article 368 Say?

- Article 368 of the Constitution specifies:
  - An amendment Bill requires two-thirds majority of members present and voting and a majority of the total membership of the House to pass.
  - After passing both Houses, it must receive Presidential assent to become law.

### Procedure for Constitution Amendment Bills

- **Rule 157 of the Rules of Procedure and Conduct of Business in Lok Sabha: Process for Constitution Amendment Bills**
    - **For motions** like considering the Bill, taking the Select or Joint Committee's report into consideration, or passing the Bill (with or without amendments), the motion is deemed carried if:
      - A majority of the total membership of the House supports it, and
      - At least two-thirds of the members present and voting are in favor.
  - **Rule 158: Voting by Division**
    - Division voting is required when a motion needs both:
      - A majority of the total membership of the House, and
      - A two-thirds majority of the members present and voting.
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### REFORMING NATIONAL ENTRANCE EXAMS

- **About NTA:**
  - It was set up in **2017** as a **specialist, self-sustaining and autonomous organisation** under the aegis of the **Union Ministry of Education.**

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- It is registered under the **Societies Registration Act 1860**, and falls under the Right to Information (RTI) Act.
- Its director general and governing body are **appointed by the Union government**.
- **Background:**
  - **In 2010**, a committee comprising directors of IITs recommended establishing an autonomous and transparent body (NTA) through legislation, modelled after the **Educational Testing Service (ETS) of the US**.
  - **Prior to the NTA's formation**, various government bodies like the UGC, the CBSE, and central universities such as Delhi University and JNU conducted their own entrance examinations.
- **Objectives:** It aims to
  - **Conduct efficient, transparent and international standards tests** in order to assess the competency of candidates for admission, and recruitment purposes.
  - **Undertake research on educational, professional and testing systems** to identify gaps in the knowledge systems and take steps for bridging them.
  - **Identify experts and institutions in setting examination questions**.
  - Produce and disseminate information and research on education and professional development standards.
- **Examinations conducted by the NTA:**
  - JEE (Main), NEET-UG, Common Management Admission Test (CMAT), Graduate Pharmacy Aptitude Test (GPAT), University Grants Commission-National Eligibility Test (UGC-NET), etc.
  - **The National Education Policy 2020** recommends a broader role for the NTA to conduct an entrance or aptitude test for all universities across the country.
- **Redefining NTA's role:** The NTA should focus solely on entrance exams for higher education, leaving recruitment exams for other bodies.



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- **Flexibility in exam modes:** Regarding NEET, the decision on the mode of the exam - computer-based or pen-and-paper - will rest with the Health Ministry, with the NTA acting as a service provider.

### Conclusion:

- The proposed reforms mark a significant shift towards ensuring fairness and efficiency in national entrance tests.
- By adopting an election-style framework and leveraging technology, **the government aims to restore trust in the examination system and safeguard its integrity.**

### ARCTIC TUNDRA AS A CARBON SOURCE



- The **Arctic Tundra** is a vast, **treeless biome** characterized by its cold, dry, and rocky terrain.

- The term “tundra” originates from the **Finnish word tunturi**, meaning a ‘**treeless plain.**’

### Characteristics of the Arctic Tundra:

- **Permafrost:** It refers to permanently frozen soil, starting within a meter of the surface. During **summer**, only the upper layer thaws, while deeper layers remain frozen.
  - The frozen layer restricts plant root growth and prevents **tree growth**, resulting in a treeless landscape.
- **Soil composition:** The tundra's soil is **rocky** and nutrient-poor due to low decomposition rates.
  - Organic material accumulates in the form of **peat (decayed sphagnum moss)** and **humus (organic matter)**, making it a significant **carbon sink**.
- **Geographic location:** The Arctic tundra is the **northernmost biome**, covering areas north of the Arctic Circle up to the **polar ice cap**, parts of Canada, Iceland, and Greenland.
  - It spans approximately **5 million km<sup>2</sup>**.

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- **Climate:** Temperatures range from  $5^{\circ}\text{C}$  in summer to  $-60^{\circ}\text{C}$  in winter, with mean temperatures below  $0^{\circ}\text{C}$  for 6–10 months.
  - **Annual precipitation** is low, ranging between 150–250 mm, but evaporation is minimal.
  - Features **24-hour sunlight in summer** and **24-hour darkness in winter**.
- **Natural vegetation:** Vegetation is predominantly **herbaceous** due to the cold climate and short growing season. Includes grasses, mosses (e.g., reindeer moss), lichens, and liverworts.
  - Woody plants like **dwarf willows** remain short and spread to withstand high winds.
- **Animal life:** Large mammals such as **polar bears, caribou, musk ox, and Arctic foxes** inhabit the tundra.
  - Smaller animals like **lemmings and Arctic hares** adapt with fur that changes color seasonally.
  - Migratory birds, such as **loons and snow geese**, breed in the tundra during summer.
- **Arctic Tundra as a Carbon Sink:** Despite the absence of trees, the Arctic Tundra is a **significant carbon sink**.
  - This is due to the **accumulation of organic matter** in: **Peat** (Decayed **sphagnum moss**) and **Humus** (Decomposed organic material).
  - The cold conditions slow decomposition, trapping carbon in the **permafrost** for millennia.

### Global carbon trends:

- **CO<sub>2</sub> emissions** in 2024 are projected to be **6 billion tonnes**, up from **40.6 billion tonnes** in 2023.
  - **Land-use changes** add **2 billion tonnes of emissions** annually.
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### Moldova Signs International Solar Alliance (ISA) Framework Agreement



- The ISA was conceptualised on the sidelines of COP21 in Paris in 2015 as a collaborative initiative between India and France.
- The headquarters of the ISA is located in Gurugram, India.
- The ISA aims to unite global efforts in combating climate change through the implementation of solar energy solutions.
- The mission of the ISA is guided by the ‘Towards 1000’ strategy, which focuses on three key goals:
  - Mobilizing USD 1,000 billion of investments in solar energy by 2030.
  - Providing energy access to 1,000 million people
  - Achieving the installation of 1,000 GW of solar energy capacity.
- The ISA Assembly is the apex decision-making body of the organization. It plays a crucial role in shaping policies and overseeing the implementation of the ISA’s Framework Agreement.
- Currently, the ISA has 104 member countries and 16 signatory countries.
- The ISA Framework Agreement came into force in 2017. Following its amendment in 2020, all United Nations member states became eligible to join the ISA.

#### Key Initiatives of the ISA:

- **Scaling Solar Applications for Agricultural Use (SSAAU):** This program addresses the increasing demand for solar-powered water pumps to support agricultural activities.
- **ISA CARES:** This initiative provides innovative and reliable solar energy solutions for healthcare systems in low- and middle-income countries.
- **Program on Solarizing Heating and Cooling Systems:** This program aims to meet the growing heating and cooling demands in commercial, industrial, and residential sectors by facilitating solar-based solutions.
- **Global Solar Facility:** Launched during COP27, this facility is designed to catalyze solar investments in underserved regions and geographies across Africa.



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### SCIENCE AND HERITAGE RESEARCH INITIATIVE



- It is a new programme on Heritage Research.
- It aims to engage experts from diverse fields for data capture and analysis, to form new collaborations, and provide viable technology, to address cultural heritage related issues.

#### Aims and Objectives:

- SHRI has been envisaged to -
    - Build capacity in human resources and encourage new researchers to work in these areas.
    - Promote scientific R&D activities for conservation of Heritage objects which may include material deterioration process, preservation techniques, intervention technologies, new materials, processes for restoration and diagnostic technologies.
    - Safeguard the use, representations, expressions, knowledge and techniques, communities, groups and in some cases, individuals, recognised as an integral part of our cultural heritage.
    - Explore new approaches, state-of-art technology to preserve the heritage and art works of former generations, which witnessed the evolution and growth of human civilization.
    - Promote application of advanced knowledge of archaeometric science in a range of fields.
    - Promote RD activities and technological advancement in Tribal Arts for value addition.
  - The Initiative envisages implementing the programme throughout the nation.
  - Nodal Ministry: Ministry of Science & Technology
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### Persistent Organic Pollutants



The scientists have found in the orcas' blubbers (fat layer under the skin) high levels of persistent organic pollutants (POPs)—toxic chemicals used in industrial and agricultural processes.

- They are **organic chemical substances** (carbon-based), widely used throughout the supply chain, in **all kinds of products including pesticides, industry processes, etc.**
- These POPs **do not break down easily** and remain in the environment for decades, travel over great distances through water and wind and eventually remain in the food chains through **bioaccumulation**.
- They are toxic to both **humans and wildlife**.

### A global treaty on POPs:

- **The Stockholm Convention on POPs** calls for reduction or elimination of releases of POPs globally.
  - It was entered into force in **2004**.
  - Parties to the Convention commit to not produce or use the chemicals listed in its annexes.
  - To date, **185 countries** have ratified the Stockholm Convention and 34 POPs are listed as 17 pesticides, 15 industrial chemicals, 7 unintentional by-products.
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