CURRENT AFFAIRS WEEKLY

WEEK 1
FEBRUARY 2025

MAINS ARTICLE

GS-II

- INDIA-MIDDLE EAST-EUROPE ECONOMIC CORRIDOR (IMEC)
- U.S. CITIZENSHIP POLICY CHANGES AND INDIA'S CITIZENSHIP LAWS
- KARNATAKA ALLOWS 'RIGHT TO DIE WITH DIGNITY'
- GENDER BUDGET AND WOMEN'S EDUCATION IN DELHI
- INDIA'S AILING DIAGNOSTICS SECTOR
- RAJASTHAN PROHIBITION OF UNLAWFUL CONVERSION OF RELIGION BILL, 2025

GS-III

- IMPACT OF TAX CUT IN UNION BUDGET
- US IMPOSES NEW TARIFFS
- INDIA'S ECONOMIC SLOWDOWN
- INDIA'S EV CHARGING MARKET
- ETHANOL BLENDING & IMPACT
- INDIA'S TRANSITION TO CLEAN ENERGY
- NUCLEAR ENERGY MISSION

PRELIMS ARTICLE

ART & CULTURE

- Sree Gowreeswara Temple

HISTORY

- Fort William renamed as Vijay Durg

INTERNATIONAL RELATIONS

- United States Agency for International Development (USAid)
- India's Chabahar Port Project

POLITY & GOVERNANCE

- PM-JANMAN Package
- Governor's Assent to Bills
- Ad-hoc Judges Appointment
- Dissolution of Districts

ECONOMY

- OECD Global Tax Deal

ENVIRONMENT

- India's largest solar cell and module manufacturing unit
- 'Cardamom Conundrum' Solved
- Sakkarakottai and Therthangal Bird Sanctuaries
- India Becomes the World Leader in Tiger Population
- Rapid Himalayan glacier melt

SCIENCE & TECHNOLOGY

- Very Short-Range Air Defence System (VSHORADS)
- Pinaka Multiple Rocket Launch System (MRLS)

GS SCORE
An Institute for Civil Services
www.iasscore.in

DISCLAIMER

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CONTENT

1st WEEK - FEBRUARY, 2025

SECTION - A

SECTION - B

GS SCORE

An Institute for Civil Services

IAS 2025-26

PRELIMS PYQ+

4 WEEKS 4 PYQs PRACTICE PROGRAMME

- Subject-wise Decoding the logic of Prelims PYQs
- Thematic Analysis of Prelims
- Phase-wise Essential Skills Development required for Prelims
- Familiarization with the Syllabus Detailing & Approach for its Coverage
- Testing the Prelims Skills through Practice MCQs

PROGRAMME FEE ₹ 4,999/-

8448496262 iasscore.in

SECTION -A

MAINS ISSUES

INDIA-MIDDLE EAST-EUROPE ECONOMIC CORRIDOR (IMEC)

Context

While the **India-Middle East-Europe Economic Corridor** has faced challenges due to regional instability, especially the Israel-Gaza conflict, diplomatic efforts are underway to revive the project.

What is the IMEC Project?

- The **IMEC** is a major infrastructure and trade project designed to create a trade route that spans multiple continents. Key features include:
  - **Route**: The corridor will connect **western India**, the **UAE's Ras Al Khaimah**, **Saudi Arabia**, **Jordan**, **Israel**, and then continue to Europe across the Mediterranean Sea.
  - **Mode of Transport**: It will include **shipping**, **rail**, and **road** routes.
  - **Objective**: The goal is to increase trade between these regions, foster economic integration, and strengthen geopolitical ties.
- The initiative was launched during the **G-20 Summit in September 2023** by countries such as **India**, **France**, **Germany**, **Italy**, **Saudi Arabia**, **UAE**, the **U.S.**, and the **EU**.

Current Status

- While IMEC has the potential to transform trade and connectivity between three major regions, its progress has been slow due to regional conflicts and diplomatic hurdles.
- **The Gaza Conflict:** The **Israel-Gaza conflict** (particularly the **October 7, 2023** attacks) has created significant uncertainties for the IMEC project:
  - The **Israel-Gaza war** and the broader conflicts in the **Middle East** have led to delays in the diplomatic meetings crucial for advancing IMEC.
  - Despite this, the **Gaza ceasefire** (since November 2023) has raised hopes that the situation may stabilize enough to resume discussions.
  - **Diplomatic sources** indicate that while the project is still a priority, it is unlikely to move forward without some progress on peace talks between **Israel** and **Palestinian representatives**.

Concerns Over IMEC's Viability

Despite the optimism, some **concerns over IMEC's viability** remain:

- **Regional Instability**: Ongoing conflicts, such as the Israel-Gaza conflict, and broader instability in **Iran**, **Syria**, and **Yemen** have delayed progress. The ceasefire in Gaza has opened a window of opportunity, but lasting peace is uncertain.
- **Slow Diplomatic Momentum**: Initial momentum on the IMEC project was lost after the Gaza war, and despite efforts from **India** and other stakeholders, the **first meeting of stakeholders** has not yet taken place as initially scheduled.
- **Infrastructure Development**: Countries like **Saudi Arabia**, **UAE**, and **India** are working on the required infrastructure for the project, but the absence of a definitive peace agreement in the region complicates the development process.

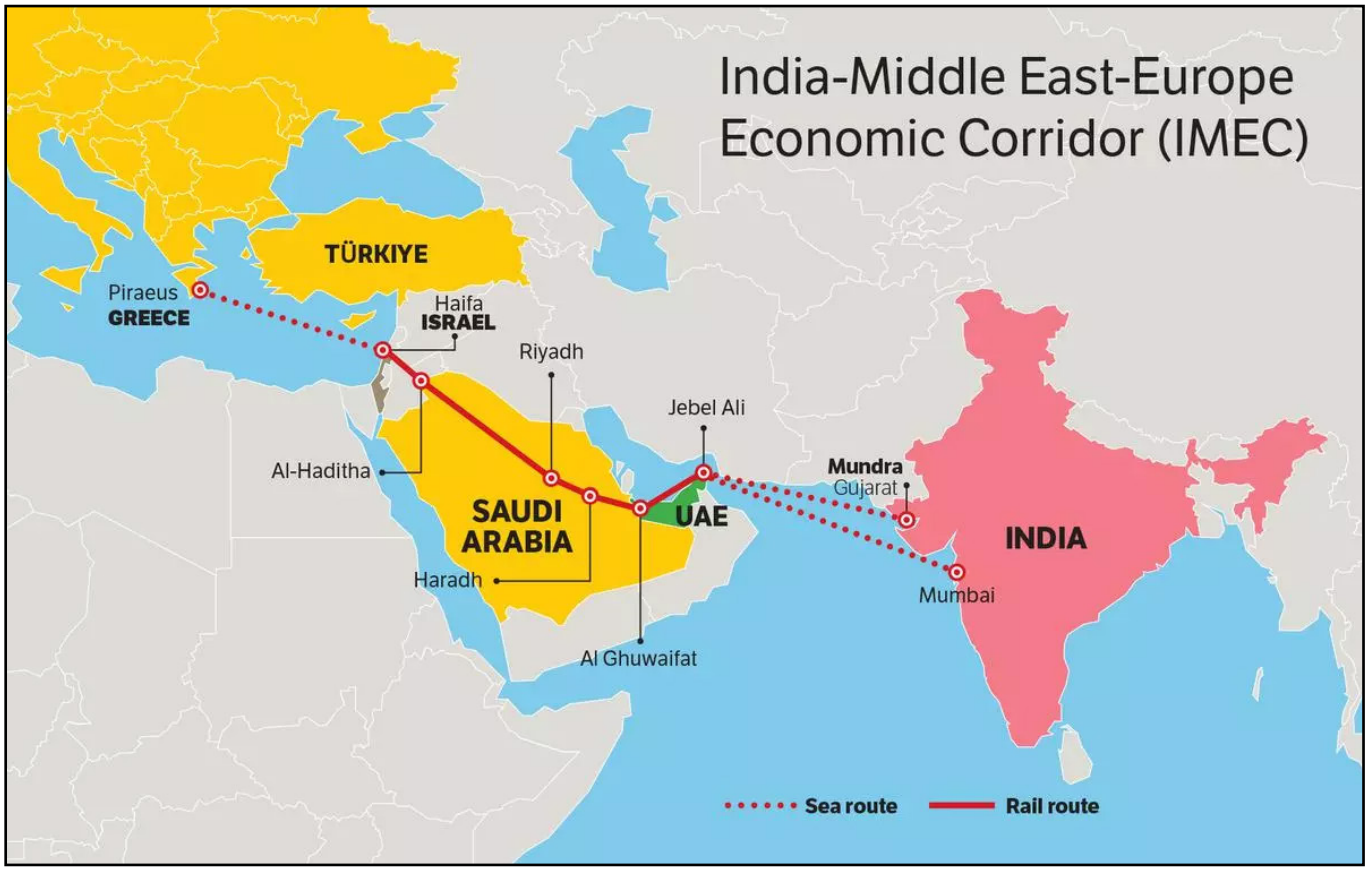


Figure No. 01

U.S. CITIZENSHIP POLICY CHANGES AND INDIA'S CITIZENSHIP LAWS

Context

In a recent development, U.S. President Donald Trump signed an executive order that drastically alters how U.S. citizenship is granted. The new order limits citizenship to children born in the U.S. to parents who are either U.S. citizens or permanent residents (Green Card holders).

Legal Principles of Citizenship: *Jus Soli vs. Jus Sanguinis*

There are two main legal systems used worldwide to determine citizenship:

- **Jus Soli (Right of the Soil)**: Under this principle, a child's citizenship is determined by their place of birth.
  - Countries such as the **U.S.**, **Canada**, **Mexico**, and many countries in **Latin America** follow **jus soli**. If a child is born in one of these countries, they are automatically granted citizenship, regardless of their parents' citizenship.
- **Jus Sanguinis (Right of Blood)**: Here, a child's citizenship is determined by the citizenship of their parents.
  - This principle is followed in countries such as **Germany**, **India**, and **Egypt**. Citizenship is passed from parent to child, irrespective of where the child is born.

Current Issue in the U.S.: Trump's Executive Order

- Historically, the **United States** has followed the ***jus soli*** principle, granting automatic citizenship to anyone born on U.S. soil.
- However, President **Trump's executive order**, titled "**Protecting the Meaning and Value of American Citizenship**", proposes a change.
- According to this order, U.S. citizenship will be granted **only to children born in the U.S. whose parents are U.S. citizens or permanent residents (Green Card holders)**.
- The **motivation** behind this change stems from concerns about illegal immigration and the flow of migrants from countries like Mexico. Trump believes that restricting birthright citizenship will reduce **birth tourism** and illegal immigration.
- However, this executive order has been met with legal opposition. A **federal court in Washington** temporarily blocked the order, calling it **"blatantly unconstitutional."**

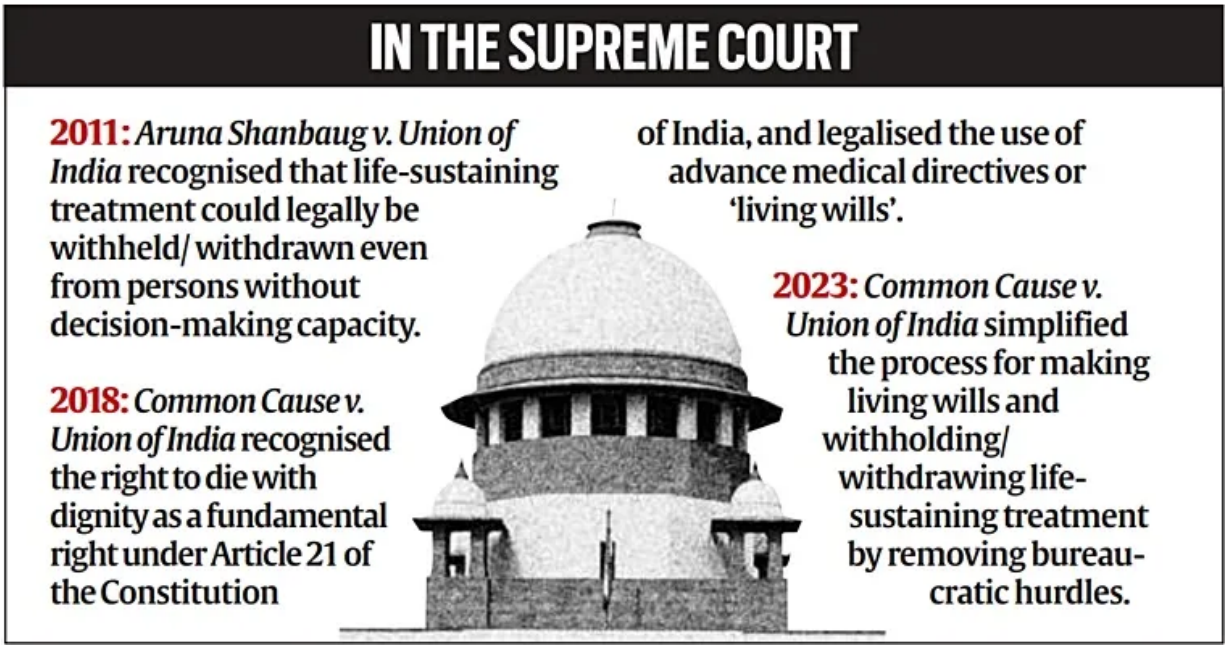


Figure No. 02

Citizenship in India

- Citizenship in India is governed by the **Citizenship Act, 1955**.
- Citizenship signifies the relationship between **'individual' and 'state'.**
- India has two kinds of people—**citizens and aliens**. Citizens are full members of the Indian State and owe allegiance to it. They enjoy all civil and political rights.
- Citizenship is an **idea of exclusion** as it **excludes non-citizens.**
- Till June 1987, India followed the ***'jus soli'* principle** granting automatic citizenship to anyone born in India.
- Subsequently, the law was amended to introduce the ***'jus sanguinis'* principle**.
  - **Before 1987:** India followed the jus soli principle, meaning any child born in India was automatically granted Indian citizenship.
  - **After 1987:** The law was amended to require that at least one parent be an Indian citizen for a child to receive Indian citizenship.
  - **After 2004:** Further amendments restricted citizenship, stating that both parents must be Indian citizens, or one parent must be an Indian citizen while the other cannot be an illegal immigrant.

This shift was primarily aimed at addressing the issue of **illegal immigration** from countries like **Bangladesh**.

KARNATAKA ALLOWS 'RIGHT TO DIE WITH DIGNITY'

Context

Karnataka has taken a landmark step in facilitating the **right to die with dignity** to implement the **Supreme Court's 2023 directive**, becoming the **first state to do so.**

Background

- This move is in line with the **Supreme Court's 2023 ruling**, which affirmed that the **Right to Life** under **Article 21 of the Constitution** also includes the **right to die with dignity (Withdrawal of Life-Sustaining Therapy (WLST)).**
- Supreme Court has held that if a patient is terminally ill and is undergoing prolonged medical treatment with no hope of recovery and cure of the ailment, and does not have decision-making capacity, then WLST may be appropriate, in accordance with the prescribed procedure.
- In response to this, the Karnataka government has taken proactive steps to implement a system that formalizes the process of **passive euthanasia** through **Advance Medical Directives (AMD)**, also known as **living wills**.

What is Withdrawing Life-Sustaining Treatment?

- Withholding or withdrawing life-sustaining treatment refers to stopping medical interventions such as **ventilators**, **feeding tubes**, and other artificial means that help maintain vital bodily functions.
- This decision is made when these treatments no longer improve the patient's condition or when they only serve to prolong suffering.

Difference Between Withdrawing Life Support and Euthanasia

- **Withdrawing Life-Sustaining Treatment (Passive Euthanasia)**: This involves stopping treatment when it is no longer beneficial, and the patient is in a terminal state. The patient is allowed to die naturally, with pain relief and comfort care provided.
- **Euthanasia:** This is the intentional act of ending a patient's life to relieve suffering, typically administered by a doctor. It is not legal in India unless passive euthanasia is followed as per the defined guidelines.

What is an Advance Medical Directive (AMD)?

- An **Advance Medical Directive (AMD)**, or **living will**, is a legal document in which a person outlines their wishes regarding medical treatment in case they become terminally ill or are unable to communicate.
- This allows individuals to express their desires about life-sustaining treatments, such as whether or not they wish to be kept alive through artificial means in the event of severe illness or injury.
- The Karnataka order enables individuals to execute an AMD and register it with the local government or the healthcare establishment to ensure that their medical wishes are known and respected when the time comes.
- While **living wills** are **legal in India**, their adoption has been slow.
- The **Supreme Court** had allowed **passive euthanasia** in 2018, but with strict guidelines.

Implications of the Karnataka Order

- **Dignified End-of-Life Care**: The decision allows terminally ill patients to choose a **dignified death** by having their **life-sustaining treatments withdrawn** if there is no hope of recovery. This will provide much-needed relief for patients who may be suffering from debilitating conditions.
- **Legal and Humane Framework**: The Karnataka order establishes a **humane, legally sanctioned process** for passive euthanasia, which **balances medical ethics and the patient's autonomy**. It also ensures **legal oversight** to prevent misuse and to safeguard the rights of the patient.
- **Progressive Step for Healthcare**: By becoming the first state to implement such a framework, Karnataka is leading the way in **upholding human rights and healthcare values**, offering individuals greater control over their healthcare decisions.

Reasons for favouring passive euthanasia	Arguments against euthanasia
Right to Die with Dignity: Article 21 ensures the right to life with dignity, which extends to the right to die with dignity, supporting passive euthanasia.	**Against the Constitution:** Legalizing euthanasia contradicts Article 21, which protects the right to life and liberty, potentially leading the State to neglect investments in healthcare.
Reducing Caregiver Burden: In cases like Aruna Shanbaug's, where the patient is beyond recovery, passive euthanasia can alleviate the emotional and physical strain on caregivers.	**Potential for Misuse**, leading to the disposal of people with incurable illnesses in society.
Right to Refuse Medical Treatment: Patients have the right to refuse treatment, which can be seen as a form of passive euthanasia.	**Mental Health Issues:** There is a need to assess the mental state of individuals seeking euthanasia.
Encourages Organ Donation: Passive euthanasia and living wills can help facilitate organ donations, saving other lives.	**Malafide Intentions**: Can be misused by family members to inherit the patient's property.

GENDER BUDGET AND WOMEN'S EDUCATION IN DELHI

Context

The **gender budget of Delhi** has grown significantly over the last decade, reflecting a stronger focus on **women's welfare in the region.** However, while the overall budget for Delhi has increased substantially, questions remain about the **allocation towards women's education**, a key factor in their economic and social empowerment.

What is the Importance of Women's Education?

- Investing in women's education has long-term benefits for both individuals and the economy.
- Educating women can help reduce the gender gap in employment and lead to wage parity.
- However, despite the growing gender budget, **investment in women's education has not kept pace with other expenditures**, raising concerns about its prioritization.
  - **2017-18 Peak:** Women's education accounted for 54% of the gender budget but has since fallen to just 27% in 2024-25.

- **Recent Decline:** In the last year, the education budget has decreased by 9%, marking a shift towards cash transfers and other welfare schemes, instead of structural investments like education.

Key Figures:

- **Delhi's Total Budget:** Increased from Rs 271 billion in 2011-12 to Rs 760 billion in 2024-25.
- **Gender Budget Growth:** The gender budget has risen seven-fold, from ₹10 billion in 2011-12 to Rs 71 billion in 2024-25.
- **Women's Education Budget:** Initially Rs 2 billion in 2011-12, rising to ₹18 billion in 2024-25, but it peaked at Rs 24 billion in 2017-18 before declining.

Impact on Women's Employment and Skills:

- **Low Female Labour Force Participation:** Delhi's female labour force participation stands at 21%, far below the **national average of 45.2%.** This is the **lowest in India**, highlighting limited job opportunities for women.
- **Low-Paid, Low-Skill Jobs:** Women are mainly employed in **low-paying, low-skill jobs** like house cleaning and domestic work. This indicates a direct link between inadequate education and limited career opportunities.
- **Gender Gap in Top Roles:** Women hold just **6% of top managerial roles** (like legislators, senior managers, and CEOs), with 94% of such positions held by men. This reflects the underrepresentation of women in higher-skilled and leadership positions.
- **Underrepresentation in High-Skill Jobs:** Only 3.8% of women in Delhi work in technical or professional jobs, compared to 10.34% of men. This suggests that women are not benefiting equally from the skilled job market.
- **Concentration in specific sector**: The lack of investment in technical and professional education for women has led to their concentration in specific sectors such as teaching and healthcare. To reduce gender gaps, it is essential to focus on increasing opportunities in technical education, professional courses, and skill development programs.

Government's intervention for Education

- **Schemes for social security**: Beti Bachao Beti Padhao (BBBP), Pradhan Mantri Awas Yojana (Urban & Rural), the National Social Assistance Programme (NSAP), Pradhan Mantri Vyay Vandana Yojana (PMVVY) and Scheme for Adolescent Girls (SAG) sup
- **Education and Skill Development**: Samagra Shiksha, Scheme of National Overseas Scholarship, Babu Jagjivan Ram Chhatrawas Yojna, Swacch Vidyalaya Mission, etc.
  - **National Education Policy (NEP), 2020** prioritises gender equity and envisions ensuring equitable access to quality education to all students.
- **Economic Empowerment**: Pradhan Mantri Mudra Yojana & Stand Up India, National Skill Development Policy
- **Labour and Workplace Reforms**: Code on Wages, 2019 & Industrial Relations Code, 2020, MGNREGA
- **Mission Shakti**: It is an integrated scheme to address women's issues across their life cycle and empower them as equal partners in nation-building.

INDIA'S AILING DIAGNOSTICS SECTOR

Context

The **private diagnostics sector** in India is facing significant scrutiny after a series of cases highlighted concerns over the **accuracy and reliability of medical tests.** Reports of incorrect test results leading to improper treatments have raised alarms about the lack of qualified professionals in diagnostic labs, pointing to systemic issues in the sector.

Current Status of the Sector

- The diagnostics industry in India consists of around 300,000 labs, with the sector contributing 9% to India's healthcare industry, valued at Rs 860 billion in 2024 and expected to grow to Rs 1,275 billion by 2028.
- **Main segments of the sector:**
  - **Pathology** involves diagnosis of diseases through the examination of tissues, cells, and body fluids
  - **Radiology** involves use of medical imaging techniques to diagnose and treat diseases and injuries. Radiology is split into
    - Soft (x-ray and ultrasound)
    - Advanced radiology (CT-scan, MRI, nuclear imaging, and interventional radiology)
- **Reason behind growth**: Rising prevalence of chronic diseases, growth in geriatric population, demand for preventive tests, and higher penetration of government insurance schemes.
- Despite rapid growth, the sector remains under-regulated and fragmented, with many small, unorganised labs operating with varying standards.

Regulations:

- The **Clinical Establishments (Registration and Regulation) Act 2010** aims to bring all diagnostic centres and labs under its ambit, with their registration with respective State councils as clinical establishments.

- The **National Commission for Allied and Healthcare Professions (NCAHP) Act 2021** do not permit laboratory technicians to practice independently and issue reports without certification by a pathologist.
- Diagnostic centres in India can obtain accreditation voluntarily from organisations such as the **National Accreditation Board for Testing and Calibration Laboratories (NABL).**

Issues Faced by the Sector

- **Lack of Skilled Personnel**: There is a significant shortage of qualified lab technicians, pathologists, and microbiologists. This leads to many diagnostic centers operating with untrained staff, which affects the quality and reliability of test results.
- **Fragmentation and Under-Regulation**: The sector is highly fragmented due to low entry barriers and the absence of stringent regulations. While some states have adopted regulations like the **Clinical Establishments Act**, implementation is inconsistent, and many labs remain unaccredited.
- **Regulatory Gaps**: There are gaps in the enforcement of laws in several states. For instance, states like Karnataka and Tamil Nadu struggle with inadequate regulation of the diagnostics sector, particularly regarding lab quality assurance, staff qualifications, and transparency.
- **Urban-Rural Divide**: There is a significant disparity in diagnostic services between urban and rural areas. While most diagnostic labs are concentrated in urban areas, rural regions, home to 70% of India's population, account for only 24% of diagnostics revenue.
- **Pricing and Affordability**: Pricing in the diagnostics sector varies widely, with some patients being charged exorbitant fees for routine tests. Government initiatives like **T-Diagnostics** in Telangana aim to provide affordable diagnostic services, but issues with supply and resource allocation have hindered their effectiveness.
- **Quality Assurance Issues**: Many diagnostic centers lack standard operating procedures (SOPs) for sample collection, testing, and reporting. Inadequate attention to quality control, including proper biomedical waste management, has led to concerns about the reliability of lab results.
- **Space and Infrastructure Constraints**: Several states have stringent space requirements for labs, which are often unfeasible for small-scale diagnostics providers. In Kerala, for example, only a fraction of the 6,500 small labs would be able to comply with existing space standards under the **State Clinical Establishments Act**.

RAJASTHAN PROHIBITION OF UNLAWFUL CONVERSION OF RELIGION BILL, 2025

Context

The **Rajasthan Prohibition of Unlawful Conversion of Religion Bill, 2025,** was introduced in the state Assembly, during the ongoing Budget Session. The bill aims to regulate and prohibit unlawful religious conversions in the state, with stringent penalties for violators.

Key Provisions of the Bill

- **Cognizable and Non-Bailable Offence**: The offence under this bill is cognisable (allowing police to make an arrest without a warrant) and non-bailable. This means the accused can be arrested and denied bail during the investigation.
- **Punishment and Penalties**:
  - **General Offences**: If religious conversion is done by misrepresentation, force, coercion, undue influence, allurement, fraudulent means, or by marriage, the offender faces imprisonment of **1 to 5 years** and a fine of **Rs 15,000**.
  - **Conversion of Minors, Women, or Scheduled Castes/Scheduled Tribes**: The punishment for violations involving vulnerable groups is **2 to 10 years imprisonment** with a fine of **Rs 25,000**.
  - **Mass Conversions**: The bill mandates **3 to 10 years of imprisonment** and a fine of **Rs 50,000** for cases of mass conversions.
- **Declaration Requirement**: Individuals wishing to convert must submit a declaration to the **District Magistrate** at least **60 days** prior to the conversion. This provision ensures a legal process for religious conversions.
- **Compensation for Victims**: The court may direct the accused to pay **compensation to the victim**, which can extend up to **Rs 5 lakh**.
- **Repeat Offenders**: **Double punishment** is proposed for repeat offenders, increasing the severity of penalties for those who commit the offence multiple times.
- Earlier to this, several states like **Uttar Pradesh, Karnataka, Gujarat, Madhya Pradesh, Chhattisgarh**, etc have passed anti-conversion laws to curb the forceful religious conversion.

Supreme Court Judgments on Conversion and Marriage

- **Hadiya vs. Ashokan K.M. (2017)**: The Court ruled that an adult has the right to marry and convert to another religion of their choice. The state cannot interfere with an individual's freedom to marry or convert.
- **Lata Singh vs. State of Uttar Pradesh (2006)**: The Court upheld an individual's right to marry anyone of their choice, regardless of religion or caste. Any state or external interference in this right is a violation of personal liberty.
- **Sarla Mudgal vs. Union of India (1995)**: Conversion for marriage is permissible, but it cannot be used to avoid legal responsibilities, such as under the Hindu Marriage Act. The Court ruled such conversions are invalid in legal proceedings if done solely for evading laws.
- **S. Pushpabai vs. C.T. Selvaraj (1982)**: The Court affirmed that conversion must be genuine and voluntary. Any coercion or misrepresentation in religious conversion violates the right to religious freedom.

FACT BOX

Protection Of Freedom Of Religion Under Indian Constitution

Article 25 to 28 of **Part-3 (Fundamental Rights) of the Constitution** confers the Right to freedom of religion.

- **Article 25(1)** of the Constitution guarantees the "freedom of conscience and the right freely to profess, practise and propagate religion".
  - It is a right that guarantees a negative liberty ï¿½ which means that the state shall ensure that there is no interference or obstacle to exercise this freedom.
  - However, like all fundamental rights, the state can restrict the right for grounds of public order, decency, morality, health and other state interests.
- **Article 26**: Freedom to manage religious affairs subject to public order, morality and health.
- **Article 27:** No person shall be compelled to pay any taxes for the promotion or maintenance of any particular religion.
- **Article 28:** Freedom to attend religious instruction or religious worship in certain educational institutions.

Global Practices

- In **Algeria,** the constitution declares that Islam is the state religion. An attempt to convert a Muslim is penalised with five years in prison and a fine of USD 70 to USD 140.
- **Bhutan** introduced an **anti-conversion clause** in 2011 which imposes an imprisonment of three years.
- The **Constitution of the United Arab Emirates (UAE)** states that it is illegal to convert from Islam and leaving the Islamic faith is a crime punishable by death.

IMPACT OF TAX CUT IN UNION BUDGET

Context

The Budget introduces a **massive income tax cut** to spur consumer consumption and economic activity. The government estimates that Rs 1 lakh crore will be foregone in tax revenues, and this money is expected to flow back into the economy through higher consumption.

Key-highlights of the Tax Reform:

- The budget has proposed to exempt individuals with income (excluding incomes taxable at special rates like capital gains) up to **Rs 12 lakhs** from paying income tax from FY 2025-26 onwards.
  - The **annual limit for TDS on rent** has been raised from Rs 2.40 lakh to Rs 6 lakh, benefiting small taxpayers receiving smaller payments.
- This **Rs 1 lakh crore** largesse has been given in the hope of driving consumption and GDP growth, thereof.

What are the potential impact of Tax Cut?

- The tax cut aims to increase **disposable income** for citizens, allowing them to spend more on goods and services.
- This is seen as a way to address the **demand-side problem** of the economy, as businesses are unlikely to invest without adequate consumer demand.
- Economic Theory Behind the Tax Cut:
  - **Multiplier Effect**: Economists suggest that the multiplier effect of an income tax cut is 1.01. This means that for every rupee cut in income tax, the GDP could grow by Rs 1.01 due to increased consumption.
  - **Increased Savings and Lower Interest Rates**: The additional income can also increase savings, which could lower interest rates and stimulate more borrowing and economic activity.
- However, experts caution that the Rs 1 lakh crore tax cut may not be sufficient to trigger a full economic recovery, as **India's GDP is much larger**, and the **total private final consumption expenditure (PFCE)** is around Rs 200 lakh crore.

Key Challenges and Potential Pitfalls

While the tax cut may have positive short-term effects, experts argue that a comprehensive strategy for sustained economic growth is still lacking.

- **Limited Impact of Tax Cuts**: Critics point out that a tax cut, while helpful in the short term, will not solve the fundamental issue of low income growth across the population.
- **Income Inequality**: Tax cuts benefit a small portion of the population (those who pay income taxes). Since only a small segment of the population pays income taxes, the broader effect of tax cuts on consumption might be limited.
- **External Dependencies**: If increased consumer spending focuses on imported goods or services, it could lead to higher imports and inflation, rather than boosting domestic industries.
- **Increased Domestic Inflation**: More money in circulation may lead to higher demand, which could push up prices, especially if supply doesn't keep pace with demand.

US IMPOSES NEW TARIFFS

Context

In a significant escalation of trade tensions, **US President Donald Trump** signed an executive order imposing new tariffs on imports from **Canada**, **Mexico**, and **China**. President Trump's executive order imposes:

- 25% tariff on all goods imported from Mexico and Canada (except for energy products from Canada, which are taxed at 10%).
- 10% tariff on all goods imported from China.

Why Did Trump Impose These Tariffs?

The US government has provided several reasons for this decision, focusing on national security and public health concerns:

- **Fentanyl Crisis**: The administration argues that these tariffs are aimed at curbing the flow of **fentanyl**, a deadly drug primarily trafficked through **Mexico** and **China**. The White House claims that fentanyl is the **leading cause of death** for Americans aged 18-45.
- **Illegal Immigration**: The tariffs are also seen as a way to force **Mexico** to take stronger actions to curb illegal immigration into the United States.
- **Holding Countries Accountable**: According to the White House, the tariffs are a tool to hold **Mexico**, **Canada**, and **China** accountable for their failure to meet promises regarding illegal drugs and immigration.

What are tariffs?

- Tariff is a tax.
- It is levied on **foreign goods** imported into a country.

The US is currently the largest goods importer in the world – in 2022, the value of imported goods in the US totalled USD 3.2tn.

- Tariffs are paid by the importer, or an intermediary acting on the importer's behalf, though the costs are typically passed on.
- They makes imported products more expensive than domestic ones.
- **Other trade barriers:** Quotas, licenses, and standardization
- Common Types of Tariffs
  - Specific tariffs
  - Ad valorem tariffs
  - Licenses
  - Import quotas
  - Voluntary export restraints
  - Local content requirements

INDIA'S ECONOMIC SLOWDOWN

Context

India's economic growth appears to be losing momentum. After achieving 8.2% growth in 2023-24, the economy grew by only 5.4% in the second quarter of 2024, marking the slowest pace in six quarters. While a growth rate above 6% is seen as aspirational for most economies, for India, this rate is insufficient to meet the ambitious goal of becoming a developed nation by 2047.

What is Economic Slowdown?

- An economic slowdown is a period of **slower economic growth**, typically characterised by a decrease in the rate of growth of real **gross domestic product (GDP).**
- It means the production and earnings of these economies are not growing at the same pace as, say, last year.
- **Causing factors:** Declining consumer and business confidence, rising unemployment, and slowing global trade.

Key Contributing Factors to the Slowdown

- **Weak Demand Side**: The main factor behind the slowdown is the weakness in **domestic demand**, particularly in consumption expenditure and investment.
  - **Private Consumption**: This remains sluggish, especially after the pandemic stimulus packages ended. It has stayed below 60% of GDP for most of the past two years, further dipping to 53% in Q3 of 2023-24.
  - **Fixed Capital Formation (Investment)**: Public investment, initially expected to spur private investment, has also slowed. Government **capital expenditure** dropped by over 12% in the first eight months of 2024 compared to the previous year.
- **Declining Private Investment**: Despite **corporate tax cuts** before the pandemic, **private investment** has been declining, particularly in 2024. There are signs that public investment is also slowing, undermining the expectation that it would "crowd in" private investment.
- **Wage Squeeze and Inflation**: The workforce, particularly in the **informal sector**, faces stagnant or **declining real wages.** A report showed that while nominal wages increased slightly in key sectors, inflation, especially food inflation, outpaced wage growth. This disparity between wage growth and inflation is curbing purchasing power, leading to sluggish demand.
  - Corporate profits, however, have surged, exacerbating income inequality and dampening overall demand.
- **Labour Market Issues**: Data from the **Periodic Labour Force Survey** shows that only 20% of India's workforce has regular, salaried jobs, with many lacking job security or social benefits. The majority of workers in the informal sector face uncertainty and low wages, which hinders overall consumption.

INDIA'S EV CHARGING MARKET

Context

India's **electric vehicle (EV)** market is at a pivotal point, with significant investments already made in the sector, yet substantial growth in charging infrastructure is still required. Despite over **USD 450 million (Rs 30,000 crores)** having been invested in startups focused on charging networks and **battery-swapping models**, the country still faces a major gap in its **public charging infrastructure**.

What is the state of EV's charging market?

- There is currently only **one public charging station for every 135 EVs** in India.
- This ratio is drastically lower than the global average of **one station per 6 to 20 EVs**.
- **Government Targets and Infrastructure Requirements:** The Indian government has set an ambitious target for EV adoption, with the goal for EVs to account for **30%** of all new private vehicle registrations by **2030**.
  - This would result in approximately **80 million EVs** on Indian roads by that year.
  - In order to accommodate this massive increase, India will require a total of **3.9 million charging stations** by 2030, according to the report titled **Charging Ahead II**.
  - This would ensure that there is one charging station for every **20 vehicles**, a crucial metric for facilitating widespread EV adoption.

Challenges and Roadblocks

- **Capital-intensive nature**: Building charging stations requires considerable investment, and securing funding remains a challenge.
- **Land acquisition hurdles**: Securing land for charging stations, especially in urban areas, continues to be a major bottleneck.
- **Grid reliability**: Ensuring the stability and reliability of the power grid to support large-scale EV charging infrastructure is another pressing concern.
- **Low EV penetration in rural areas**: While urban areas are seeing significant growth, rural areas still face challenges in terms of EV adoption, limiting the overall demand for charging stations.

FACT BOX

Government Interventions:

- **Faster Adoption and Manufacturing of Electric Vehicles (FAME) scheme II**, which provides incentives for EV manufacturers and buyers. These incentives include subsidies, tax rebates, preferential financing, and exemptions from road tax and registration fees.
- **National Electric Mobility Mission Plan (NEMMP),** which sets out the target to achieve 6-7 million sales of hybrid and electric vehicles year on year from 2020 onwards by providing fiscal incentives.
- **National Mission on Transformative Mobility and Battery Storage**, which seeks to create a comprehensive ecosystem for the adoption of EVs and support the establishment of Giga-scale battery manufacturing plants in India.
- **Production Linked Incentive (PLI) scheme**, which provides incentives for the manufacturing of electric vehicles and components.
- **Vehicle Scrappage Policy**, which provides incentives for the scrapping of old vehicles and the purchase of new electric vehicles.
- **Go Electric campaign** aims to create awareness on the benefits of EVs and EV charging infrastructure.

Electric Vehicle (EV)

- An electric vehicle (EV) is a mode of transport which is powered by electricity.
- Unlike conventional vehicles that use a **gasoline (petrol) or diesel-powered engine**, EV uses an **electric motor** powered by electricity from batteries or a fuel cell.
- Because it runs on electricity, the vehicle emits no exhaust from a tailpipe and does not contain the typical liquid fuel components, such as a fuel pump, fuel line, or fuel tank.

ETHANOL BLENDING & IMPACT

Context:

India is on track to achieve its target of **20% ethanol blending** in petrol **ahead of schedule**, with the goal set to be met in the next **two months**, a year earlier than expected. This ambitious target would require the **production of nearly 1,100 crore litres** of ethanol annually.

Key Highlights:

- **Ethanol Production Sources**: The **1,100 crore litres of ethanol** required to meet the 20% blending target will come from a variety of feedstocks:
  - **Sugar and high-grade molasses**: Expected to contribute around **400 crore litres**.
  - **Food Corporation of India (FCI) rice**: About **110 crore litres** of ethanol is projected to come from FCI rice this year.
  - **Maize**: This will account for around **350-400 crore litres** of ethanol, a notable shift, as ethanol production from maize has grown significantly since 2020.
- **Ethanol Distillery Capacity**: India's **ethanol distillery capacity** has grown to **1,600 crore litres**, driven by **government incentives** and a **stable, lucrative market** for ethanol production.

Maize's Role:

- Maize, traditionally used for food, animal feed, and starch, has gained importance in **ethanol production**.
- With the increase in demand for ethanol, maize is now cultivated more extensively for fuel.
- The **government's policy** to allow ethanol production from maize has spurred its growth, and it has become a key **feedstock** alongside sugarcane.

- Initially, India was not producing much ethanol from maize, but now it is expected to produce **350-400 crore litres** of ethanol from **9 million tonnes** of maize.
  - This shift is supported by farmers turning to maize cultivation, particularly in states like **Karnataka, Madhya Pradesh, Maharashtra**, and others, as it offers better financial returns than traditional uses like poultry feed.

Negative Impact:

- The shift towards ethanol production could impact food supply, as maize, which is usually used for **livestock feed**, is now increasingly diverted to ethanol production.
- If more **land** is used for **maize cultivation**, it could reduce the availability of land for **other food crops**.

What is Ethanol Blending?

- Ethanol is one of the **primary biofuels**, naturally produced through the **fermentation of sugars by yeasts or through petrochemical processes** like **ethylene hydration.**
- It is widely used not only as an **alternative fuel source** but also in various industries as a **chemical solvent** and in the **synthesis of organic compounds**.
- **Medical applications**: antiseptic and disinfectant
- **Ethanol blending** is the process of mixing ethanol, an alcohol-based fuel made from renewable sources like sugarcane, maize, or rice, with petrol.
- The practice of blending ethanol with petrol began in **2001 as a pilot project.**
- The **ethanol blend** is used in **internal combustion engines**, reducing dependence on fossil fuels and decreasing air pollution.
- Blending ethanol into petrol also helps mitigate the **economic impact** of oil import bills and promotes **sustainable fuel options**.

Maize Cultivation

- In India, maize is principally grown in two seasons, rainy (kharif) and winter (rabi). Kharif maize represents around 83% of maize area in India, while rabi maize correspond to 17% maize area.
- **Temperature:** 25° Celsius-30° Celsius
- **Soil:** Fertile well-drained alluvial or simply red loams free of coarse elements and full off nitrogen.
- **Maize Producing States:** Karnataka, Madhya Pradesh, Maharashtra, Telangana, Rajasthan, Tamil Nadu, Bihar, Uttar Pradesh, and Gujarat.
- Globally, maize is grown over **207 million hectares** producing over 1,218 mt in 2022-23. The **United States** remains the largest producer of maize.
  - The **US, Brazil and Argentina** - the three largest producers of maize - dominate the global trade of 197 mt of maize exported primarily to **China, the European Union, Mexico, Japan, South Korea, Vietnam, Iran and Egypt.**
  - India barely contributed **3 per cent** at 34.6 mt from around 11 million hectares in 2022-23.

UPSC PYQ

Q: Given below are the names of four energy crops. Which one of them can be cultivated for ethanol? (2010)

(a) Jatropha
(b) Maize
(c) Pongamia
(d) Sunflower

Solution: (b)

Q: According to India's National Policy on Biofuels, which of the following can be used as raw materials for the production of biofuels? (2020)

(1) Cassava
(2) Damaged wheat grains
(3) Groundnut seeds
(4) Horse gram
(5) Rotten potatoes
(6) Sugar beet

Select the correct answer using the code given below:

(a) 1, 2, 5 and 6 only

(b) 1, 3, 4 and 6 only

(c) 2, 3, 4 and 5 only

(d) 1, 2, 3, 4, 5 and 6

Solution: (a)

INDIA'S TRANSITION TO CLEAN ENERGY

Context

The **Union Budget 2025**, tabled on **1 February**, continues to prioritize **energy security** and **energy transition** with significant investments and policy reforms aimed at transforming India's energy landscape. However, challenges remain in fully achieving energy transition goals, especially in the face of global disruptions and domestic policy complexities.

Measures taken by Government for clean energy

- **Budget Allocations for Renewable Energy**: The **Ministry of New and Renewable Energy's** budget allocation increased from Rs 1,535 crore in fiscal year 2015 to Rs 32,626 crore in 2025, highlighting India's growing commitment to clean energy.

- However, there has been underutilization of these funds in most years, except for 2015 and 2023, leading to lower **revised estimates (REs).**

- **PM-KUSUM Scheme**: Launched in 2019 with an outlay of Rs 34,422 crore, the **PM-KUSUM** scheme aimed to set up off-grid solar irrigation pumps and grid-connected solar plants on fallow farmlands. Despite its ambitious goals, the scheme's response has been underwhelming, with less than half a gigawatt of installed capacity achieved so far.
- **Exemptions to Customs Duty**: Recognizing the inflationary impact of steep **basic customs duty (BCD)**, the government decided to **exempt 12 critical minerals** and **35 capital goods** from these duties. This policy shift aims to facilitate the local production of lithium-ion battery technology, crucial for India's renewable energy future.

Major schemes to promote clean energy and sustainable living:

- Green Hydrogen Mission
- PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth
- GOBARdhan (Galvanizing Organic Bio-Agro Resources Dhan) scheme
- Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI)
- Amrit Dharohar
- Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA)
- Green Energy Corridor (GEC)
- National Smart Grid Mission (NSGM) and Smart Meter National Programme
- International Solar Alliance (ISA)
- Surya Ghar Muft Bijli Yojana

Renewable Energy Capacity in India (2024)

- As of 2024, India has a combined installed renewable energy capacity of 195.01 GW. The distribution of this capacity across different renewable energy sources is as follows:
  - **Wind Power**: 46.65 GW
  - **Solar Power**: 85.47 GW
  - **Biomass/Co-generation**: 10.35 GW
  - **Small Hydro Power**: 5 GW
  - **Waste to Energy**: 0.59 GW
  - **Large Hydro**: 46.92 GW

India's Targets

- India aims for **net zero by 2070** with **50% non-fossil electricity by 2030** and ranks **fourth globally** in renewable energy capacity, supported by a 36.5% CAGR in solar over 11 years.
- Additionally, its **2030 Nationally Determined Contributions (NDCs)** under the **UNFCCC** highlight five key objectives:
  - Promoting sustainable lifestyles under the **"LIFE" initiative**, reducing emissions intensity of GDP by 45% from 2005 levels
  - Achieving **50% electric power capacity from non-fossil fuel sources**
  - Creating an additional carbon sink of 2.5 to 3 billion tons of CO_2 equivalent through forest and tree cover
  - Enhancing investments in climate-vulnerable sectors like agriculture, water, and disaster management

Challenges in Clean Energy Adoption

- **Import Dependence and Tariffs**: In a bid to reduce reliance on Chinese imports, the government imposed a **40% basic customs duty (BCD)** on solar modules and **25% on solar cells**. While this aimed to boost domestic manufacturing, it led to rising solar power prices and slowed installation across the country.
- **Coal Dominance in Power Generation**: Despite significant growth in renewable energy, **coal** still contributes to about **70% of India's power output** (as of October 2024). Experts have stressed the need for **grid-scale battery storage technology** to address the intermittent nature of renewable energy production and reduce reliance on fossil fuels.
- **Critical Minerals Framework**: India faces the challenge of securing **critical minerals** needed for energy transition technologies. These minerals, essential for batteries and solar cells, are largely imported, particularly from China.
- **Equitable implementation of initiatives**, especially in areas like rooftop solar uptake, remains uneven across states.
- **Infrastructure readiness** for the integration of renewables and the need for large-scale battery storage are key hurdles.

UPSC PYQ

Q: "Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs)". Comment on the progress made in India in this regard. (2018)

NUCLEAR ENERGY MISSION

Context

The **Budget 2025-26** announced a **dedicated Nuclear Energy Mission** with an allocation of **Rs 20,000 crore**. The mission's primary objective is to operationalize **five Small**

Modular Reactors (SMRs) by **2033**. This move is a part of India's broader strategy to enhance its **nuclear energy capabilities** and strengthen its **clean energy** output, aligning with the country's commitment to **reduce carbon emissions** and work towards a **net-zero emission target by 2070**.

Key Highlights:

- The **Nuclear Energy Mission for Viksit Bharat** aims to **enhance domestic nuclear capabilities**, **promote private sector participation**, and **accelerate the deployment of advanced nuclear technologies** such as **Small Modular Reactors (SMRs).**
- The government has allocated **Rs 20,000 crore** for this initiative, aiming to develop at least **five indigenously designed and operational SMRs by 2033.**
- **Involvement of Private Sector**: The mission will include the **private sector** through amendments to the Atomic Energy Act with the motive of:
  - Setting up Bharat Small Reactors
  - Research & development of Bharat Small Modular Reactor
  - Research & development of newer technologies for nuclear energy

What are Small Modular Reactors (SMRs)?

- SMRs are smaller, modular nuclear reactors capable of generating up to **300 megawatts (MWe)** of electricity per unit, which is about **one-third of traditional nuclear plants**.
- **Faster, Cheaper Construction**: SMRs are designed to be manufactured in factories and transported to installation sites. This significantly reduces **construction timelines** and **costs**, making nuclear power more accessible and economically viable.
- **Enhanced Safety Features**: These reactors are equipped with **passive safety systems**, ensuring they can safely shut down during emergencies without human intervention.
- **Versatile Applications**: Beyond electricity generation, SMRs can also be used for **desalination**, **heating**, and other industrial processes, broadening their utility.
- **Deployment in Remote Areas**: SMRs offer a solution for areas where large nuclear plants might not be feasible due to space or logistical challenges.

Figure No. 03

Government Initiatives for Enhancing India's Nuclear Capacity

- **The government has initiated steps to increase nuclear power capacity from the current 8,180 MW to** 22,480 MW **by** 2031-32**.**
- **This expansion includes the construction and commissioning of** ten reactors, **totalling** 8,000 MW, **across** Gujarat, Rajasthan, Tamil Nadu, Haryana, Karnataka, **and** Madhya Pradesh**. Additionally, pre-project activities for ten more reactors have commenced, with plans for progressive completion by** 2031-32**.**
- **Further, the government accorded in-principle approval to set up** 6 x 1208 MW nuclear power plant **in cooperation with the** USA **at** Kovvada **in** Srikakulam **district in the state of** Andhra Pradesh.
- **In 2024,** Rajasthan Atomic Power Project's Unit-7 (RAPP-7), one of the country's largest and third indigenous nuclear reactors, reached criticality**,** marking the beginning of controlled fission chain reaction.
- **India's nuclear power plants operate with** stringent safety protocols **and** international oversight**. The** radiation levels **at Indian nuclear facilities are consistently well** below global benchmarks**, underscoring the country's commitment to secure and sustainable nuclear energy.**

GS SCORE

An Institute for Civil Services

IAS PRELIMS 2025

TARGET PT

AN ULTIMATE COURSE *for*

MICRO MANAGEMENT *of the* SYLLABUS

PRELIMS TARGETED CLASSES

- Micro-management of the syllabus through 40 Concept Classes and Daily Tests for GS
- 10+ Classes and Tests for CSAT Paper
- 20+ Current Affairs Tests and Classes covering 800+ Topics from last 2 years
- Special Emphasis on High Yielding Topics

ASSESSMENT

- Daily Tests are designed to reinforce learning, measure understanding and progress.
- Apart from Daily Tests, the following tests are:
  - 6 subject Revision Tests
  - 6 Sectional Tests
  - 20 Mock Tests (GS + CSAT)

PERSONAL MENTORSHIP

- One-on-one session to get Tailor-made individual strategy through Mentorship

PRELIMS STUDY MATERIAL

- Yearly Compilation of Prelims Current Affairs (pdf)
- Prelims Fact File (pdf)

COURSE FEE ₹ 12,500 (+GST)

8448496262 iasscore.in

SECTION -B

QUICK BYTES

SREE GOWREESWARA TEMPLE

Context

Sree Gowreeswara Temple, Cherai, has recently decided to end a nearly century-old practice that required men to remove their upper garments to worship at the temple.

About the Tradition

- The tradition at **Sree Gowreeswara Temple, Cherai**, required men to remove their upper garments, such as shirts, before entering the temple to worship.
- The practice is not scriptural but rather a **social construct** rooted in the caste system.
- It was deeply tied to the **marginalization of lower-caste communities**.
  - Between the **10th and 19th centuries**, Kerala's scriptures have explicitly detailed barring entry to people from marginalised communities such as the **Ezhavas and Adivasis.**
- This practice (removing the upper garment) was started to ensure that the ***punool*** (sacred thread worn by Brahmins) could be seen. That custom still continues in temples.
- Not all temples in the state ask men to remove their shirts before entering the sanctum sanctorum.
- However, the practice is strictly enforced in some major temples such as the **Sree Padmanabhaswamy Temple in Thiruvananthapuram, the Guruvayur Sri Krishna Temple** in Thrissur, and the **Ettumanoor Mahadeva Temple in Kottayam**.

Shree Gowreeswara Temple

- Cherai Gowreeshwara Temple is one of the famous temple in Kerala dedicated to **Lord Murugan.**
- The temple was built in 1912. It is also known as South Pazhani.
- The idol of the temple was installed by **Sree Narayana Guru**, saint and social reformer of Kerala, who fought against caste oppression and other social evils prevalent till the early twentieth century.
- Cherai Gowreeshwara Temple is the **one and only temple** in Asia which is **chathurmukha kovil** (**sree kovil** with four side doors).

FORT WILLIAM RENAMED AS VIJAY DURG

Context

In the latest step toward eliminating colonial practices and mindsets within the armed forces, Fort William in Kolkata, the headquarters of the Eastern Army Command, has been renamed Vijay Durg.

About Fort William

- Fort William was built in 1696 by the **British East India Company** in Kolkata.
- It is located on the eastern banks of the **River Hooghly.**
- It was named after **King William III** of England and served as a stronghold for the British in India.

- The fort was used to control **Bengal** and served as a base for **British military operations**, including the ***Battle of Plassey*** **(1757**), which allowed the British to dominate India.
- It was also central to British activities during the ***Revolt of 1857*** (First War of Independence).
- The fort has six gates - **Chowringhee, Plassey, Calcutta, Water Gate, St George's and Treasury.**
- **Post-Independence Role**: After independence, Fort William became the Eastern Army Command's headquarters in 1963 following the Sino-**India war of 1962.**
- **New Name – Vijay Durg**: The proposed new name, *Vijay Durg*, translates to **"Fort of Victory."**
  - The name is inspired by *Vijaydurg Fort* in Maharashtra, which is linked to Chhatrapati Shivaji Maharaj, a key figure in India's resistance to colonial powers. The name symbolizes India's victory over foreign rule and celebrates its own military history.

India's Eastern Command

- The Indian Army's current-day Eastern Command, headquartered in Kolkata, covers several states, including **Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, Assam, and West Bengal.**
- The command was first formed in 1920.
- The Army's **III Corps, IV Corps, XVII Corps and XXXIII Corps** come under this command.
- The formations and units under the command faced the **Chinese aggression in 1962** and also participated in the **1971 Indo-Pakistan War,** also known as the **Bangladesh Liberation War.**

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

Context

US President Donald Trump's administration has decided to freeze the funds of the **United States Agency for International Development (USAid).**

What is USAID?

- **Established in:** 1961
- The United States Agency for International Development (USAid) was set up to **administer humanitarian aid programmes** on behalf of the US government around the world.
- It has bases in more than 60 countries and works in dozens of others.
- **Key-functions:**
  - helps strategically important countries and countries in conflict
  - leads US efforts to alleviate poverty, disease, and humanitarian need
    - assists US commercial interests by supporting developing countries' economic growth and building countries' capacity to participate in world trade
- **Top aid recipients in 2023**: Ukraine, Ethiopia, Jordan, Democratic Republic of Congo, Somalia, Yemen, Afghanistan, Nigeria, South Sudan and Syria.
- **Impact on India:** USAid has been working in India for over 70 years. During the current fiscal year, India was to receive USD 140 million through USAid while the country's overall budget of over USD 600 billion.

USAID's Role in India

- **Healthcare:** USAid helped in reducing maternal and child mortality, saving over 2 million children since 1990. It supported India's efforts to combat **tuberculosis (TB)** and **HIV/AIDS.** During the COVID-19 pandemic, USAID provided millions in aid.
- **Education:** USAID has partnered with India to improve literacy across 16 states, reaching over 2 million students.
- **Water, Sanitation, and Hygiene (WASH):** USAid supported India's **Swachh Bharat Abhiyan,** helping more than 300,000 people access household toilets and ensuring 25,000 communities became open defecation-free.
- **Food Security and Agriculture:** USAid has assisted over 130,000 farmers by introducing improved farming technologies, leading to higher yields and increased incomes.

INDIA'S CHABAHAR PORT PROJECT

Context

The Trump administration has issued a directive that may potentially remove the **sanctions waiver** granted to India, which allowed the country to continue its work on **Iran's Chabahar port**. This move is part of the U.S.'s broader **"maximum pressure" campaign** against Iran.

About Chabahar Port

- Located in Iran, Chabahar port provides India access to **Afghanistan and Central Asia**, bypassing Pakistan.
- India signed a **10-year deal in 2024,** investing USD 120 million in port development and a USD 250 million credit facility for related projects.
  - **India Ports Global Limited (IPGL**) has managed the port since 2018.
- The deep water port is located on the **Makran Coast of Iran's Sistan-Baluchistan province**.
- Moreover, Chabahar is the **only Iranian port** with direct access to the Indian Ocean.

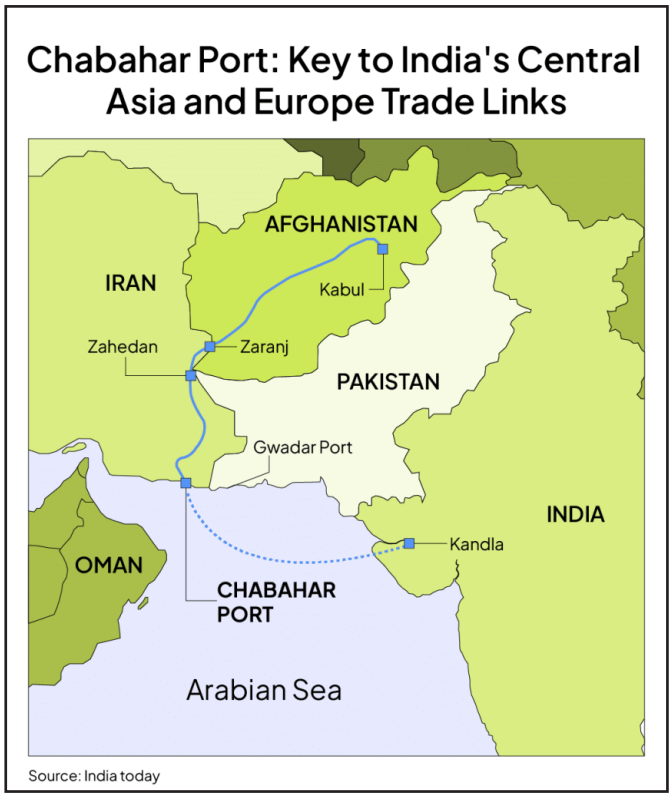


Figure No. 01

- Chabahar connects **Mumbai** to the **International North-South Transport Corridor (INSTC),** reducing transport costs and improving trade.
- The port has handled over 90,000 TEUs of container traffic and 8.4 million metric tons of cargo since 2018.

Impact of removal on waiver on India

- **Development Work at Risk**: Revocation of the sanctions waiver could hinder India's development efforts at Chabahar.
- **Trade Growth**: Chabahar saw a 43% increase in vessel traffic and 34% rise in container traffic in FY 2024, proving its growing significance for India's trade.
- **Geopolitical Impact**: India's ties with Iran are key to its presence in Central Asia and Afghanistan. The sanctions could disrupt these strategic interests.

International North-South Transport Corridor (INSTC)

- INSTC is a multi-modal, cost-effective transport route from India to Northern and Western Europe.
- It was launched in September 2000 by Russia, Iran, and India.
- **Members**: 13 countries – India, Iran, Russia, Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Ukraine, Belarus, Oman, Syria; Bulgaria is an Observer State.
- **Route**:
  - Goods move from **Mumbai (India)** to **Bandar Abbas (Iran)** by sea.
  - Then from Bandar Abbas to **Bandar-e Anzali (Iran)** by road.
  - From Bandar-e Anzali to **Astrakhan (Russia)** by ship across the Caspian Sea.
  - From Astrakhan, goods travel via **Russian Railways** to **Europe.**

(Figure No. 02 given below)

PM-JANMAN PACKAGE

Context

In recent developments, the **Ministry of Tribal Affairs** has streamlined the process for approving homes for

Figure No. 02

Particularly Vulnerable Tribal Groups (PVTGs) across India. This move follows the identification of delays caused by the data requirements in the **PM-GatiShakti portal**, which led to slower project approvals.

What is the PM-JANMAN Package?

- **Launched in:** 2023
- **Nodal Ministry:** Ministry of Tribal Affairs
- The scheme delivers essential amenities, including **safe housing, clean drinking water, sanitation, healthcare, education, road and telecom connectivity**, and **sustainable livelihoods**.
- It seeks to bridge development gaps in remote tribal areas through initiatives such as **constructing pucca houses, deploying mobile medical units, establishing health and wellness centres**, and setting up **Van Dhan Vikas Kendras** alongside skill development programs.
- Under the housing component of the package, the goal is to **sanction and build 4.90 lakh homes** for these communities under the **PM-AWAS (Pradhan Mantri Awas Yojana)** scheme.
- **Issue with Data on the PM-GatiShakti Portal:** One of the central features of the PM-JANMAN package was the use of the **PM-GatiShakti portal**, which was meant to maintain **data sanctity** by tracking the details of each village, including village codes, beneficiaries, and housing requirements.
  - This portal is monitored by the respective line ministries and supervised by the **Ministry of Tribal Affairs**.

FACT BOX

PARTICULARLY VULNERABLE TRIBAL GROUPS (PVTGS)

- The concept of PVTGs was introduced in 1975.
- The **Ministry of Home Affairs** has designated **75 tribal groups** across 18 states and the Union Territory of Andaman and Nicobar Islands as **Particularly Vulnerable Tribal Groups (PVTGs).**
- They are identified as the most vulnerable among tribal communities.
- **Classification:** PVTGs are more vulnerable among the tribal groups and are determined by t he given criteria:
  - They have declining or stagnant populations,
  - low levels of literacy,
  - pre-agricultural levels of technology and
  - Economically backward.
- Notably, Odisha has the highest concentration of PVTGs, with 13 groups, followed by Andhra Pradesh with 12.

UPSC PYQ

Q: Consider the following statements about Particularly Vulnerable Tribal Groups (PVTGs) in India: (2019)

(1) PVTGs reside in 18 States and one Union Territory.

(2) A stagnant or declining population is one of the criteria for determining PVTG status.

(3) There are 95 PVTGs officially notified in the country so far.

(4) Irular and Konda Reddi tribes are included in the list of PVTGs.

Which of the statements given above are correct?

(a) 1, 2 and 3

(b) 2, 3 and 4

(c) 1, 2 and 4

(d) 1, 3 and 4

Solution: (c)

GOVERNOR'S ASSENT TO BILLS

Context

The Supreme Court of India addressed the delay by **Tamil Nadu Governor R.N. Ravi** in assenting to **12 Bills** sent by the State government. These Bills, primarily related to higher education and the appointment process of Vice-Chancellors in State Universities, had been pending for over three years.

What is the process of granting assent?

- **Assent of the Governor or the President** is necessary for a Bill passed by the legislature to become law. After a Bill is passed by both Houses of the State Legislature, it is presented to the Governor for assent.
- **Governor's Options (Article 200):** The Governor has the power to:
  - **Grant Assent:** The Bill becomes law.
  - **Withhold Assent:** The Governor can withhold assent, but it must be returned to the Legislative Assembly for reconsideration.
  - **Return for Reconsideration (**except Money Bills**)**: If the Governor returns the Bill, the Legislature can amend it. If re-passed, the Governor must assent.
    - Money Bills are automatically deemed assented to by the Governor.

Key Constitutional Provisions

- **Article 200**: Governor's discretion in assenting to Bills.
- **Article 201**: Governor can reserve Bills for the President.

- **Article 163**: Governor's discretionary powers are limited by the advice of the Council of Ministers, except in specific cases.
- **Article 361**: Immunity for the Governor, but actions may be reviewed for mala fide conduct.

  - **Reserve for President's Consideration (Article 201)**: If the Governor believes the Bill affects the Constitution or has national importance, it can be reserved for the President's consideration.

- **Discretionary Powers**: The Governor can withhold assent if the Bill is against national interests, violates the Constitution, or conflicts with Union laws, though this power is not absolute.
- **Article 167**: The Governor may require the Chief Minister to communicate decisions of the Council of Ministers, including Bills pending for assent.
- **No Timeline for Decision**: There is no specified timeline within which the Governor must act, often leading to delays or a **"pocket veto."**

  - The **Sarkaria Commission (1988)** and the **National Commission to Review the Working of the Constitution (2000)** recommended time limits for **granting assent (e.g., 6 months for assent, 3 months for President's decision).** There are ongoing debates on enforcing such timelines.

- **Judicial Review:** The Supreme Court has held that if the Governor's decision to withhold assent is found to be mala fide (in bad faith), it can be subject to judicial scrutiny and struck down. Courts can review such actions for constitutionality (Rameshwar Prasad, 2006).

FACT BOX

About Governor

- A Governor is appointed by the President of India under **Articles 155 and 156** of the Indian Constitution.
- The Governor serves "**during the pleasure of the President**," meaning that the President has the power to remove the Governor at any time before the completion of their five-year term.

  - The President typically works in consultation with the **Prime Minister and the Council of Ministers**, and this process governs the appointment and removal of the Governor.

- **Article 153 of the Constitution** mandates that there shall be a Governor for each state. However, a **1956 amendment** allowed the same person to be appointed as Governor for two or more states.
- **Article 163** establishes that there shall be **a Council of Ministers, headed by the Chief Minister,** to assist and advise the Governor in the exercise of his functions. The Governor, however, can act in his discretion in certain matters as outlined in the Constitution.
- **Qualifications of a Governor**: As per Articles 157 and 158 of the Indian Constitution, the qualifications for the office of Governor are:

  - The person must be an Indian citizen.
  - The person must be at least 35 years of age.
  - The person must not be a Member of Parliament or a member of any state legislature.
  - The person must not hold any other office of profit.

UPSC PYQ

Q: Which of the following are the discretionary powers given to the Governor of a State? (2014)

(1) Sending a report to the President of India for imposing the President's rule

(2) Appointing the Ministers

(3) Reserving certain bills passed by the State Legislature for consideration of the President of India

(4) Making the rules to conduct the business of the State Government

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2, 3 and 4 only

(d) 1, 2, 3 and 4

Solution: (b)

AD-HOC JUDGES APPOINTMENT

Context

The **Supreme Court of India** made a landmark decision allowing High Courts to appoint **retired judges** on an ad-hoc basis to address the mounting backlog of criminal cases. The decision came in the wake of a **growing pendency of cases**, particularly in criminal appeals, across the country's High Courts.

About Ad-hoc Judges Appointment

- Article **224-A** allows the appointment of retired judges to High Courts on an ad-hoc basis. This provision was introduced by the **Constitution (Fifteenth Amendment) Act, 1963**.

- The appointment requires the consent of the retired judge and the **President of India**. Such judges enjoy the same jurisdiction, powers, and privileges as sitting judges.
- **Appointment Procedure**:
  - Once a retired judge consents to the appointment, the **Chief Justice of the High Court** submits the name and proposed tenure to the **Chief Minister**.
  - The **Chief Minister** forwards the recommendation to the **Governor**, who then sends it to the **Union Minister of Law and Justice**.
  - The **Union Law Minister** consults the **Chief Justice of India (CJI)**, after which the recommendation is sent to the **Prime Minister**.
  - Finally, the **President of India** approves the appointment, and the **Chief Minister** issues the formal notification.
- **When Can Ad-hoc Judges be Appointed?** Ad-hoc judges are appointed under specific circumstances, particularly when:
  - Judicial vacancies exceed **20%** of the sanctioned strength.
  - Cases in a specific category have been pending for more than **five years**.
  - More than **10%** of cases are pending for over five years.
  - The **case disposal rate** is lower than the rate of incoming cases.

Conditions for Appointment in January 2025 Order:

- The Supreme Court's **January 2025 order** allows High Courts to appoint retired judges on an ad-hoc basis, even when vacancies are **less than 20%** of the sanctioned strength.
- Ad-hoc judges will **only hear criminal appeals** and must be part of a Bench led by a sitting judge.
- The number of ad-hoc judges should not exceed **10%** of the High Court's sanctioned judicial strength.

- **Appointment Duration and Number**: Ad-hoc judges should typically be appointed for **2 to 3 years**. Each High Court can have **2 to 5 ad-hoc judges**.
- **Allowances and Benefits**:
  - Ad-hoc judges will receive the **same pay and allowances** as permanent judges, excluding pension.
  - They will either be provided with **rent-free accommodation** or a housing allowance.

DISSOLUTION OF DISTRICTS

Context

The Rajasthan government dissolved nine districts and three divisions during a cabinet meeting. The number of districts in the state now stands at 41 and divisions at seven. The districts that have been done away with include Dudu, Kekri, Shahpura, Neemkathana, Gangapur City, Jaipur Rural, Jodhpur Rural, Anupgarh, and Sanchore. The divisions of Pali, Sikar, and Banswara have also been dissolved.

What is the Procedure to form a new District?

- The power to create new districts or alter existing ones lies with the **State Government**. This process is entirely within the purview of the state and does not require intervention or approval from the **Central Government**.
- The **State Government** can either create a new district or modify existing districts through an **executive order** or by passing a **legislative bill** in the **State Assembly**.
- **Method of Formation or Alteration of Districts:** To form a new district or modify an existing one, the **State Government** may follow these steps:
  - **Executive Order**: The state can issue an executive order to create, abolish, or modify districts. This is the most common method for administrative convenience.
  - **Legislative Process**: Alternatively, the State Assembly may pass a law to create a new district or alter boundaries, if needed. This could involve a formal procedure in the legislative body, including debates, voting, and passing a bill.
- The **Centre** does not have any role or jurisdiction in this matter, meaning that each state has the autonomy to decide how its districts should be organized.

OECD GLOBAL TAX DEAL

Context

India is considering whether it should continue its participation in the **OECD's global tax deal** following the United States' decision to withdraw from the pact. US's exit effectively nullified the progress made by the **OECD** in bringing together 140 countries to agree on a **global minimum tax of 15%** for profits made by multinational corporations.

About OECD Global Tax Deal

- The Organization for Economic Co-operation and Development ("OECD") Global Tax Deal is a groundbreaking international agreement to overhaul how multinational corporations are taxed.
- In 2021, nearly 140 countries signed the OECD's global tax deal.
- The deal emerged from the **Base Erosion and Profit Shifting ("BEPS") project**, launched in 2013 to combat tax avoidance by multinational corporations
- Its purpose is to create a more unified international tax regime, with the U.S., home to several of the **world's largest multinational corporations** like Google and Amazon, playing a pivotal role in pushing the negotiations forward.

- The deal introduces a **two-pillar framework** aimed to address the **"race to the bottom"** approach of global tax competition and discourage cross-border tax avoidance by firms.
  - **Pillar 1** aims to reallocate the residual profits of large multinationals from their home countries to jurisdictions where they generate revenue
  - **Pillar 2** establishes a 15 per cent global minimum corporate tax.

Implications of U.S. Pullout:

- **Global Tax Coordination:** With the U.S. withdrawing from the deal, it could lead to **uncertainty in global tax coordination**. The U.S. has historically been a key player in international economic agreements, and its absence may reduce the effectiveness of the Global Tax Deal.
- **Impact on U.S. Multinationals:** The withdrawal could benefit **S. tech giants** by ensuring that they do not face additional **tax liabilities** in other countries, especially those related to **top-up taxes** under the OECD agreement. These companies would continue to avoid the 15% minimum tax in foreign jurisdictions, potentially reducing their overall tax burden.
- **Impact on India:** India, like other countries, could face challenges in enforcing tax policies on **global digital services**. The U.S. withdrawal from the deal may limit India's ability to apply **top-up taxes** on U.S. multinational corporations operating in India. Additionally, India's proposed **2% equalization levy** on foreign tech giants might come under pressure if other countries align their tax policies with the OECD framework. This could affect India's ability to generate revenue from international tech firms.

INDIA'S LARGEST SOLAR CELL AND MODULE MANUFACTURING UNIT

Context

India's **largest solar cell and module manufacturing unit** has been recently inaugurated at the **Gangaikondan SIPCOT Industrial Growth Centre** in Tamil Nadu.

About the Plant

- The facility is set up by **TATA Power's solar energy arm**, **TP Solar Limited**
- **Investment**: Rs 3,800 crore.
- It is designed to produce **4.30-GW photovoltaic cells and modules** annually, which will be used in solar power generation units across the country.
- The plant is equipped with **advanced robotic automation**, and will feature cutting-edge **TOPCon** and **Mono Perc technology**, which will ensure high efficiency and long-term reliability for solar projects, including **rooftop solar installations**.
- The unit will not only produce solar modules but also manufacture raw materials necessary for module production.
- Additionally, **Vikram Solar** is also setting up a **3-GW solar cell and 6-GW module manufacturing facility** at the same site, further boosting the region's solar energy manufacturing capabilities. This expansion is part of Tamil Nadu's ongoing efforts to create a robust clean energy infrastructure.

FACT BOX

Solar Cells:

- A **solar cell** or photovoltaic (PV) cell is the basic unit of a solar panel that converts sunlight into electricity through the **photovoltaic effect**.
- When sunlight strikes the cell, it excites **electrons** in the material, generating electrical current.
- The most commonly used material in solar cells is **silicon**, though newer technologies like **TOPCon (Tunnel Oxide Passivated Contact)** and **Mono Perc (Monocrystalline Passivated Emitter and Rear Contact)** are being adopted to enhance efficiency.

Solar Modules:

- A **solar module** (or **solar panel**) consists of several solar cells connected together.
- The cells are encapsulated in a durable frame and covered with glass to protect them from the environment.
- These modules are the building blocks of solar power systems, providing the **capacity to generate electricity.**

Important Government Schemes

- **National Solar Mission (NSM):** Launched in **January 2010**, NSM is a major initiative to promote ecological sustainable growth while addressing India's energy security challenges.
- **PM-KUSUM Scheme: (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan):** Launched in **March 2019**, the PM-KUSUM Scheme supports farmers by **offering financial assistance** for installing **solar-powered irrigation systems,** including solar pumps and grid-connected solar power plants.
- **PM Surya Ghar Muft Bijli Yojana:** Launched in **February 2024**, the PM Surya Ghar Muft Bijli Yojana, the **world's largest domestic rooftop solar initiative**, is designed to promote rooftop solar energy adoption in residential areas.

'CARDAMOM CONUNDRUM' SOLVED

Context

Cardamom, often called the **"Queen of Spices,"** has long been a symbol of aromatic and flavorful spices. For years, it was believed that only one species of cardamom existed in the genus **Elettaria—Elettaria cardamomum** (green cardamom). However, recent research reveals that this spice has a number of wild relatives, leading to the reclassification of cardamom species.

Key-highlights of the Research

Newly Identified Species

Elettaria facifera:

- **Location**: Found in **Periyar Tiger Reserve**, Idukki, Kerala.
- **Distinct Features**:
  - **Sessile leaves** (leaves that don't have petioles).
  - **Erect flowering shoots** separate from the leafy shoots.
  - **White labellum** (part of the flower) with **purple-red markings**.
- **Local Name**: The **Mannan tribe** calls it "Vai noki elam" (translated as "Open-mouth cardamom") due to the shape of its fruit, which resembles an open mouth.

Elettaria tulipifera:

- **Location**: Found in **Agasthyamalai Hills** (Thiruvananthapuram and Munnar, Kerala).
- **Distinct Features**:
  - **Tulip-shaped inflorescence** (flower structure).
  - **Bright red** or **dark red** bracts (modified leaves that surround the flower).

- An international research team has discovered that **green cardamom (Elettaria cardamomum)** is not alone in its genus, as previously thought.
- The team has now identified **six closely related species** of cardamom, expanding the genus **Elettaria** from one to seven species. This breakthrough changes the understanding of cardamom's diversity and potential uses.
- **Previous Classification**: Earlier, **four species** (previously classified under the genus **Alpinia**) were reclassified under Elettaria. These species are:
  - **E. ensal**
  - **E. floribunda**
  - **E. involucrata**
  - **E. rufescens**
- **Newly Identified Species**: Two entirely new species of cardamom were identified and described from the **Western Ghats** in **Kerala**:
  - **Elettaria facifera**: Found in **Periyar Tiger Reserve**, Idukki district.
  - **Elettaria tulipifera**: Found in the **Agasthyamalai Hills** (Thiruvananthapuram and Munnar).

Green cardamom

- The true **'Cardamom'** of commerce is the dried capsules obtained from the perennial plant ***Elettariacardamomum*** **Maton** of the family **Zingiberaceae.**
- Green cardamom, often called the "**Queen of Spices**," is one of the world's most valuable **spices**, ranking just after **saffron** and **vanilla**.
- The seeds from **Elettaria cardamomum** are used to make the commercial **green cardamom** spice, widely used in cooking, sweets, and beverages.
- As a result, these discoveries hold **economic significance** as they may lead to better
- It is one of the three most economically important species in the **ginger family**.
- The **Western Ghats**, a UNESCO World Heritage Site, is home to these species but also faces ecological pressures.
- **Major cardamom producing countries**: India, Gautemala, Srilanka, Thailand and Cambodia

SAKKARAKOTTAI AND THERTHANGAL BIRD SANCTUARIES

Context

Tamil Nadu has added two more Ramsar sites: **Sakkarakottai** and **Therthangal** bird sanctuaries. This brings the state's total number of Ramsar sites to **20**, the highest in India. Uttar Pradesh follows with 10 Ramsar sites.

What is a Ramsar Site?

- The **Ramsar Convention**, signed in 1971, aims to protect wetlands worldwide through local conservation efforts, national policies, and international cooperation.
- Wetlands included under the treaty encompass a wide range of ecosystems, from **marshes**, **lakes**, **rivers**, and **peatlands**, to **coastal habitats** such as **mangroves**, **saltmarshes**, **mudflats**, **seagrass beds**, and even **coral reefs**.
- **Importance of Ramsar Status:** The **Ramsar status** provides enhanced conservation efforts and global recognition for these crucial ecosystems. It opens the door for **increased funding** and ensures better protection for these fragile areas.
- **Tamil Nadu's Wetland Conservation Efforts**

- The newly designated **Sakkarakottai** and **Therthangal** bird sanctuaries are located in **Ramanathapuram district**, which already hosts two other Ramsar sites: **Chitrangudi** and **Kanjirankulam**.
- Tamil Nadu has been at the forefront of wetland conservation in India, with its first Ramsar designation granted in 2002 for the **Point Calimere Wildlife and Bird Sanctuary**.
- Other sanctuaries in Tamil Nadu that have received Ramsar recognition include **Kazhuveli** and **Nanjarayan Bird Sanctuaries**, which were added in **2024**.

- Alongside the Tamil Nadu sites, **India** has recently added **four new Ramsar sites** in total, bringing the country's total Ramsar sites to **89**:
  - **Khecheopalri Wetland** (Sikkim)
  - **Udhwa Lake** (Jharkhand)

INDIA BECOMES THE WORLD LEADER IN TIGER POPULATION

Context

India has made a remarkable achievement by becoming the country with the **largest tiger population** in the world, according to a recent study. Over the past decade, India has **doubled its tiger population**, reaching approximately **3,600 tigers**, which now constitutes **75% of the global tiger population**.

Key Statistics and Success Factors

- The tiger population in India now occupies an area of **138,200 square kilometers**.

Government Initiatives:

- **Tiger hunting** was officially banned and the **Wildlife Protection Act** came into force in 1972.
- **Project Tiger:** Project Tiger was launched by the Centre on 1 April 1973 to conserve the beautiful big cat.
- In 1973, the **International Union for Conservation of Nature** declared the tiger an endangered species.
- Every four years, a report, called the **'Status of Tigers'** is published by the **National Tiger Conservation Authority (NTCA)** laying out population information.

- According to the **5th cycle of the All India Tiger Estimation 2022** (usually conducted in cycles of four years) summary report, India has a minimum of 3,167 tigers and is now home to more than **70 per cent of the world's wild tiger population.**
- This success is attributed to several key conservation measures, including:
  - Protection from poaching
  - Conservation of habitats
  - Securing prey availability
  - Efforts to reduce human-wildlife conflict
  - Engagement and support for local communities

About Tiger (*Panthera Tigris*)

- Tiger (***Panthera tigris***) is the **largest member** of the **cat family (Felidae)** and also the **earliest Panthera member to exist.**
- Primarily a forest animal, they range from the Siberian taiga to the Sunderban delta.
- In the wild, tigers are found in **India, Nepal, China, Russia, Bhutan, Myanmar, Cambodia, Laos, Vietnam, Thailand, Sumatra (Indonesia) and Malaysia.**
- It is the **national animal of India, Bangladesh, Malaysia, and South Korea.**
- **Status: Endangered**
- Since 2015, the global tiger population has increased from 3,200 in 2015 to approximately 4,500 in 2022.
- **The five surviving sub species of tiger are**
  - **Indian Tiger or Royal Bengal Tiger**(***Panthera tigris tigris***) found in **India, Nepal, Bhutan and Bangladesh**
  - **Indo-Chinese tiger**(***Panthera tigris corbetti***) mainly found in Thailand and Peninsular Malaysia but are also found in **Myanmar, Southern China, Cambodia, Laos and Vietnam**
  - **Siberian or Amur Tiger**(***Panthera tigris altaica***) found in **far east Russia**
  - **Sumatran Tiger**(***Panthera tigris sumatrae***) found in the Indonesian island of Sumatra
  - **South China Tiger** (***Panthera tigris amoyensis***) found in China. The population found in Peninsular Malaysia has been given a status of separate sub species ***Panthera tigris jacksoni.***

RAPID HIMALAYAN GLACIER MELT

Context

A recent study has uncovered concerning findings about the rapid retreat of glaciers in the eastern Himalayas, specifically in **Arunachal Pradesh**, over a span of **32 years**.

Key Highlights

- **Massive Glacier Loss**: Between **1988 and 2020**, **110 glaciers** covering **309.85 sq. km** were lost in the eastern Himalayas. This represents a loss of over **47%** of the glacier cover in the region, with a retreat rate of **16.94 sq. km** per year.
- **Glacial Lake Outburst Floods (GLOFs)**: As glaciers shrink, they expose **bedrock** and create **glacial lakes**. These lakes are prone to **glacial lake outburst floods (GLOFs)**, which pose a significant risk to communities

and infrastructure downstream. In 2023, the region experienced a major disaster due to a GLOF in Sikkim, which claimed lives and caused damage to a hydropower project.

- **Temperature and Precipitation Trends**: Over the last century, the **temperature** in the Himalayas has risen by **1.6°C**, with the **eastern Himalayas** warming at a rate higher than the global average (0.1°C to 0.8°C per decade). This warming trend is expected to continue, leading to higher temperatures and increased precipitation in the region by the end of the century.
- **Impact on Freshwater Resources**: The glaciers region play an essential role in maintaining the **hydrological balance**. The rapid retreat of these glaciers could threaten water availability for millions, especially during dry periods.
- **Himalayan Glaciers' Role in Global Sea-Level**: The glaciers in the Himalayas are important not only for local water supply but also in regulating **global sea levels**. As they melt, the freshwater flows into the oceans, contributing to rising sea levels.

FACT BOX

The Himalayas:

- The Himalayas span five countries: **Bhutan, India, Nepal, China and Pakistan.**
- It covers 2,500 km running west-northwest to east-southeast in an arc.
- The Himalayan range is bordered:
  - on the northwest by the **Karakoram and the Hindu Kush ranges**
  - on the north by the **Tibetan Plateau**
  - on the south by the **Indo-Gangetic Plain**
- Some of the world's major rivers, the **Indus, the Ganges, and the Tsangpo–Brahmaputra**, rise in the vicinity of the Himalayas, and their combined drainage basin is home to some 600 million people with 53 million people living in the Himalayan regions.

Figure No. 03

- The Himalayan mountain ranges contain 60,000 km^2 of ice – storing more water than only the **Arctic and Antarctic.**
- The eastern Himalayas, often referred to as the **"Third Pole"**, are a critical source of **freshwater** for over **1.3 billion** people.

(Figure No. 03 on previous page)

VERY SHORT-RANGE AIR DEFENCE SYSTEM (VSHORADS)

Context

The **Defence Research & Development Organisation (DRDO)** recently completed **three successful flight-tests** of the **Very Short-Range Air Defence System (VSHORADS)** off the coast of **Chandipur, Odisha**.

About Very Short-Range Air Defence System (VSHORADS):

- The VSHORADS is an **advanced Man Portable Air Defence System (MANPADS).**
- The missile has been developed indigenously by **the Research Center Imarat (RCI)** in collaboration with other DRDO laboratories.
- The missile system is specifically designed to protect against **low-altitude aerial threats**, primarily targeting **drones, helicopters, small aircraft**, and other aerial objects that fly at low altitudes, which are typically challenging to target with conventional air defense systems.
- **Man Portable System:** VSHORADS is a lightweight, portable missile system that can be carried and operated by a single soldier, providing flexibility and ease of deployment in various combat situations.
- The system is designed to be used by all three branches of the Indian Armed Forces—the **Army, Navy, and Air Force.**

Man Portable Air Defence System (MANPADS)

- They are the **short-range, lightweight, and portable surface-to-air missiles** that may be fired by individuals or small groups to kill aeroplanes or helicopters are known as **Man-Portable Air-Defense Systems.**
- They aid in the protection of troops from aerial attacks and are particularly efficient against low-flying aircraft.
- MANPADS can be fired from a helicopter or boat, or launched from atop a ground vehicle.

PINAKA MULTIPLE ROCKET LAUNCH SYSTEM (MRLS)

Context

The Union Defence Ministry of India signed contracts worth Rs 10,147 crore for the procurement of advanced ammunition for the **Army's Pinaka Multiple Rocket Launch Systems (MRLS).**

About Pinaka:

- The **Pinaka Multiple Rocket Launch System (MRLS)** is a key **long-range artillery weapon** used by the Indian Army, designed to provide rapid, high-volume firepower.
- The system has been developed by the **Defence Research and Development Organisation (DRDO)**.
- It is named after **Pinaka**, the bow of the Hindu god Lord Shiva, symbolizing power and precision.

Key Features:

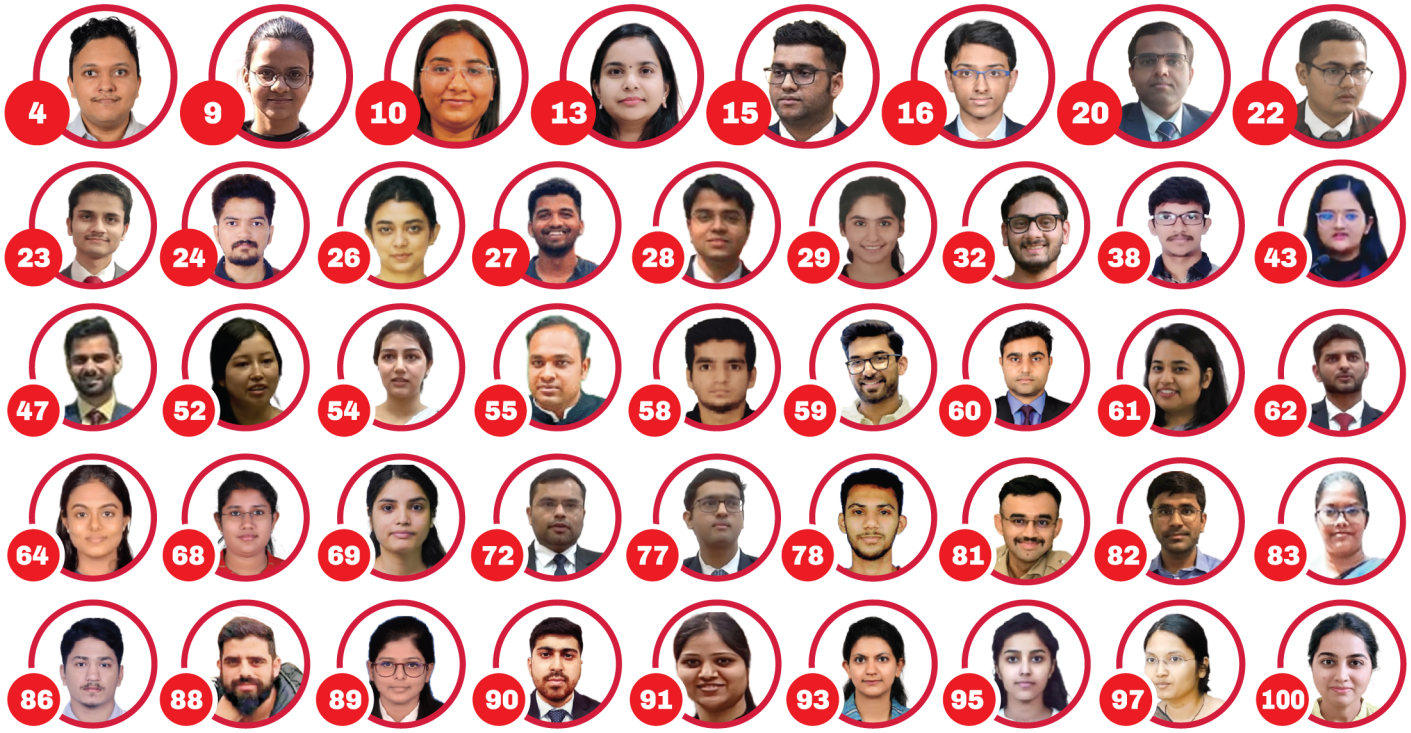
- **Range and Firepower:** The Pinaka MRLS is capable of firing multiple rockets in a single salvo. The upgraded system has an impressive range of 75 km, with plans to enhance it to 120 km and eventually 300 km. It can deliver a salvo of 72 rockets on target in just 44 seconds, allowing for a concentrated attack on enemy positions.
- **Ammunition Types:** The system uses various types of rockets, including high explosive, anti-tank, and area denial munitions. The new contracts aim to acquire **ADM Type-1** (designed to deny areas to enemy forces) and **HEPF-Mk-1 rockets** (enhanced versions of existing rockets for greater range and precision).
- **Fully Automated System:** The Pinaka system is fully automated, enabling fast and efficient rocket launches. This automated system helps the army deliver concentrated strikes on targets within a short time frame, providing a significant tactical advantage.

GS SCORE
An Institute for Civil Services

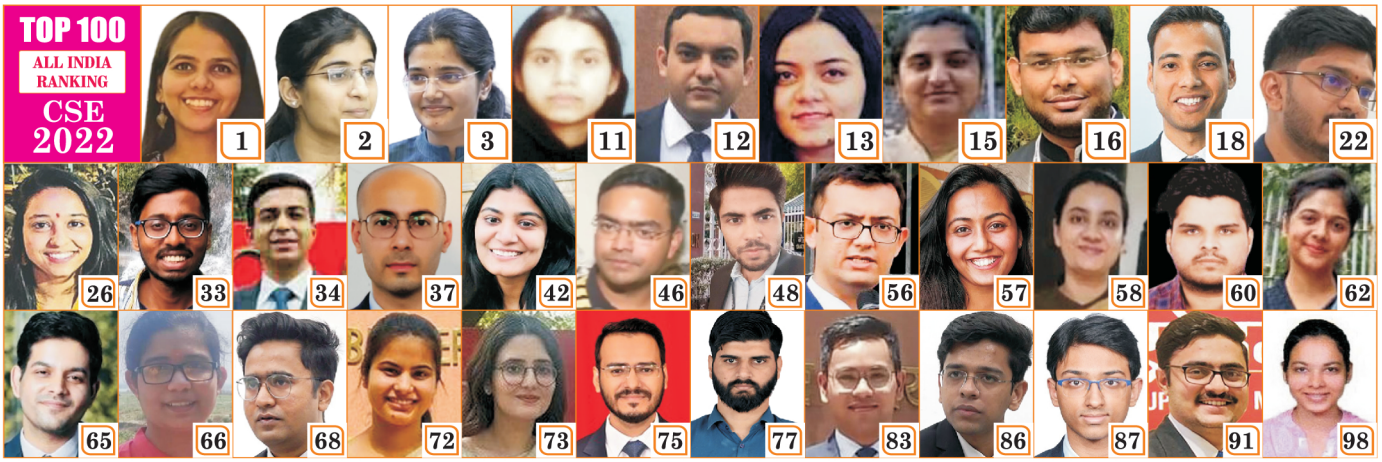
CSE RESULT

Scan QR Code for detailed RESULT

TOP 100 ALL INDIA RANKING CSE 2023



TOP 100 ALL INDIA RANKING CSE 2022



TOP 100 ALL INDIA RANKING CSE 2021