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75 YEARS OF ESTABLISHMENT OF NATO

Context

- NATO has completed its **75 years of establishment in 2024.**

About NATO

- NATO, or the North Atlantic Treaty Organization, is a **military alliance of countries.**

- **Establishment:** It was founded in **1949** with the signing of the North Atlantic Treaty, more popularly known as the **Washington Treaty**.

- **Aim:** To ensure the **security and defense of its member countries** through collective defense.

- **Founding Members:** The original members of NATO were Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, and the United States.

- **Collective Defense:** The cornerstone of NATO is Article 5 of the North Atlantic Treaty, which states that an armed attack against one or more of its members is considered an attack against all members.

- **Decision-Making:** Decisions within NATO are made on the basis of **consensus among member countries.**

  - **The North Atlantic Council,** which includes the ambassadors of all member countries, is the **principal political decision-making body.**

- **Members:** It has **32 member countries, Finland** and **Sweden** became the 31st and 32nd members respectively.

  - On signing the Treaty, countries voluntarily commit themselves to participating in the political consultations and military activities of the Organization.

Expansion of NATO

- NATO now has **32 members** across **Europe and North America,** including the **UK, US, Canada, France, Germany, Italy, Spain and Turkey.**

- **After the Soviet Union's collapse in 1991, many Eastern European countries joined:** Albania, Bulgaria, Hungary, Poland, the Czech Republic, Slovakia, Romania, Lithuania, Latvia and Estonia.

- **Sweden and Finland** applied to join in 2022, following Russia's invasion of Ukraine. **They had been neutral for decades.**

- **Finland -** which has a 1,340km (832 mile) **land border with Russia** - joined in 2023. **Sweden** became a member in March 2024**.**

- With Sweden and Finland joining Nato, it is seeing its **biggest expansion since the 1990s.** They will add nearly 300,000 active and reserve troops to the alliance's ranks.

- Ukraine, Bosnia and Herzegovina, and Georgia also hope to join Nato.

Nato's European expansion since 1949

Founder members 1949
Joined Nato 1950-1996
Joined Nato 1997-2022
Joined 2023
Joined 2024
Applying to join

*Russia annexed Crimea in 2014

Concerns of NATO Expansion

- **Geopolitical Tensions:** Expanding NATO's borders potentially provokes tensions with neighboring countries, especially those with close ties to Russia.

  - The immediate reason for the Russian - Ukraine war can be associated with the fact the Russia wanted to prevent Ukraine from joining NATO.

- **Security Dilemma:** NATO expansion can trigger a security dilemma wherein one country's effort to enhance its security is seen as a threat by another, leading to an **arms race or increased military tensions.**

- **Strategic Interests:** Expanding NATO's membership raises questions about the strategic interests of the alliance and its commitment to collective defense.

  - Some argue that NATO should focus on consolidating its existing members rather than taking on new ones.

- **European Security Architecture:** NATO expansion could undermine efforts to develop a broader European security architecture, including initiatives such as the Organization for Security and Co-operation in Europe (OSCE).

- **Promoting such new alliances:** Countries who sees NATO as a security threat can come up with a counter alliance such as the Warsaw Treaty Organization by the Russia. These alliances can further accelerate the geopolitical tensions.

- **Potential for Conflict:** NATO expansion raises the risk of conflict, particularly if it involves regions with existing territorial disputes or unresolved conflicts.

  - This could escalate tensions and increase the likelihood of military confrontation.

Way Ahead

- Overall, while NATO expansion can enhance the security of new member states and contribute to the stability of the Euro-Atlantic region, it also poses various challenges and concerns that need to be carefully considered by all parties involved.

- Diplomacy, dialogue, and a nuanced understanding of each other's security concerns are essential for addressing these concerns and maintaining peace and stability in the region.

Source: IE

HOW ARE SYMBOLS ALLOTTED TO POLITICAL PARTIES?

Context

- Recently, a political party raised questions about the allotment of symbols to 'registered unrecognised parties'.

About the Election Symbols in India

- Election symbols play a crucial role in the electoral process in India, especially considering the sizable population that is still illiterate.

- These symbols serve as a visual representation of political parties and independent candidates, making it easier for voters to identify their preferred candidates on the ballot.

Allotment of Symbols

- The **Election Commission of India (ECI)** allots symbols to political parties and contesting candidates as per the provisions of the **Election Symbols (Reservation and Allotment) Order, 1968.**

- A recognized political party has a reserved symbol that is not allotted to any other candidate in any constituency.

Key Criteria

- **Recognition of Parties:** A party is recognized as a 'national' or 'state' party under the provisions of the Symbols Order by the ECI.

  - The criteria for recognition at the State level consists of winning a certain number of Lok Sabha or Legislative Assembly seats or securing a certain percentage of votes polled in a general election.

- **Allotment of Symbols:** Symbols are allotted to political parties and contesting candidates as per the provisions of the Symbols Order by the ECI.

  - A recognized political party has a reserved symbol that is not allotted to any other candidate in any constituency.

- **For Registered but Unrecognised Parties:** One of the free symbols is allotted as a common symbol during an election if that party contests in two Lok Sabha constituencies or in 5% of seats to the Assembly of a State as the case may be.

- **Rule 10B of the Symbols Order:** It provides that the concession of a common free symbol shall be available to a **'registered unrecognised party'** for two general elections.

  - Furthermore, a party shall be eligible for a common symbol in any subsequent general election if it had secured at least 1% of votes polled in the State on the previous occasion when the party availed of this facility.

- **Application for Symbol:** Such an unrecognised party should however apply for a symbol every time in the prescribed format.

  - It can be made any time during the period commencing six months prior to the expiry of the term of the Lok Sabha or State Assembly as the case may be.

- **First-Come-First-Served Basis:** The symbols are thereafter allotted on a 'first-come-first-served' basis.

- **Free Symbols:** An independent candidate or someone contesting on behalf of an unrecognised political party has to approach the Commission and get a symbol allotted from the list of 'free' symbols available.

- ◆ A candidate will have to provide three symbols from the free list at the time of submission of nomination papers, one of which will be allocated to him/her.

Significances of Election Symbols

- **Aid for Illiterate Voters:** The main purpose of giving symbols to parties is to help illiterate voters, who cannot read the candidates' names, to find their candidate on the ballot paper and facilitate their voting by looking at the symbol.

- **Political Identity:** Symbols today represent a far greater role in India's electoral politics, with each denoting allegiance to a particular ideology and the associated followership of a national leader.

- **Distinguishing Parties:** Symbols allow political parties to distinguish themselves from others.
  - ◆ They are particularly crucial in a country like India where there are numerous political parties.

- **Symbol Reservation:** In the case of a recognised political party, the Commission allows it to 'reserve' a symbol.
  - ◆ For example, if a political party recognised in a particular State wishes to contest in elections in another State, it can 'reserve' the symbol being used by it.
  - ◆ The Commission will oblige, provided the symbol is not being used by anyone else.

Conclusion

- Election symbols are an integral part of India's democratic process, serving as a visual aid for voters and a representation of political parties and candidates.

- The process of allotment and reservation of these symbols by the ECI ensures a fair and equitable system that upholds the principles of democracy.

Source: TH

THREE-DIMENSIONAL MAP OF THE UNIVERSE

Context

- An **international team of researchers** has just released the **most comprehensive three-dimensional map of the universe.**

About

- The researchers have published findings from the first year of observations by the **Dark Energy Spectroscopic Instrument, or DESI.**

- ◆ It is a unique piece of equipment that, once fitted over a telescope, can capture light from **5,000 galaxies at the same time.**

- Using DESI, which is mounted over the **Mayall 4-Meter Telescope in Arizona, United States,** researchers have been able to measure **light from six million galaxies** — some of which existed as far back as **11 billion years ago**.

- The scientists have been able to **measure the distances between these galaxies** with a very **high degree of accuracy.** That is why we call it a three-dimensional map.

- **DESI is a collaboration of more than 900 researchers** in institutions across the world.
  - ◆ From India, **Tata Institute of Fundamental Research in Mumbai (TIFR)** is the only participating institution.

- Scientists hope that the Map could reveal some clues about **dark energy.**

Dark Matter and Dark Energy

- The content of the Universe is widely thought to consist of **three types of substance: normal matter, dark matter and dark energy.**

- Roughly **68% of the universe is dark energy. Dark matter** makes up about **27%**. The rest - everything on Earth ever observed adds up to **less than 5% of the universe.**

- **Dark Matter:** Unlike normal matter, dark matter **does not interact with the electromagnetic force.** This means it does not absorb, reflect or emit light, making it extremely hard to spot.
  - ◆ Dark matter works like an **attractive force** — a kind of cosmic cement that **holds the universe together.** This is because dark matter **does interact with gravity.**

- **Dark Energy:** Dark energy is a **repulsive force** — a sort of anti-gravity — that **drives the universe's ever-accelerating expansion.** Dark energy is the far more dominant force than Dark matter.

Source: IE

REGISTRATION OF BIRTHS AND DEATHS (AMENDMENT) ACT, 2023

Context

- According to Model Rules drafted by the Union Ministry of Home Affairs, while registering the birth of a child, parents will need to separately record the religion of both the child's father and mother.

About

- The new rules are a departure from the existing 'religion of the family' declaration in birth registers.

- The proposed "**Form No.1-Birth Report**" will expand the column requiring a tick mark selection for religion of the child, to now also state the **"religion of father"** and **"religion of mother".**

  - Similar changes have been made for parents of an adopted child.

The Registration of Births and Deaths (Amendment) Act, 2023

- The act was amended to the **Registration of Birth and Death Act 1969.**

- **Database of births and deaths:** The Registrar General, India (who may issue general directions for registration of births and deaths) will maintain a national database of registered births and deaths.

  - The Chief Registrars (appointed by states) and Registrars (appointed by states for local area jurisdiction) will be obligated to share data of registered births and deaths to the national database.

- **Connecting database:** The national database may be made available to other authorities preparing or maintaining other databases. Such databases include: **National Population Register (NPR)**, electoral rolls, ration card, and any other national databases as notified.

- **Use of birth certificate:** The digital birth certificates issued under this system will become a single document to prove the date of birth for various services,

  - admission to an educational institution,
  - preparation of voter lists,
  - appointment to a government post, and
  - any other purpose determined by the central government.

- **Digital records:** All reported births and deaths in the country are to be digitally registered.

National Population Register (NPR)

- NPR is the first step to the creation of the National Register of Citizens (NRC), as per the Citizenship Act.

- NPR, first collected in 2010 and updated in 2015 through door-to-door enumeration, already has a database of 119 crore residents.

National database

All reported births and deaths are to be digitally registered through the Centre's portal for the Civil Registration System

- The database may be made available to other authorities preparing or maintaining other databases such as electoral rolls or ration cards
- Information from digital certificate can be used for purposes such as admission to an educational institution or appointment to government posts
- Data is used by the govt. for socio-economic planning and to evaluate the effectiveness of social sector programmes

Statistical and legal information

- Any birth register includes two parts: **legal information and statistical information.**

- The information on the parents' religion is to be maintained for statistical information.

- **The birth register form** pertaining to legal information has been expanded to record the Aadhaar number, and the mobile and e-mail IDs of both the parents, "if available".

Source: TH

FIRST HOME-GROWN GENE THERAPY FOR CANCER
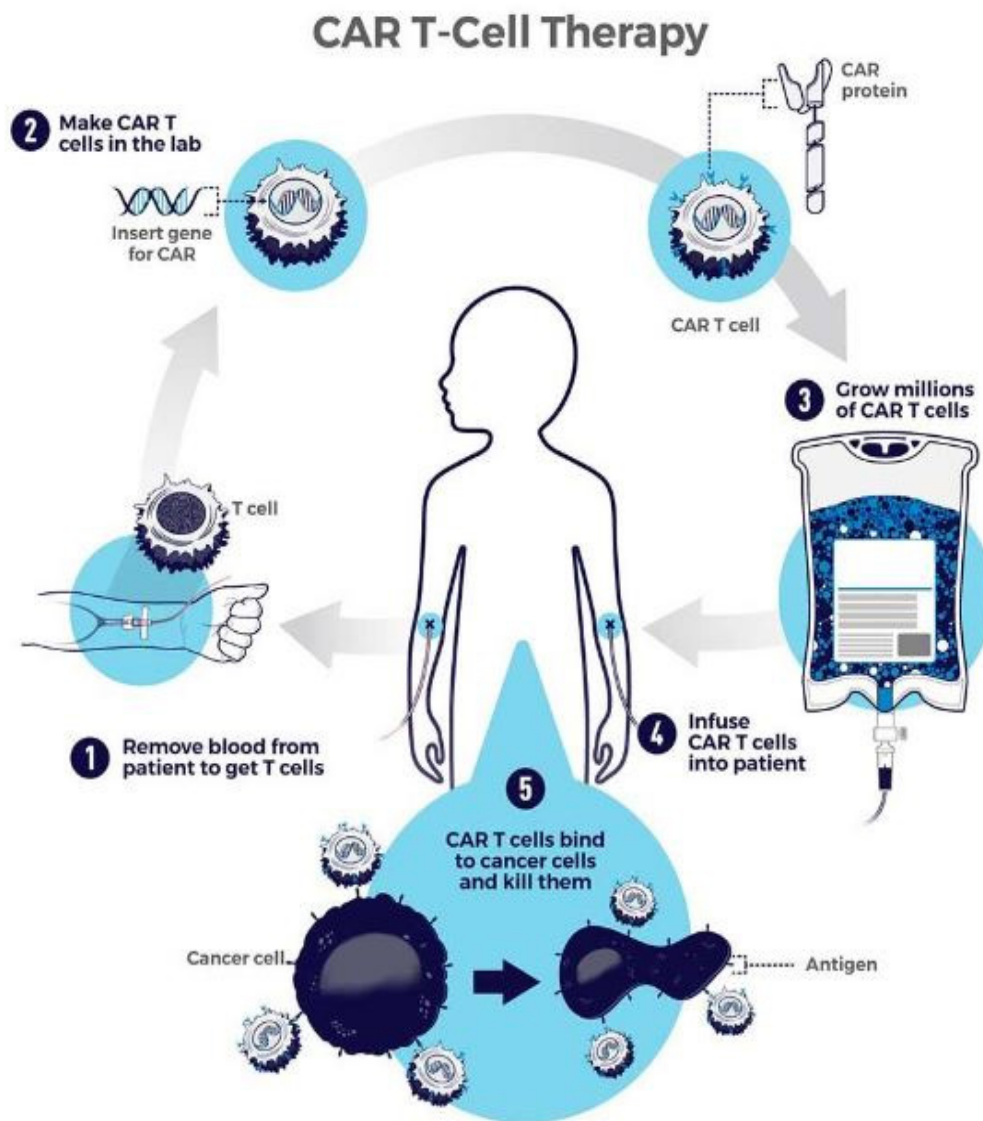
Context

- The President of India, launched India's first home-grown gene therapy which is CAR-T cell therapy (NexCAR19) for cancer at IIT Bombay.

About

- NexCAR19 is the indigenously developed **therapy for B-cell cancers** (types of cancers that form in the immune system's cells) such as leukemia and lymphoma.

- It has been developed collaboratively by **ImmunoACT,** a company incubated at the Indian Institute of Technology Bombay (IITB), and **Tata Memorial Hospital**.

CAR-T Cell Therapy

- T cells are the cells of the immune system that fights infections and can kill cancer.

- But, sometimes cancers can evade the T cells and there comes the use of "CAR-T cell therapy" or **Chimeric antigen receptor (CAR) T-cell therapy.**

- In this, patients own T cells are taken and modified in the lab so that they can recognise and react against the cancer.

- These modified T cells, also called CAR-T cells are then reinfused back into the patients. Now, these cells can better recognise cancer and are able to attack it.

CAR T-Cell Therapy

Different types of cell therapies

- **Stem cell therapy:** This type of therapy involves the transplantation of stem cells to replace damaged or diseased cells. Stem cells have the ability to differentiate into various types of cells, including blood cells, nerve cells, and muscle cells, and can help repair damaged tissue.

- **Dendritic cell therapy:** This type of therapy involves the use of dendritic cells, which are immune cells that help to coordinate the immune response against cancer.

What are B and T-Cells?

- B-cells and T-cells are a specific type of white blood cell called lymphocytes.

- **Types of T cells:**

- **Cytotoxic T-cells:** They kill cells infected with viruses and bacteria, and they also destroy tumor cells.

- **Helper T-cells:** They send signals that direct other immune cells to fight infection.

- **Regulatory T-cells (Tregs):** These cells suppress excessive immune responses to prevent autoimmune reactions and maintain immune tolerance. They play a crucial role in preventing the immune system from attacking the body's own cells and tissues.

- **T-cells** start in bone marrow, mature in thymus and eventually relocate to lymph tissue or bloodstream.

- **B-cells** make antibodies in response to antigens (antibody generators).

- **There are two main types of B-cells:** plasma cells and memory cells. Both types help to protect from infection and disease.

Cancer and Its Types
- Cancer is a large group of different diseases that can start in almost any organ or tissue of the body when abnormal cells grow uncontrollably.
- Cancers are further categorized based on their behavior, such as whether they are benign (non-cancerous) or malignant (cancerous), and their stage of progression.
- Some of the most common types of cancer include:
    - **Carcinomas:** These cancers originate in the skin or tissues that line the internal organs. The most common carcinomas include breast, lung, prostate, and colon cancer.
    - **Sarcomas:** Sarcomas develop in the connective tissues such as bone, cartilage, fat, muscle, or other supportive tissues.
    - **Leukemias:** Leukemias are cancers that begin in the bone marrow, where blood is produced. They often involve abnormal production of white blood cells.
    - **Lymphomas:** Lymphomas affect the lymphatic system, which is part of the body's immune system. They typically begin in lymph nodes and lymphoid tissues.
    - **Central nervous system cancers:** These cancers affect the brain and spinal cord. Gliomas, for example, arise from the glial cells in the brain.

Source: PIB

NEWS IN SHORT

HIKE IN PRICES OF ESSENTIAL MEDICINES

Context
- The **National Pharmaceutical Pricing Authority (NPPA)** has hiked the **price of essential medicines** including painkillers, antibiotics and anti-infectives.
    - NPPA was set up under the Department of Pharmaceuticals is an independent regulatory agency that **controls the prices of pharmaceutical drugs** in India.

About
- **Essential medicines** are those that **satisfy the priority healthcare needs** of the **majority** of the population.

- The essential medicines list needs to be **country specific** addressing the disease burden of the nation and the commonly used medicines at **primary, secondary and tertiary healthcare levels.**
- **The first country** in the world to compose its EML was **Tanzania in 1970.**
- **In India, The Ministry of Health and Family Welfare** prepared the first National List of Essential Medicines (NLEM) **in 1996**. Subsequently, the list has been revised.
- **Drug Price Control Order, 2013** was issued by the Department of Pharmaceuticals under Ministry of Chemicals and Fertilizers for **fixing the ceiling price of medicines included in NLEM.**

Source: TH

DISASTER RELIEF FUNDS

Context
- **Tamil Nadu** has filed a suit at the Supreme Court claiming that the Centre is withholding **national disaster relief funds,** after Cyclone Michaung and consequent floods rocked the state in 2023.

About
- Funds for disaster relief are available to states from **two sources** — **the State Disaster Relief Fund (SDRF) and the National Disaster Relief Fund (NDRF).**
- These funds were created with the enactment of the **Disaster Management Act, 2005 (DMA),** following the devastating tsunami in 2004.
- **Calamities Under NDRF:** It covers calamities such as cyclones, droughts and floods that are considered to be of **severe nature** by the Government of India, and which require **additional funding** beyond what is available in the SDRF.
- **Process of Funding:** A state that does not have adequate funds in the SDRF and has faced a national calamity beyond the coping capacity of the State Government can submit a request for funds from the NDRF.
    - First, the MHA will immediately constitute an **Inter Ministerial Central Team (IMCT)** to visit the areas affected by the calamity, and determine if there is a need for additional funds.

- Then, the IMCT will submit its **recommendation to a sub-committee** of the **National Executive Committee** which will decide how much funding can be made available.
- Finally, a committee chaired by the **Home Minister,** and comprising the Ministers for Agriculture and Finance, as well as the NITI Aayog vice-chairman, will sign off on the release of NDRF funds.

Source: IE

AGNI-PRIME BALLISTIC MISSILE

Context

- Recently, the new generation ballistic missile **Agni-Prime** was successfully flight-tested by the **Strategic Forces Command (SFC)** along with the DRDO from the Dr APJ Abdul Kalam Island off the coast of Odisha.

About the Agni-Prime

- It is a **two-stage**, surface-to-surface, canister-launched, road-mobile, and solid-fueled medium-range **ballistic missile**.
- The Agni-Prime is equipped with a dual redundant navigation and guidance system.
- It has a **range between 1000 to 2000 km.**
- The missile is lighter than all the earlier Agni series of missiles.
- It features significant upgrades to the composite motor casing, **a manoeuvrable reentry vehicle (MaRV)**, along with improved propellants, navigation, and guidance systems.

Ballistic Missiles

- It is a rocket-propelled, **self-guided** strategic-weapons system that follows a ballistic trajectory to deliver a payload from its launch site to a **predetermined target**.
- It can carry **conventional high explosives** as well as **chemical, biological, or nuclear munitions**.

Strategic Forces Command (SFC)

- The Strategic Forces Command (SFC), sometimes called **Strategic Nuclear Command**, forms part of **India's Nuclear Command Authority (NCA).**

- The Nuclear Command Authority comprises a **Political Council** and an **Executive Council**. The **Political Council is chaired by the Prime Minister.** It is the sole body which can authorise the use of nuclear weapons.
- The **Executive Council is chaired by the National Security Advisor**. It provides inputs for decision making by the Nuclear Command Authority and executes the directives given to it by the Political Council.
- It is responsible for the management and administration of the country's tactical and strategic nuclear weapons stockpile.

Source: TH

PROJECT AKASHDEEP

Context

- Recently, the Indian Army has started the induction of **Akashteer Command and Control Systems** under **'Project Akashdeep'** to bolster its air defence capabilities.

About the Akashteer Command and Control Systems

- It is developed by **Bharat Electronics Limited (BEL)** as part of the Atma Nirbhar Bharat initiative.

- It is a cutting-edge initiative designed to **automate air defence control and reporting processes** by digitising the entire process.
- The system's Control Centres, designed to be vehicle-based and mobile, can maintain operational capabilities even in challenging communication environments.
- It aims to enable monitoring of low-level airspace over the battle areas of the Indian Army and effectively control the **Ground Based Air Defence Weapon Systems.**

- By integrating radar and communication systems at all levels into a unified network, Akashteer aims to deliver an unprecedented level of situational awareness and control.

Project Akashdeep

- It is an **automated air defence control** and **reporting system**, **similar to the Indian Air Force's system**.
- It focuses on building a comprehensive air defence picture for **monitoring, tracking, and engaging** air defence assets by **digitising the entire process**.

Source: IE

ROMANIA

In News

- Research centre in Romania has developed the world's most powerful laser.

About Romania

- It is located in the geographic centre of Europe.
- It neighbours to the North of Ukraine, to the East on the Republic of Moldova, Ukraine, and the Black Sea, to the South on Bulgaria, to the South-West on Serbia, and to the West on Hungary.

- Bucharest, the capital city.

- The Black Sea forms the border of Romania in the south-east along 245 km.
- **Geographical Features :** Romania's relief is very diverse and complex. 31% of the area is covered by mountains , 36% by hills and tablelands, and the rest of 33% by plains.
    - In the centre lies the Plateau of Transylvania, surrounded by the chains of the Carpathians Mountains
    - the highest elevation in Romania being the Moldoveanu Peak.
    - The **Danube River** travels through Romanian territory.

Source:TH

SAUDI ARABIA

In News

- World's First 3D-Printed Mosque was built in Saudi Arabia

About Saudi Arabia

- It is the largest country in the Arabian Peninsula
- It is located in the southwest corner of Asia
- It is surrounded by the Red Sea on the West, by Yemen and Oman on the South, the Arabian Gulf and the United Arab Emirates and Qatar on the East, and Jordan,Iraq and Kuwait on the North.

- The economy of Saudi Arabia is dominated by petroleum and its associated industries.
- Riyadh is the capital city of Saudi Arabia.

Source: TH

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