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4 May, 2024

Working of Counting Centres

Context: *The counting of votes in the largest democratic exercise in history, involving 642 million voters, commenced today, marking a crucial moment for democracy.*

➢ **Supervision and Direction of Vote Counting:**

- Vote counting is overseen and directed by the Returning Officer (RO) for each seat, appointed by the Election Commission of India (ECI) as per Rule 51 of The Conduct of Election Rules, 1961.
- Assistant Returning Officers may also supervise counting, especially in cases where an RO is responsible for multiple constituencies.
- Counting officials, including supervisors, assistants, and staff, are appointed by the RO to conduct the actual counting of votes in Electronic Voting Machines (EVMs) based on the anticipated number of postal ballots and counting tables.

➢ **Composition of Counting Officials:**

- Each counting table consists of a supervisor, an assistant, counting staff, and a micro-observer responsible for ensuring the integrity of the counting process.
- These officials are selected from a database of officers using software developed by the state's Chief Electoral Officer as per Rule 51 of The Conduct of Election Rules, 1961.

➢ **Access to Counting Hall:**

- Allowed individuals in the counting hall include supervisors, assistants, micro-observers, ECI-authorised personnel, public servants on election duty, and candidates, election agents, and counting agents.
- Police officers and government ministers are not classified as "public servants" in this context, and mobile phones are prohibited inside the counting hall except for the ECI's Observer as per Rule 51 of The Conduct of Election Rules, 1961.

➢ **Location of Vote Counting:**

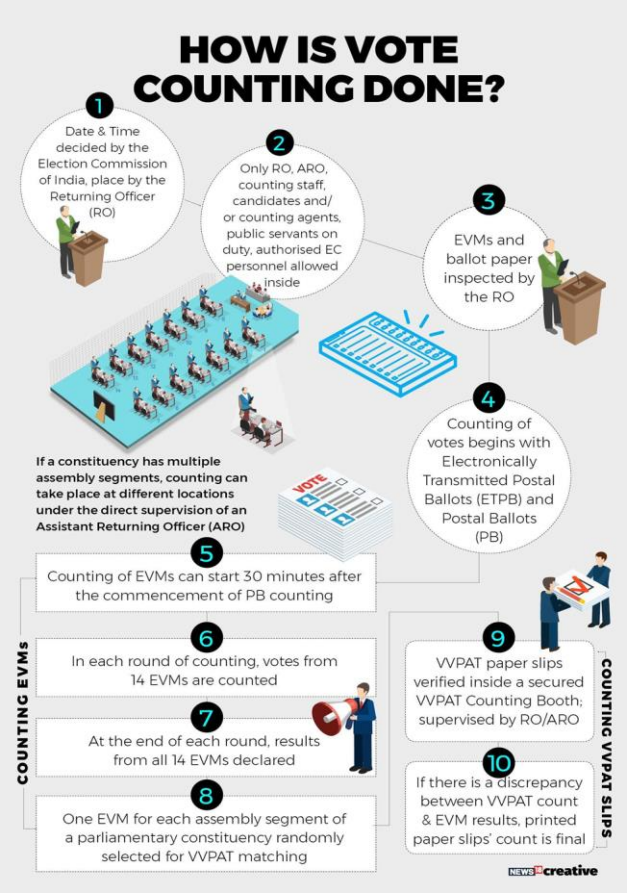
- The location and timing of vote counting are determined by the RO at least one week before the poll date, following guidelines set by the ECI as per Rule 51 of The Conduct of Election Rules, 1961.
- Votes for each Assembly constituency are counted at a single location, typically at the RO's headquarters.

➢ **Process and Progression of Vote Counting:**

- Vote counting begins with postal ballots, followed by EVM votes.
- EVM counting is conducted on tables arranged in rows, with each table addressing votes from one polling station at a time.
- After each round of EVM counting, results are announced by the RO, and the tallying of Voter Verified Paper Audit Trail (VVPAT) commences as per Rule 51 of The Conduct of Election Rules, 1961.

➢ **Announcement of Results:**

- Results are announced by the RO after each round of counting, with the relevant records signed and authorized for the next round to proceed as per Rule 51 of The Conduct of Election Rules, 1961.
- The verification of VVPAT slips begins once all rounds of EVM counting are completed, taking approximately an hour per VVPAT machine on average.



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Agnibaan Rocket

Context: *Last week, Agnikul Cosmos, a private space company, successfully launched its domestically built rocket, marking a breakthrough in India's space sector.*

➢ **Rocket Overview:**

- Agnibaan (Sanskrit, ISO: Agni 'Fire', Bāṇa 'Arrow') is produced by Agnikul Cosmos in Chennai, India.
- It is a mobile small-lift launch system currently under development.
- Capable of placing a 100 kg (220 lb) satellite into a 700 km (430 mi) orbit.
- The rocket will be 18 meters long with a diameter of 1.3 meters and a lift-off mass of 14,000 kg (31,000 lb).
- Manufactured by 3D printing as a whole.

➢ **Rocket Design:**

- Agnibaan rocket has two stages.
- The first stage is powered by seven Agnilet engines.
- The second stage is powered by a vacuum-optimized version of the Agnilet engine.
- Engines use liquid oxygen and kerosene as oxidizer and fuel.
- First stage powered by 7 Agnite engines, each with a thrust of 25 kN.

➢ **Launch Site:**

- Designed to launch from multiple launch ports across the world.
- Launch pedestal named "Dhanush" designed for full mobility and reusability.
- Dimensions of Dhanush designed to meet road dimensions and transportability restrictions globally.

➢ **Schedule:**

- Initially aimed to develop and launch the first rocket in 2021.
- Signed a Non-Disclosure Agreement (NDA) with the Department of Space on December 3, 2020.
- Entered an agreement with Alaska Aerospace Corp. to launch a rocket from Kodiak Launch Complex.

➢ **Launch History:**

- Test flight of a knocked down version of the rocket Agnibaan SORTeD successfully flew on a suborbital mission on May 30, 2024, from SDSC.
- The launch was postponed several times due to various issues.

NEWS IN BETWEEN THE LINES

PraVaHa Software

Recently, the Indian Space Research Organisation (ISRO) has developed Computational Fluid Dynamics (CFD) software named Parallel RANS Solver for Aerospace Vehicle Aero-thermo-dynamic Analysis (PraVaHa).

About PraVaHa Software:

- PraVaHa (Parallel RANS Solver for Aerospace Vehicle Aero-thermo-dynamic Analysis) is a **specialized Computational Fluid Dynamics (CFD) software** developed by the Indian Space Research Organisation (**ISRO**) at the **Vikram Sarabhai Space Centre** (VSSC).
- This software is designed to simulate the **complex external** and **internal flows** experienced by aerospace vehicles, such as **launch vehicles** and **re-entry vehicles**, both winged and non-winged.
- The software has been extensively used in the Gaganyaan program for the aerodynamic analysis of human-rated launch vehicles such as **HLVM3**, the **Crew Escape System** (CES), and the **Crew Module** (CM).
- It is **capable of simulating airflow** under both Perfect Gas and Real Gas conditions.
- The software facilitates the evaluation of a large number of configurations for launch vehicles during the initial aerodynamic design studies.

Face to Face Centres

DELHI MUKHERJEE NAGAR: 9205274741, 42 | LAXMI NAGAR : 9205212500, 9205962002 | RAJENDRA NAGAR: 9205274743 | UTTAR PRADESH PRAYAGRAJ: 0532-2260189, 8853467068 | LUCKNOW (ALIGANJ): 0522-4025825, 9506256789 | LUCKNOW (GOMTI NAGAR): 7234000501, 7234000502 | GREATER NOIDA: 9205336037, 38 | KANPUR: 7887003962, 7897003962 | GORAKHPUR : 7080847474, 9161947474 | ODISHA BHUBANESWAR: 9818244644/7656949029

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- PraVaHa **uses Computational Fluid Dynamics** (CFD) to predict aerodynamic and aero-thermal loads by numerically solving conservation equations of mass, momentum and energy, along with the equation of state.
- The software **enhances the safety and efficiency** of ISRO's aerospace missions, particularly the **human spaceflight program** (**Gaganyaan**).

Computational Fluid Dynamics:

- Computational fluid dynamics (CFD) is a **branch of fluid mechanics** that **uses computers to simulate fluid flow** and predict fluid-flow phenomena.
- It is **based on the conservation laws of fluid motion,** such as conservation of mass, momentum, and energy.
- It **uses numerical analysis** and **data structures** to solve problems involving fluid flows, such as the interaction of fluids with surfaces and free-stream flow.

Bank Clinic

Recently, the bank employees of All India Bank Employees' Association (AIBEA), launched Bank Clinic, a platform to address customer complaints and provide guidance on rights and remedies.

About the Bank Clinic:

- The Bank Clinic is an **initiative launched by the All India Bank Employees' Association** (AIBEA).
- It aims to **assist bank customers in addressing their grievances**, particularly in light of rapid technological expansion and evolving Reserve Bank of India (RBI) guidelines on retail banking.
- **Customers can fill out complaint details**, **create a ticket** and expect a response **within five working days.**
- The response includes information on available remedies and compliance with relevant RBI guidelines concerning the reported issue.
- The initiative **empowers customers** by providing a structured platform to address their grievances.
- It ensures **compliance with RBI guidelines** by offering appropriate solutions to customer complaints.

Food Safety and Standards Authority of India

Recently, the FSSAI issued a directive mandating all food business operators to remove any claim of "100% fruit juice" from labels and advertisements of reconstituted fruit juices with immediate effect.

About the Food Safety and Standards Authority of India:

- The Food Safety and Standards Authority of India (FSSAI) is **a statutory body established under the Ministry of Health and Family Welfare,** Government of India.
- It was established on **5 September 2008 under Food Safety and Standards Act, 2006**
- It serves as the apex body responsible for **regulating** and **supervising the food safety and standards in India.**
- Its regulations aim to prevent foodborne illnesses and promote consumer confidence in the food supply chain.
- It is comprised of a **Chairperson and 22 members** representing various stakeholders including food industry, consumer organizations and food scientists.
- FSSAI undertakes various initiatives such as **the Eat Right India movement** to promote healthy eating habits and reduce food wastage.
- Its headquarter is in **New Delhi.**

Place in News

Cuba

Recently, India sends humanitarian assistance to Cuba including 90 tonnes of 'Made In India' active pharmaceutical ingredients.

Cuba (Capital: Havana)

Location: Cuba is an **island country** located **in the Caribbean Sea**.

Boundaries: Cuba shares its borders with the United States (**Florida**) and the **Atlantic Ocean** to the north, the **Caribbean Sea** to the south, the **Windward Passage** (separating it from Haiti) to the east and the **Yucatán Channel** (separating it from Mexico) to the west.

Physical Features:

- The highest point in Cuba is **Pico Turquino**, located in the **Sierra Maestra mountain** range in southeastern Cuba.
- The major rivers of Cuba include the **Cauto**, **Toa**, **Sagua la Grande** and **Hanabana**.
- Cuba's mineral resources include **nickel**, **cobalt**, **iron ore**, **copper**, **manganese** and **salt**
- Cuba has a **tropical climate**.

POINTS TO PONDER

- What is bank clinic? **– The bank clinic is an initiative by the All India Bank Employees Association (AIBEA). It's aim to help bank customers to redress their grievances.**
- According to the provisional estimate of the National Statistical Organisation (NSO), what was the growth rate of the Indian economy in 2023-24? **– 8.2%**
- With which IIT did the Armed Forces Medical Services (AFMS) sign an MoU for collaboration on research and training? **– IIT Hyderabad**
- Which organizations jointly launched the 'BIMReN initiative' for PhD students? **– Ministry of External Affairs and Bay of Bengal Programme-Inter Governmental Organization**
- Which institute established the 'DRDO-Industry-Academia Centre of Excellence'? **– IIT Kanpur**