

DAILY PT POINTERS

4 June, 2024



The Hindu-Polity and Governance (GSII)-Page 11

- Telangana was carved out of erstwhile unified Andhra Pradesh on June 2, 2014, and it was created as the 29th state with Hyderabad as its capital.
- The Andhra Pradesh Reorganisation Act (2014) bifurcated Andhra Pradesh into two separate states.
- The Andhra State Act (1953) formed the first linguistic state of India, known as the State of Andhra, by taking out the Telugu speaking areas from the State of Madras (now Tamil Nadu).
- Formation of States in India: Article 3 of the Indian Constitution: It provides for the creation of a new state through a bill tabled in Parliament on the President's recommendation after consultations with the legislatures of the affected states.
 - Parliament may create new States in a number of ways, namely by: separating territory from any State; uniting two or more States; uniting parts of States; and uniting any territory to a part of any State.
- Parliament's power under Article 3 extends to increasing or diminishing the area of any State and altering the boundaries or name of any State.

Telangana's firm, first steps after formation

State formation is not simply a bureaucratic design, a technical rational affair but one that is deeply located within the social imaginaries and their durable forms

Advertisement

Telangana just celebrated 60 years of Statehood. In the context, statehood in 2014, the State formed on June 2, 2014, after a long, three-decade struggle.

For the past 60 years, the Telugu people have been living on June 2, 2014 after a long, three-decade struggle. For the past 60 years, the Telugu people have been living on June 2, 2014 after a long, three-decade struggle.

The state of Telangana is a historical project of State formation of the Indian subcontinent. It is a project of State formation that is deeply located within the social imaginaries and their durable forms. It is a project of State formation that is deeply located within the social imaginaries and their durable forms.

Social imaginaries. The demand for Telangana statehood is a demand for a new social imaginary. It is a demand for a new social imaginary.

State formation and social imaginaries. State formation is a process that is deeply located within the social imaginaries and their durable forms. It is a process that is deeply located within the social imaginaries and their durable forms.



Several districts, where the mass rallies were held, participated in the Telangana State formation, celebrated on June 2, 2014, in Hyderabad.

State formation and social imaginaries. State formation is a process that is deeply located within the social imaginaries and their durable forms. It is a process that is deeply located within the social imaginaries and their durable forms.

State formation is not simply a bureaucratic design, a technical rational affair but one that is deeply located within the social imaginaries and their durable forms.

Social imaginaries. The demand for Telangana statehood is a demand for a new social imaginary. It is a demand for a new social imaginary.

State formation and social imaginaries. State formation is a process that is deeply located within the social imaginaries and their durable forms. It is a process that is deeply located within the social imaginaries and their durable forms.

State formation and social imaginaries. State formation is a process that is deeply located within the social imaginaries and their durable forms. It is a process that is deeply located within the social imaginaries and their durable forms.

State formation and social imaginaries. State formation is a process that is deeply located within the social imaginaries and their durable forms. It is a process that is deeply located within the social imaginaries and their durable forms.

The Hindu-S&T(GSIII)Page 14

ICMR seeks to provide oral formulation of hydroxyurea to treat sickle cell disease

Bindu Shajan Perappadan
NEW DELHI

The Indian Council of Medical Research (ICMR) has invited Expressions of Interest (Eoi) from eligible organisations for the “joint development and commercialisation” of a low dose or paediatric oral formulation of hydroxyurea to treat sickle cell disease in India.

India has the highest prevalence of sickle cell disease in South Asia. Over 20 million people with the disease live in the country. While most pharmaceutical companies in India market 500-mg capsules or 200-mg tablets of hydroxyurea, the biggest challenge in treatment is that it is not available in the suspension form for effective use in the case of paediatric patients, the ICMR said.

Sickle cell disease is one



Over 20 million people with sickle cell disease are residing in India. AP

of the most common monogenic disorders of haemoglobin, and hydroxyurea, a myelosuppressive agent, is an effective drug for treating patients of sickle cell disease, and thalassemia.

Risk of low dose

The ICMR said that since only high-dosage hydroxyurea tablets are available, initiating a low-dose treatment becomes a tedious

task for service providers, as the capsule or tablet has to be broken down appropriately to be administered in accordance with body weight, risking the efficacy available with measured doses.

“Thus, there is a need for paediatric formulation of HU (hydroxyurea), considering the number of SCD cases in India and in view of the launch of the National Mission to eliminate Sickle Cell Anaemia/SCD (by 2047),” it said.

The ICMR, which is the apex biomedical research body in the country, also said that in India, according to the National Health Mission’s guidelines, healthcare providers initiate hydroxyurea therapy to only symptomatic sickle cell disease patients among children both because of the lack of availability of paediatric doses as well as the fear of toxicity.

In children, the prescribed dose is 10 mg to 15 mg per kilogram of body weight after two years of age. This titration of dose is difficult, and currently, it is carried out by using a fraction of the broken capsules, which is not an appropriate method because it can lead to less accurate administration of the drug, which has five dose-related side-effects.

Titration of drug

With the availability of a formulation, the titration of the drug can be better, and its dose-related side effects can be reduced.

The council said that it could enter into any form of exclusive or non-exclusive agreement with eligible manufacturing companies for joint development and commercialisation of paediatric oral formulations of hydroxyurea for sickle cell disease.

- The Indian Council of Medical Research (ICMR) has invited Expressions of Interest (Eoi) from eligible organisations for the “joint development and commercialisation” of a low dose or paediatric oral formulation of hydroxyurea to treat sickle cell disease in India.
- India has the highest prevalence of sickle cell disease in South Asia. Over 20 million people with the disease live in the country.
- Sickle cell disease is one of the most common monogenic disorders of haemoglobin, and hydroxyurea, a myelosuppressive agent, is an effective drug for treating patients of sickle cell disease, and thalassemia.

HEADLINES OF THE DAY

The Hindu :_GS 3-S&T



ISRO's Launch Vehicle Mark-10 M4 carrying Chandrayaan-3 lifts off on July 14, 2023. ISRO says initial aerodynamic design studies for launch vehicles demand evaluation of many configurations.

ISRO develops new PraVaHa software for aerodynamic design

The Hindu Bureau
BENGALURU

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).

This software was developed in ISRO's Vikram Sarabhai Space Centre (VSSC). It can simulate external and internal flows on launch vehicles, winged and non winged re-entry vehicles. According to ISRO, initial aerodynamic design studies for launch vehicles demand evaluation of a large number of configurations.

shape, structure, and Thermal Protection System (TPS) required for these bodies.

The unsteady part of aerodynamics contributes to serious flow issues around such rocket bodies and creates significant acoustic noise during the mission. Computational Fluid Dynamics (CFD) is one such tool to predict the aerodynamic and aerothermal loads which solve numerically the equations of conservation of mass, momentum, and energy along with the equation of state.

PraVaHa has been used extensively in the Gaganyaan program for aerodynamic analysis of human-rated launch vehicles, viz,

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).

This software was developed in ISRO's Vikram Sarabhai Space Centre (VSSC). It can simulate external and internal flows on launch vehicles, winged and non winged re-entry vehicles. According to ISRO, initial aerodynamic design studies for launch vehicles demand evaluation of a large number of configurations.

PraVaHa has been used extensively in the Gaganyaan program for aerodynamic analysis of human-rated launch vehicles, viz, HLVM3, Crew Escape System (CES), and CM. Currently, the PraVaHa code is operational to simulate airflow for Perfect Gas & Real Gas conditions.

-

Indian Express : GS 2-Welfare Schemes

Over 1 lakh farmers voluntarily gave up their PM-Kisan benefits last year

HARIKISHAN SHARMA
NEW DELHI, JUNE 3

BIHAR, UTTAR Pradesh and Rajasthan lead the chart of 1.16 lakh farmers who have voluntarily given up the benefits of the annual Rs 6,000 Pradhan Mantri Kisan Samman Nidhi (PM-Kisan) scheme across the country from June 2023 to May 2024, according to data available with

THE TOP 5 STATES

No. of beneficiaries who surrendered PM-Kisan

Bihar	29,176
Uttar Pradesh	26,593
Rajasthan	10,343
Maharashtra	7,825
Jharkhand	6,215

the Ministry of Agriculture & Farmers Welfare.

The state breakup: 29,176 farmers' families, the maximum, surrendered PM-Kisan benefits in Bihar; followed by Uttar Pradesh (26,593) and Rajasthan (10,343).

Sources said the Agriculture Ministry had introduced a module in the PM-Kisan mobile app and website last year which

CONTINUED ON PAGE 2

- PM-KISAN is a central sector scheme launched on 24th February, 2019 to supplement financial needs of land holding farmers.
- Financial benefit of Rs 6000/- per year in three equal installments, every four month is transferred into the bank accounts of farmers' families across the country through Direct Benefit Transfer (DBT) mode.
- The scheme was initially meant for small and marginal farmers (SMFs) having landholding upto 2 hectares but scope of the scheme was extended to cover all landholding farmers with effect from 01.06.2019.

Indian Express GS 2 –Polity and Governance-Page 14

From 8 am today: how votes will be counted

RITIKA CHOPRA
NEW DELHI, JUNE 3

OVER THE last month and a half, 642 million voters have spoken in the largest democratic exercise in the history of the world. It is now time for them to be heard.

The counting of votes will begin at 8 am on Tuesday. Fairly clear trends are likely to emerge over the following four hours.

Who will be in charge of the counting of votes?

Counting is carried out under the supervision and direction of the Returning Officer (RO) for each seat, in the presence of the candidates and their election agents. The RO, who is typically the District Magistrate of the district concerned, is nominated by the Election Commission of India (ECI).

Assistant Returning Officers (AROs) are also empowered to oversee the counting, especially where an RO is responsible for more than one constituency. The actual counting of votes in the Electronic Voting Machines (EVMs) at various tables is done by counting officials appointed by the RO, based on the anticipated number of postal ballots and the number of counting tables.

And who are these counting officials?

Each counting table has a counting supervisor who is typically a gazetted officer or equivalent, a counting assistant, counting staff drawn from Group D employees, and a micro observer. The micro observer is responsible for the sanctity of the counting process at his/her table.

These officials are chosen from a database of officers using software developed centrally by the state's Chief Electoral Officer.

Who is allowed inside the counting hall?

A counting hall may have several counting tables. Since the candidate or their election agent cannot be present at every counting location and table, the law permits the candidate to appoint as many counting agents as there are counting tables, including the table where postal ballots are counted.

The following are allowed to enter the counting hall: counting supervisors, counting assistants, micro-observers, ECI-authorized individuals and Observers, 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. No one, including the candidate, RO,

or Assistant RO, is permitted to carry a mobile phone inside the counting hall. The only person who can do so is the ECI's Observer.

Where will the votes be counted?

Rule 51 ("Time and place for counting of votes") of The Conduct of Election Rules, 1961, says that the "returning officers shall, at least one week before the date, or the first of the dates, fixed for the poll, appoint the place or places where the counting of votes will be done and the date and time at which the counting will commence."

The ECI's Handbook for Returning Officers says: "For the sake of uniformity, the date and time of counting of votes is fixed by the Commission." The location of the counting is determined by the RO and should

"preferably" be at the RO's headquarters in the constituency. However, the ECI notes that "there will be no legal objection even if the place so fixed is outside the limit of the constituency".

Votes for a specific Assembly constituency are counted at a single location. However, the ECI says that "each Assembly constituency or an Assembly segment of a

parliamentary constituency is to be counted in a separate hall and under no circumstances can the counting of more than one Assembly constituency be taken simultaneously in a hall".

Each counting hall "shall be a separate room walled on all sides preferably with separate exit and entry facilities"; if pre-constructed separate rooms are not available, large rooms should be divided to create halls, with each part constituting a hall separated by temporary partitions.

Each counting hall can have a maximum of 14 counting tables, in addition to the RO's table.

How does the counting begin and progress?

Two types of votes are counted: EVM votes, and votes cast through postal ballots (which are used for senior citizens, physically challenged individuals, service voters, etc). Postal ballots are counted separately from EVM votes.

The process begins with the counting of postal ballots. All postal ballots are counted at the RO's table.

EVM counting starts 30 minutes later. The Strong Room, where the polled EVMs are

stored, is opened in the presence of the Observer, RO/AROs, and the candidates or their election agents.

After making the necessary entries in the logbook maintained for this purpose, the seal of the lock is inspected and shown to the candidates or their election agents before being broken. The entire procedure is video-graphed with date and time stamps.

EVM counting is organised on tables arranged in rows and numbered sequentially. Seating arrangements are made for counting agents at each table.

Barricades or wire mesh are set up around each counting table to ensure that the EVMs are not physically accessible to the counting agents. The agents are required to remain seated beyond the wire mesh or barricades.

At each counting table, the votes cast at one polling station are addressed at a time. Only the Control Unit of the EVM used at each polling station is needed to determine the poll results for that station. The Ballot Units are kept in a secure strong room.

Along with the Control Unit, the vote account recorded in Form 17C for that polling station is provided to the counting table. After inspecting the paper seals, the counting official activates the Control Unit and presses

the result button, and the total number of votes for each candidate and NOTA (None of the Above) at the polling station appears on the display panel.

The counting supervisor records the results as displayed for each candidate in "Part II-Result of Counting" of Form 17C. If needed, the result button can be pressed again to allow candidates and their agents to note the results. The control unit is then turned off.

How are the results announced?

After all EVMs for a particular round have been counted, and the ECI Observer has conducted a parallel count of two randomly selected EVMs, a tabulation for the round is done.

The RO announces the result of that round of counting, and signs the relevant record (Part II of Form 17C). Following this, the RO/ARO verbally authorises the EVMs for the next round to be brought from the strong room into the counting hall.

The tallying of VVPAT (Voter Verified Paper Audit Trail) commences after all rounds of EVM counting are completed. This process is done sequentially, not simultaneously, for all polling stations. On average, it takes about an hour to verify the slips from each VVPAT machine.



The counting of votes will begin at 8 am on Tuesday. Fairly clear trends are likely to emerge over the following four hours.

Who will be in charge of counting of votes?

- Counting is carried out under the supervision and direction of the Returning Officer (RO) for each seat, in the presence of the candidates and their election agents. The RO, who is typically the District Magistrate of the district concerned, is nominated by the Election Commission of India (ECI).

Indian Express :GS 3-S&T(Page 14)

Launch of Agnibaan rocket: a turning point for India's space sector

AMITABH SINHA
NEW DELHI, JUNE 3

AMIDST ALL the political activity around the elections, a private space company, Agnikul Cosmos, carried out the first launch of its indigenously-built rocket last week, opening up a new chapter in India's space sector. The event was significant enough to be noticed by the Indian Space Research Organisation (ISRO) and everyone else in the space sector, in India and abroad. Prime Minister Narendra Modi, Home Minister Amit Shah, and External Affairs Minister S Jaishankar congratulated the company for the achievement.

This was not the first time that an Indian private company had flown a rocket from Indian soil. In November 2022, Skyroot Aerospace, a young space start-up just like

Agnikul, successfully launched its Vikram rocket, named after Vikram Sarabhai, the legendary space leader credited for building ISRO in its early years. That moment too had been hailed by the President, PM, and many others.

The inaugural flight of Agnikul's creatively named Agnibaan rocket builds on the success of Skyroot, and signals the range of options that are opening up in India's space market. Agnibaan was powered by the world's first 3D printed engine, and was launched from Agnikul's own launchpad, built at ISRO's Sriharikota launch facility. Both Agnikul and Skyroot hope to begin launching commercial satellites on their rockets within a year.

Small satellites

The rocket flown on Thursday will eventually have several variants, capable of carrying

payloads between 30 kg and 300 kg to lower earth orbits. Skyroot's Vikram, also has a few variants, with similar capabilities.

Both are targeting the small satellite market to cater to a rapidly growing demand for a variety of space-based applications in diverse areas such as communications, broadcasting, disaster management, climate change, earth and ocean observation, urban planning, and surveillance. These satellites are usually not meant for space exploration or scientific experiments.

ISRO itself is developing a new rocket, called SSLV or Small Satellite Launch Vehicle, to serve this demand. SSLV, which has flown twice but only once with success, is slightly more powerful and can carry payloads up to 500 kg.

Salient features

The uniqueness of Agnibaan lies in the fact that its semi-cryogenic engine is entirely 3D printed. The engine does not have any components or moving parts at all. There are no joints, no welding, and no fusing. It is a smooth single piece of hardware.

The use of 3-D printing in space hardware is not a novel idea. But no one has used an entire engine that is 3D printed.

This can increase efficiency, bring down costs, and reduce the probability of something going wrong. In an engine that is an assembly of several moving parts, each joint or wiring is a potential source of error. Agnibaan's engine, named Agnilet, has been an entirely in-house development.

The fact that Agnibaan was launched

from a privately owned launch pad is a first for India. Thus far, all space launches have been carried out from one of the two ISRO launch pads at Sriharikota. Given the prospect of a sharp rise in the number of space launches, ISRO is in the process of developing a second space port, at Kulasekarapattinam in Thoothukudi district, Tamil Nadu. It is meant to be used mainly for SSLV launches.

Agnikul, the company, has built its own launch pad inside the Sriharikota range with the help of ISRO. It uses a lot of ISRO's facilities, but the separate launchpad gives it the flexibility to schedule its launches whenever it wants. Agnikul is hoping to carry out 35 to 40 launches of its Agnibaan rockets every year.

Rise of private players

Agnikul and Skyroot represent the suc-

cess of India's efforts to open up the space sector for private participation. They are not alone. Dozens of space companies have come up in the last few years, operating in different segments of the space market – satellites, space-based applications, hardware, communications, data centres, and everything else. Many have already started to make their mark.

With private players also coming in, space has become a sunrise sector that the government is promoting heavily. Prime Minister Modi has personally held several meetings with a select group of space entrepreneurs. Space has become an important part of India's diplomatic outreach to other countries, inviting other companies not just to utilise its capabilities for their own needs, but also to invest in an area that promises to grow at a very fast pace in the near and medium term.

'Agnibaan - SOrTeD' Sub-Orbital Technology Demonstrator also has the unique distinction of having been launched from India's first private launch pad called 'Dhanush' established by Agnikul. It is also India's first semi-cryogenic engine-powered rocket launch.

The key purpose of this mission, which is also Agnikul's first flight, is to serve as a test flight, to demonstrate the in-house and home grown technologies, gather crucial flight data and ensure optimal functioning of systems for Agnikul's orbital launch vehicle, the 'Agnibaan'.

The flagship launch vehicle, 'Agnibaan', is designed to be compatible with the mobile launchpad called 'Dhanush,' allowing for launch flexibility regardless of location.

Agnibaan can be configured to accommodate payloads ranging from 30 kg to 300 kg, ensuring versatility across a wide range of mission requirements.

HEADLINES OF THE DAY



PIB:GS3/Economy

Ministry of Cooperation

National level Coordination Committee for the World's largest grain storage plan holds its first meeting in Delhi

The ambitious plan envisages to transform PACS into Multi-Service Societies

States of UP, MP, Rajasthan, Gujarat, Maharashtra, Tamil Nadu, Karnataka, Assam, Tripura, Uttarakhand and Telangana have implemented its pilot project

Posted On: 03 JUN 2024 5:30PM by PIB Delhi

The National Level Coordination Committee (NLCC) for the World's largest grain storage plan held its maiden meeting in the Ministry of Cooperation, New Delhi on Monday.

- The National Level Coordination Committee (NLCC) for the world's largest grain storage plan held its inaugural meeting at the Ministry of Cooperation in New Delhi on Monday. The committee reviewed the implementation status of its pilot project, initiated last year across 11 states.
- This plan aims to develop various agricultural infrastructures at the Primary Agricultural Cooperative Societies (PACS) level. These include warehouses, custom hiring centers, processing units, and Fair Price Shops. The initiative integrates several existing Government of India (GoI) schemes such as the Agriculture Infrastructure Fund (AIF), Agricultural Marketing Infrastructure Scheme (AMI), Sub Mission on Agricultural Mechanization (SMAM), and the Pradhan Mantri Formalization of Micro Food Processing Enterprises Scheme (PMFME).

HEADLINES OF THE DAY



PIB:GS2/Health

Ministry of Science & Technology

CSIR's 'Phenome India' Project Hits Target with 10,000 Samples Collected, Aims for New Era in Precision Medicine

First ever Pan-India Longitudinal Study to Enable Better Prediction Model for Cardio-Metabolic Diseases in India : Senior Principal Scientist, CSIR-IGIB

Posted On: 03 JUN 2024 5:51PM by PIB Mumbai

Goa, 3 June 2024

- The Council of Scientific and Industrial Research (CSIR) announced the successful conclusion of the first phase of its groundbreaking longitudinal health monitoring project, the 'Phenome India-CSIR Health Cohort Knowledgebase' (PI-CheCK).
- Launched on 7th December 2023, the PI-CHeCK project aims to assess risk factors in non-communicable (cardio-metabolic) diseases within the Indian populace. This unique initiative has already enrolled nearly 10,000 participants, who have volunteered to provide comprehensive health data. These participants include CSIR employees, pensioners, and their spouses from across 17 states and 24 cities. The collected data encompasses a wide range of parameters, including clinical questionnaires, lifestyle and dietary habits, anthropometric measurements, imaging/scanning data, and extensive biochemical and molecular data.