

### GAGANYAAN TV-D1 TEST SUCCESSFUL

#### Why in news?

- ISRO successfully performed the first test vehicle development flight (TV-D1) for India's first human space flight Gaganyaan.
- The Flight Test Vehicle Abort Mission-1 (TV-D1) demonstrated the performance of the **Crew Escape System** of the Gaganyaan project.

#### Gaganyaan Mission

- Gaganyaan project envisages **demonstration of human spaceflight capability** by launching a **crew of 3 members to an orbit of 400 km** for a 3 days mission and bring them back safely to earth.
  - It is part of the **Indian Human Spaceflight Programme (IHSP)**, which was initiated (in 2007) by the ISRO to develop the technology needed to launch crewed orbital spacecraft into low earth orbit (LEO).
- **Launch Vehicle Mark-3 (LVM3/GSLV Mk3) rocket** - the well proven and reliable heavy lift launcher of ISRO, is identified as the launch vehicle for Gaganyaan mission.
  - **India's heaviest rocket** consists of solid stage, liquid stage and cryogenic stage.
- All systems in the LVM3 launch vehicle are re-configured to meet human rating requirements and christened **Human Rated LVM3/HLVM3**.
- Upon its completion, India will become the fourth nation, after the US, Russia, and China, to undertake a manned spaceflight mission.

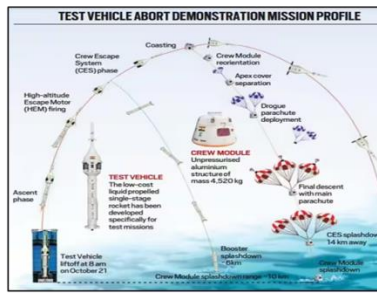
#### News Summary: Gaganyaan TV-D1 test successful

- ISRO achieved a major milestone by successfully executing the Test Flight Abort Mission for the Gaganyaan mission.

#### The test exercise

- **About**
  - The brief test flight sequence launched the Crew Escape System (CES) and crew module at an altitude of 17 km.

- This was followed by a safe touchdown in the sea, about 10 km from Sriharikota in the Bay of Bengal.
- The test checked the functioning of systems for separating the crew module from the rocket in case of a mid-flight emergency (abort mission) and the escape of astronauts.



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- **Objective**

- To evaluate various subsystems of the Test Vehicle, including the Crew Escape System and its separation systems.
- To assess crew module characteristics and demonstrate the deceleration system at higher altitudes and its recovery.

- **The new Test Vehicle**

- The full-fledged test flight of the crew module into space and back will be carried out on the human rated LVM3 rocket.
- However, for the TV-D1 mission, ISRO will use a low-cost basic rocket it has built specifically to test systems.
- The **liquid-propelled single-stage test vehicle**, or TV-D1, used a **modified VIKAS engine**.

- **What next?**

- After the TV-D1 test flight demonstration, the space agency will also be carrying out a test flight with a robot, ‘**Vyomitra**’, a humanoid astronaut.

## CBSE MERIT SCHOLARSHIP SCHEME FOR SINGLE GIRL CHILD

The Central Board of Secondary Education (CBSE) recently extended the registration date for the CBSE Merit Scholarship Scheme for Single Girl Child, 2023.



### About the CBSE Merit Scholarship Scheme for Single Girl Child:

- It was launched by the **Ministry of Education**.
- The scheme is aimed at recognising the efforts of parents in promoting education among girls and providing encouragement to meritorious students.

- The objective of the scheme is to **provide scholarships to meritorious single girl students** who are the **only children of their parents**, have passed the **CBSE Class X Examination with 60% or more marks**, and are **continuing their further school education in Classes XI and XII**.
- It **provides financial aid every month** to the selected students, so they can continue their higher education.

### Eligibility Criteria:

- The applicant should be the **single girl child of her family**.
- The applicant should have secured **60% or more marks in the CBSE Class 10th Examination and be studying Class 11th and 12th in school** (affiliated with CBSE).
- The **tuition fee should not be more than ₹1,500/- per month** during the academic year. In the next two years, the total enhancement in tuition fees in such a school shall not be more than 10% of the tuition fee charged.
- The applicant **must be an Indian National**.
- The student **must continue her school studies in Classes 11th and 12th**.
- Applicants who have the status of **Non-Resident Indian (NRI)** are also **eligible to apply**. The **tuition fee for the NRIs** has been decided **maximum of Rs. 6,000/- per month**.
- **Benefits:**
  - The scholarship **offers a maximum of Rs. 500 per month**.
  - The amount is **payable for a maximum period of two year** Payment will be made through **ECS/NEFT**.
  - The scholarship is **eligible for renewal annually upon successful completion of class XI, contingent upon the scholar's achievement of 50% or more aggregate marks in the exam** determining promotion to the next class.
  - **Renewal or continuation** of the scholarship requires the **prior approval of the Board** if the scholar **discontinues the current course of study or changes schools**.
  - **Satisfactory conduct and regular attendance are necessary** for maintaining the scholarship.

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[WHY THE ISRAEL-PALESTINE CONFLICT COULD DERAIL THE IMEC PLAN](#)

## Why in the News?

- According to a report by the Georgia Tech Research Institute (GTRI), Israel-Palestine war could derail the prospect of a historic peace deal between Israel and Saudi Arabia, a crucial linchpin in the India-Middle East Europe Economic Corridor (IMEC) framework.

## About India-Middle East Europe Economic Corridor (IMEC):



- At the sidelines of the **G20 Summit** held in New Delhi in September 2023, an MoU was signed to develop a rail and shipping corridor connecting India to Europe via the Middle East between India, United States, Saudi Arabia, the United Arab Emirates, France, Germany, Italy, and the European Union.
- The proposed IMEC will involve:
  - **Rail connectivity,**
  - **Shipping lines,**
  - **High-speed data cables,** and
  - **Energy pipelines.**
- These will complement the existing maritime and road networks that will enhance movement of trade and services “**to transit to, from, and between India, the UAE, Saudi Arabia, Jordan, Israel, and Europe.**”

## Significance of IMEC Project:

- IMEC is significant from an infrastructure and connectivity perspective as well as from a geopolitical angle.
- The project involves two separate corridors –
  - **East Corridor:** connects India to the Arabian Gulf, and
  - **Northern Corridor:** connects the Arabian Gulf to Europe.
- According to the MoU, IMEC is “expected to stimulate economic development through enhanced connectivity and economic integration between Asia, the Arabian Gulf, and Europe.”

- The new corridor has other important dimensions, including reliable and secure regional supply chains, better trade accessibility, and trade facilitation.
- In geopolitical terms, IMEC is touted as a counter to China's Belt & Road Initiative (BRI).
  - India, from very early days, had objected to it because the China-Pakistan Economic Corridor, a key component of the BRI, runs through territories claimed by India.

### **Role of IMEC in Improving Israel & Gulf Countries' Relationship:**

- Saudi Arabia and Israel do not have diplomatic ties —primarily because of differences of opinion about the Israel-Palestine conflict.
- In fact, Israel has official ties with only Egypt, Jordan, the UAE, Bahrain and Morocco in the Arab region.
- In this light, **the transit network which seeks integration on multiple fronts assumes particular significance.**
- The corridor's passage through Jordan and Israel could support the US administration's effort to build on the recent normalisation of ties between Israel and several Arab states, including the UAE.
- This may push Saudi Arabia to follow suit and formalise ties with Israel.

### **Impact of Israel-Palestine Conflict on IMEC Project:**

- With the ongoing Israel-Hamas conflict intensifying, there is a growing realization that the kind of diplomatic cooperation a project like IMEC would have warranted as a prerequisite, is far more complicated now.
- The Saudi Arabia – Israel peace deal might not be a possibility in the near future now as mounting anger in the Arab world about the scale of Israel's offensive in northern Gaza.
- US President Joe Biden's planned visit in Jordan this week had to be cancelled after an attack on a Gaza hospital.
- A rocket launched near Iraq's Baghdad International Airport added to a rising number of attacks targeting US forces in the Middle East.
- While the war's direct impact remains regional, the geopolitical consequences reverberate far beyond, with potential consequences for the proposed IMEC corridor.

## INDIAN ARMY'S PROJECT UDBHAV

### Why in the News?

- Union Defence Minister Shri Rajnath Singh unveiled 'Project Udbhav' during the inauguration of the Indian Military Heritage Festival.

### What is Project Udbhav?

- Project Udbhav is a collaboration between the **Indian Army** and the **United Service Institution of India (USI)**, a defence services think tank.
- The project, named 'Udbhav', translates to 'origin' or 'genesis', recognizing the profound knowledge embedded in our nation's historical texts spanning centuries.
- At its core, the project seeks to amalgamate ancient insights with modern military practices, creating a comprehensive approach to tackle present-day security challenges.
- This initiative aims to **bridge the gap between age-old wisdom and contemporary military education**.
- India's ancient knowledge system, rooted in a **5000-year-old civilizational legacy**, boasts a repository of intellectual texts and manuscripts.
- Project Udbhav, as per MoD, aims to facilitate a profound understanding of these systems and their enduring relevance in the modern era.

### Inspiration Behind Project Udbhav:

- The initiative builds upon earlier research by the Army Training Command, resulting in the compilation of the '**Compendium of 75 Stratagems**' based on ancient Indian scriptures.
- The project draws inspiration from revered texts like **Chanakya's Arthashastra** which emphasises the importance of strategic partnerships and diplomacy, aligning with contemporary practices.
- Similarly, **Thirukkural**, the classical Tamil text, champions ethical conduct in all endeavors, including warfare, aligning with modern codes of ethics and principles of the Geneva Convention.

- The records of history also offer invaluable lessons from prominent military campaigns and leaders.
  - The empires of Chandragupta Maurya, Ashoka, and the Cholas serve as examples of flourishing influence during their times.
  - Noteworthy is the Ahom Kingdom's 600-year rule, marked by repeated defeats of the Mughals.
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## NEED TO RELOOK THE DAM SAFETY ACT

### Why in news?

- India has almost 6,000 large dams and about 80% of them are more than 25 years old and carry safety risks.
- A new **Dam Safety Act (DSA)** was passed in late 2021.
- On **October 4, 2023**, a glacial lake outburst flood (GLOF) in North Sikkim's South Lhonak Lake washed away one of the biggest hydropower projects in India, the Teesta III dam at Chungthang.
- Reports have since revealed there were no early warning systems, no risk assessment or preventive measures in place as required under the Act.

### What are the provisions of the Act?

- **About**
  - The Dam Safety Act was tabled in the Rajya Sabha in December 2021, as a response to deficient surveillance and maintenance causing dam failure-related disasters.
  - The Act listed key responsibilities and mandated that national and State-level bodies be established for implementation.
- **Key provisions**
  - A **National Committee on Dam Safety** would oversee dam safety policies and regulations;
  - A **National Dam Safety Authority** would be charged with implementation and resolving State-level disputes;
  - The Chairman of the Central Water Commission (CWC) would head dam safety protocols at the national level;

- A State Committee on Dam Safety (SCDS) and State Dam Safety Organisation (SDSO) would be set up.
- **Obligations of States**
  - Provisions require States to:
    - classify dams based on hazard risk,
    - conduct regular inspections,
    - create emergency action plans,
    - institute emergency flood warning systems, and undertake safety reviews and period risk assessment studies.
  - States were asked to report and record incidents of dam failures.
    - Until now, no statutory provision required systemic reporting of failures and no single agency was tasked with tracking this data.
    - The CWC keeps a record but the list is not updated regularly.
- **Punishment**
  - Failure to comply with any provision of the Act is punishable with imprisonment and/or fines.
  - If such obstruction or refusal to comply with directions results in loss of lives or imminent danger, the entity shall be punishable with imprisonment for a term which may extend to two years.
  - In February 2023, the Sikkim High Court ordered the Gati Hydropower Project company to pay ₹70 lakh to two widowed mothers, for non-compliance with the Dam Safety Act.

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## EDAKKAL CAVES

Recently, Kerala Tourism launched a 2.9-crore rupee project to improve civic amenities around the Edakkal Caves in Wayanad.



### About Edakkal Caves:

- These caves are located 3,900 feet above sea level in the majestic **Ambukuthi Hills**.
- The name Edakkal itself means “a stone in between”.



- The unique, intricate stone carvings date back to the Neolithic and Mesolithic ages.
  - The caves are **two natural formations** that are believed to have been formed by a large split in a huge rock.
  - These feature Neolithic-era pictorial writings believed to date **to at least 6,000 BCE**.
  - **Features:**
    - The caves sport **human and animal figures besides symbols and letters**.
    - Inside the caves are pictorial drawings and engravings that indicate the **presence of ancient human settlements in the region**.
    - Despite their name, the Edakkal Caves are not actually caves. They are **part of a prehistoric rock shelter that was** formed naturally when one huge boulder got wedged between two bigger ones.
    - **Human figures, animals, tools, vehicles, day-to-day occurrences**, and scripts in different languages have been discovered here.
    - The diversity of the engravings suggests that the Edakkal caves were inhabited several times at different points in history.
    - The **Muniyaras, or ancient burial sites** that have been discovered in these hills have yielded a rich collection of ancient earthenware and pottery.
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