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ISRO's GSAT-7A

Military communication satellite to be launched on December 19.

- It is a **Military communication satellite**

- Although all Indian communication satellites offer capacity to the armed forces, **GSAT-7A will be the first one built primarily for the Indian Air Force (IAF)** to qualitatively unify its assets and improve combined, common intelligence during operations.

- This new space-based dimension adds color to the way the Indian Air Force interlinks, operates and communicates with its aircraft as they fly and with command centres on ground

- This satellite **using Ku band** will enable superior real time **aircraft-to-aircraft communication**; and between planes that are in flight and their commanders on the ground.

- It will also support aerial activities of the Army and the Navy when required.

- The GSAT-7A incorporates **Chemical Propulsion System** to provide an operational mission life of a minimum of eight years.

  o Chemical propulsion will be **used for orbit raising as well as for on orbit attitude correction**

  o Sufficient redundancy is built into the Spacecraft for continued service.

Context

- The **Geosynchronous Satellite Launch Vehicle – F11 (GSLV-F11),** will undertake its 13th flight carrying the 35th Indian Communication satellite GSAT-7A built by the ISRO.

- It will place the 2,250-kg GSAT-7A communication satellite into a geosynchronous transfer orbit.

GSLV – F11

It is ISRO's fourth generation launch vehicle **with three stages**.

- The four liquid strap-ons and a solid rocket motor at the core form the first stage.

- The second stage is equipped with high thrust engine using liquid fuel.
- The Cryogenic Upper Stage forms the third and final stage of the vehicle.

Significance

- It would **enhance by many times the coverage** now provided by ground communication systems such as radars and stations of the Army.
- Out-of-sight and remote areas where ground infrastructure and signals are difficult would get into the critical information loop.
- The satellite is expected to help the IAF interconnect with various ground radar stations, airbases and AWACS (Airborne Warning And Control System) aircraft.
- Pilots can communicate much better with headquarters while they fly. Headquarters can receive data in real time.

Watan ko Jano

Context: Union Home Minister meets J&K school children under Youth Exchange Programme 'Watan ko Jano'

About:

- The programme is sponsored jointly by Ministry of Home Affairs, Central Government (Kashmir Cell) and J&K State Rehabilitation Council Social Welfare Department.
- It aims to give exposure to youth and children of J&K about the cultural and socio-economic development taking place in other parts of country. Youth and children hit by militancy and from weaker sections from J&K are selected for the programme.

Women Transforming India Awards

Context: The NITI Aayog is organising the Third Edition of the Women Transforming India Awards 2018 and is launching the upgraded portal of the Women Entrepreneurship Platform (WEP)

About:

- The Women Transforming India Awards were instituted to recognise and celebrate stories of exemplary women from across India.
- This year's theme is "Women and Entrepreneurship" and fifteen winners have been chosen through an extensive six-month long process to identify fascinating and inspiring stories of women entrepreneurs.
- The Women Entrepreneurship Platform seeks to transform the entrepreneurial ecosystem in the country and shall be a one-stop resource centre for future and budding women entrepreneurs.

Victory Day (VIJAY DIWAS)

About Vijay Diwas:

- Vijay Diwas, also called as Victory Day, is celebrated on every 16th December in India.
- It marks the victory of Indian armed forces over Pakistan in the war of Independence of Bangladesh from Pakistan in 1971.
- At the end of the 1971 war, the Pakistani Army unilaterally surrendered resulting in the independence of East Pakistan, which was called as Bangladesh.

- On this day in 1971, the chief of the Pakistani forces along with 93,000 troops, surrendered to the allied forces consists of Indian Army and Mukti Bahini in Dhaka after they got defeated in the war.
- On the anniversary of Vijay Divas, respect and tributes are paid to the martyrs who laid down their lives for their country.

Details

- The backdrop to the War of 1971 was the state of politics in Pakistan where the Bengali Muslims of East Pakistan were clearly **resistant to the idea of being subjugated by the dominant Punjabi and Mohajir influence**.
- **Besides language**, it was the **sharing of resources** between East Pakistan and West Pakistan which created the cleavage.
- **Sheikh Mujibur Rahman,** father of the current prime minister of Bangladesh Sheikh Hasina Wajed, was **illegally denied his electoral victory in 1970 by Pakistan's ruling military** coterie greatly influenced by Zulfiqar Bhutto, the hugely anti-India ex-foreign minister under Ayub Khan.
- The crisis spilled into the streets of East Pakistan and became a point of no return in March 1971. The **Pakistan army launched a reign of terror on the Bengalis**, exacerbating the situation with an initial displacement of a **million refugees who spilled across the border into India**.
- In a path-breaking set of strategic decisions under **advice from the iconic Field Marshal (then General) Sam Manekshaw**, Prime Minister Indira Gandhi awaited the right moment, prepared the nation and the armed forces, cultivated international opinion and signed the Indo-Soviet Treaty of Friendship and Cooperation, before launching India into a show of arms instigated by Pakistan.

- In 14 days of conventional war fighting aided by the **Mukti Bahini (the nationalist guerilla force of Bengali Muslims**), Pakistan was roundly defeated resulting in the creation of Bangladesh as a free and independent nation.

Introspection

- Vijay Diwas **should be more appropriately used to self-examination on the state of national security**; at different levels and with diverse understanding of the term "security".

- Professional military advice in national security and especially emergent situations is something a political leader can **ignore only at the cost of the nation's peril**.

- If the armed forces have to deliver, then they need to be at **optimum preparedness levels at all time**, especially now, when wars can be triggered on the basis of public anger and pressure instigated by major acts of terror on Indian soil.

So alongside celebration there should be introspection about the state of preparedness, should we ever be threatened again.

Slow progress in direct benefit transfer (DBT) scheme for nutritional support to Tuberculosis (TB) patients

Context

- The direct benefit transfer (DBT) scheme for **nutritional support to Tuberculosis (TB) patients — Nikshay Poshan Yojana (NPY)** has recorded slow progress in the last eight months

Details

- Of the 18 lakh registered TB patients across the country, only 4.69 lakh, barely 26% of the beneficiary pool, have received cash transfer so far.
- This is because many of the rural poor either do not have a bank account or are migrant patients, whose bank accounts are difficult to be captured.

Transfer to blood relative

- In case the beneficiary does not have an account in his/her own name, but a family member (spouse, parents, brother/sister /blood relatives) has a bank account, the health staff/treatment supporter can transfer the benefits of NPY to the account of a family member by obtaining an undertaking from the beneficiary
- Also for beneficiaries who do not have a bank account even in his family member's name, provision of opening zero balance bank account is available under the Pradhan Mantri Jan Dhan Yojana (PMJDY) and Indian Postal Bank.
- The District Magistrates/Collectors should ensure that zero balance bank accounts for the TB patients are opened expeditiously. The District TB officers should coordinate with the Lead Bank manager, nodal officer for PMJDY and Postal Bank in the district

North-Eastern Hill University (NEHU) researchers patent process to treat industrial waste

Context

- Researchers from the North-Eastern Hill University (NEHU) based in Meghalaya capital Shillong have patented a fast, energy-efficient and low-cost process for treatment and bio-detoxification of **industrial effluents contaminated with harmful azo-dye**.

Background

- The **traditional treatment** of environmentally damaging waste-water effluents with appropriate chemicals processes such as chemical precipitation, coagulation and electrocoagulation only transfers the contaminating chemical entities and chemical groups of the waste-water to other media, **thereby producing secondary wastes**.

- In some cases, these secondary wastes, intermediates and by-products formed by the second process of chemical remediation or detoxification may produce equally or more toxic chemical entities than the original toxicants and pollutants

Concerns

- Most **strains of E. coli,** a common kind of bacteria that lives in the intestines of animals and people, are **Their survival is crucial for bio-flora and fauna**

- The **release of such effluents into the environment could adversely affect the survival of aquatic micro-organisms**, flora and fauna, thereby disturbing the entire ecosystem and ecological balance.

Current Scenario

- The so-called waste-water is not really suitable for release directly into streams, rivers and other water bodies. So the reserchers recognised this serious shortcoming of the existing technologies in the domain, and came up with the innovative technology

- The 'green process' developed for **treating waste-water from industries such as textile, leather and paint** is 25% faster, 40% more energy-efficient and more sustainable than the existing technology.

- This process has also been found to **leave the discharge environmentally benign and thus likely to be equally non-toxic** to other bio-flora and fauna.