13 March 2024
National and International News

Cutlass Express 24

Context:

- The Indian Navy led the maritime exercise **"Cutlass Express" – 24 with INS Tir at Port Victoria, Seychelles.**
- The exercise involved active engagement with participants from 16 friendly foreign countries.

Training Activities:

- The training encompassed theoretical and practical aspects of Maritime Interdiction Operations, Visit Board Search and Seizure (VBSS) procedures, and Diving operations.
- During the sea phase, the VBSS team of INS Tir boarded the Seychelles Coast Guard ship LE Vigilant, showcasing boarding operation procedures.
- Joint diving operations were conducted by Indian, US, and Seychelles divers after intensive training.

INS Tir:

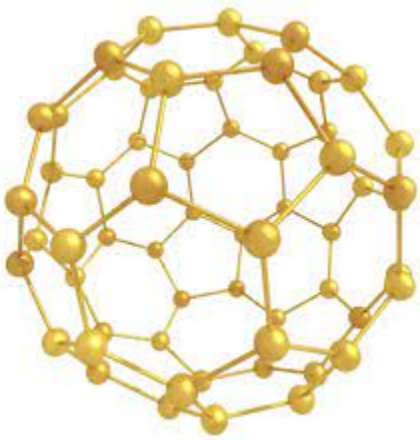
- INS Tir (A86) is the first dedicated **cadet's training ship to be built by Mazagon Dock Limited and commissioned as such by the Indian Navy.**
- She is the senior ship of the 1st Training Squadron of the Southern Naval Command.
- INS Tir was commissioned on **21 February 1986.**

INS Tushil

Context:
INS Tushil, India's latest naval asset, began its sea trials from Russia's Baltiysk naval base on March 5.

Key points:

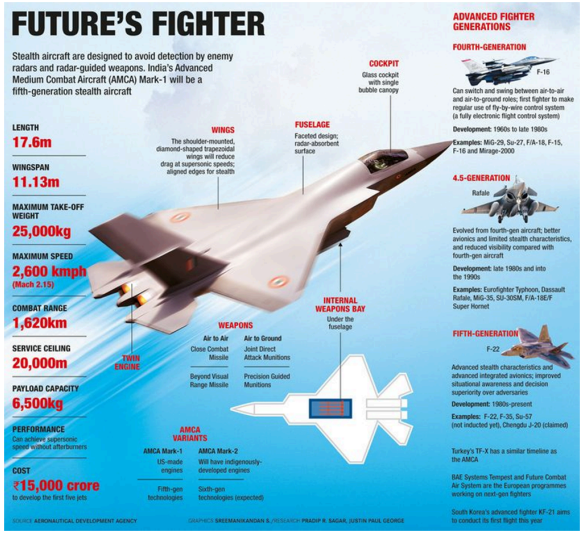
- INS Tushil belongs to the **Talwar-class frigates**, known for their stealth-guided missile capabilities.
- These frigates are **upgraded versions of the Russian Krivak III-class frigates, originally used by the Coast Guard**.
- The Indian Navy currently **operates six of these ships, with four more under construction, including two at India's Goa shipyard.**
- These ships incorporate **"stealth technology"** to

	minimize radar and underwater noise detection. • They are equipped with **Indian and Russian weaponry**, including **surface-to-surface missiles, sonar systems, surveillance radar, communication suites, anti-submarine warfare systems, surface-to-air missiles, and gun mounts.** • Designed for combat in brown and blue waters, they can engage submarines, warships, and repel air attacks independently or in formations. • The frigates have a displacement of **3620 tons, a length of 124.8 meters, a top speed of 30 knots, and a cruising range of 4850 miles.** **Project 11356M:** • In **October 2016, India and Russia signed an Inter-Governmental Agreement (IGA) for four Admiral Grigorovich-class frigates (Project 11356M).** • Russia agreed to deliver two frigates, including **INS Tushil and INS Tamala,** while India would build the other two domestically. • The construction of these ships is tailored to meet the **Indian Navy's requirements for comprehensive naval warfare capabilities in air, surface, and sub-surface domains.**
Gold Nanoparticles 	**Context:** • Often referred to as **'gold bhasma,' gold nanoparticles are recognized for their therapeutic and beautifying properties in skincare.** • They protect the skin from external infestations, combat aging, improve metabolism, and rejuvenate the body. **Key points:** • Gold nanoparticles (AuNPs) are **tiny particles made of gold atoms, typically ranging from 1 to 100 nanometers in size.** • They possess unique optical, electronic, and catalytic properties due to their small size and shape. **Benefits** • Easily absorbed by the skin, they act as a **rejuvenator, potentially benefiting various systems of the human body.** • Integral to various Ayurvedic preparations, they are known for their rejuvenating,

immuno-modulating, beautifying, and healing properties.
- They **slow down collagen depletion, stimulate cell regeneration, improve metabolism, and tone up muscles.**
- They strengthen underlying tissue, bones, and nerves, contributing to a youthful appearance.
- Innovative formulations like sparkling gold face washes enriched with gold nanoparticles and natural ingredients offer potent skincare solutions.

Applications
- **Biomedical:** Used in imaging, therapy, and diagnostics, serving as contrast agents in X-ray, computed tomography (CT), and photoacoustic imaging, and facilitating photothermal therapy and drug delivery.
- **Catalysis:** Exhibit remarkable catalytic activity in various chemical transformations.
- **Electronics:** Used in nanoelectronic devices, conductive inks, and sensors.
- **Environmental Remediation:** Employed in detecting and removing pollutants from water and soil.

India's indigenous fifth gen fighter jet AMCA



Context
- The **Cabinet Committee on Security (CCS) cleared a Rs 15,000 crore project to design and develop the Advanced Medium Combat Aircraft (AMCA), India's fifth-generation fighter multirole fighter jet.**

Agencies Involved
- The **Aeronautical Development Agency (ADA**) under the Defence Research and Development Organisation (DRDO) will be the nodal agency for executing the programme and designing the aircraft.
- It will be manufactured by **state-owned Hindustan Aeronautics Limited (HAL).**

Features
- Stealth features
- Low-probability-of-intercept radar
- Agile airframes with super cruise performance
- Advanced avionics features
- Highly integrated computer systems capable of networking with other elements within the battlespace
- Higher utilization time and smaller serviceability or

	maintenance periods **Other fifth-generation fighters** • Only a few countries have **built a fifth-generation stealth fighter aircraft.** • The list of the aircraft currently in service includes the **F-22 Raptor and F-35A Lightning II of the US, the Chinese J-20 Mighty Dragon, and the Russian Sukhoi Su-57.**

Kerala Regional News

Prof. M.V. Pylee Award for T. Pradeep 	**Context:** • **Professor Thalappil Pradeep of IIT Madras** was conferred the **prestigious Prof. M.V. Pylee Award 2023 by Cochin University of Science and Technology (CUSAT)** • It was given to him in r**ecognition of his distinction as a leading academician in India**. • The **award includes a cash prize of ₹1 lakh, a citation, and a memento.**
Suspected case of Lyme disease reported in Ernakulam	**Context:** • A s**uspected case of Lyme disease** caused by the **bite of a tick carrying borrelia bacteria** has been **reported from Koovapady in Ernakulam district.** **About:** • Lyme disease is a **bacterial infection spread by Borrelia burgdorferi bacteria** from **infected Ixodes ticks** (blacklegged ticks in the US) • The **most common symptom is a bull's-eye rash around the tick bite**, but fatigue, fever, and headaches can also occur. **Key Points**: **Transmission:** • Tick bite (usually attached for 36-48 hours or more) **Cure:** • **Early diagnosis is key to prevent the infection from reaching joints, the heart, or the nervous system.**

	• Lyme disease is **treatable with antibiotics**, especially if caught early. • Early treatment with antibiotics usually leads to a **full recovery.**
Prime Minister launches five OSOP stalls in Kozhikode	**Context:** • The **Prime Minister** inaugurated **five stalls promoting the "One Station One Product" (OSOP) scheme at railway stations in Kozhikode district,** Kerala. • **Three stalls** were set up at **Kozhikode railway station, and one each at Koyilandy and Vadakara stations.** **About:** • The **"One Station One Product" initiative is a program by the Indian Railways** to **promote local artisans and products.** • **Goal: Aligned with the "Vocal for Local" vision**, OSOP **aims to create a market for indigenous goods and provide livelihood opportunities.** • **Functioning:** Stations across India are **designated to showcase and sell a single, signature product from their region.** • **Products**: These can be **handicrafts, handloom textiles, food products,** or anything specific to the local area.
National Good Samaritan Day	**Context:** • **National Good Samaritan Day is celebrated on March 13th** each year. • It's a day to **recognize people who help others in need, without expecting anything in return.** • The day is **named after the parable of the Good Samaritan in the Bible**, which tells the **story of a traveler who helps a wounded stranger.** • The day was first recognized by the United States White House in 1996 in honour of the **life of sports journalist and humanitarian Chad Powellin.** **Key points:** • **Promotes kindness and charity**: It encourages people to be more helpful and compassionate towards others. • **Honors selfless acts**: Recognizes those who go out of their way to assist strangers. • **Importance of community:** Highlights the value of helping one another and building a stronger community.

Tribal cultural festival begins at KIRTADS in Kozhikode

Context:

- **Paddy conservationist Cheruvayal Raman inaugurated 'Nera Thinka', the tribal medicine, food, art and literature festival organised by the Kerala Institute for Research Training and Development Studies of Scheduled Castes and Scheduled Tribes (KIRTADS) in Kozhikode**
- Former State Council of Educational Research and Training (SCERT) **Director K. Prasad** was the **guest of honour on the occasion**.