

## PINAKA ROCKET SYSTEM

**Context:** Indian army is procuring more Pinaka Missile Systems to upgrade its firepower.



### About Pinaka Rocket System

- It is a **multi-barrel rocket launcher** developed by the **DRDO** and manufactured by Indian defence firms.
- Named after the legendary bow of **Lord Shiva**, symbolizing power and precision.
- It was first used during the Kargil War, where it successfully neutralised Pakistan Army positions on the mountain tops.

### Key Features

- The **quick response and relatively high pointing accuracy** of the launcher enable it to deliver a large volume of fire against critical and time-sensitive enemy targets, within a very short time.
- It delivers a variety of warheads, including high-explosive and submunitions.
- **Multiple Launch Capability:** Fires 12 rockets in just **44 seconds**, delivering overwhelming firepower.

- **Mobility:** Mounted on **8×8 or 6×6 trucks**, allowing rapid deployment in diverse terrains.
- **Range:**
  - Pinaka Mk-I: **40 km**.
  - Pinaka Mk-II and Enhanced Versions: **60–75 km**.
  - Guided Variant: **90 km**, with improved accuracy and reduced collateral damage.
- **Guidance and Precision:** Equipped with **satellite-based guidance** for precision targeting.
- **Payload Options:** Carries multiple warheads, including high explosives, incendiaries, anti-personnel, and anti-tank bomblets.
- **Quick Deployment and Reloading:** Rapid deployment enables swift counterstrikes.
- **Modularity and Expandability:** Modular design supports advanced technology integration for network-centric warfare.
- **It has** Proven effectiveness in **mountainous and rugged terrains**.

*Source: Defence Ministry signs contracts worth ₹10,147 crore for Pinaka ammunition (The Hindu)*

## MIRAGE 2000

**Context:** India lost another Mirage 2000 fighter jet in a regular flying exercise

### About Mirage 2000:

- The Mirage 2000 is a **French multirole, single-engine fourth-generation** fighter jet.



- **Manufacturer:** Dassault Aviation
- **First flight:** 10 March 1978
- The jet is available as a **single-seater or two-seater** multirole fighter.
- **Combat weight:** 21,000 pounds
- **Range:** 1,550km
- **Maximum Speed:** Mach 2.2 (2,530 km/h)
- **Approach Speed:** 140 knots (259 km/h)
- It has a maximum **climbing speed of 60,000 feet per minute.**
- It is capable to launch both **Air-to-Air Missiles and Surface-to-Air Missiles**
- It is designed for all **weather penetration at low altitude.**
- Over 600 Mirage 2000 aircraft have been built and it has been in service with nine nations, including **France, India, Greece, and the United Arab Emirates.**

**Kargil War and Mirage 2000**

- During the Kargil War, India needed high-performance aircraft for challenging terrains and harsh climates.

- The MiG-21s, MiG-23s, and MiG-27s couldn't dislodge the Pakistani forces, leading to the deployment of the Mirage 2000.
- This jet dropped laser-guided bombs, destroying Pakistani positions.
- During Operation **Safed Sagar**, two Mirage aircraft flew 514 sorties, targeting Pakistan's Northern Light Infantry bunkers and repeatedly striking Tiger Hill.
- The impressive performance of the Mirage 2000 in 1999 prompted India to order more of these jets.

Source: Air Force fighter plane Mirage-2000 crashes near Gwalior; pilots eject safely (The Hindu)

**PLACES IN NEWS**

**Chabahar Port**

**Chabahar Port: Key to India's Central Asia and Europe Trade Links**



Source: India today

- It is a **deep-water port** located in Iran's Sistan-Baluchistan province.
- It is on the **Gulf of Oman** at the **mouth of the Strait of Hormuz.**

- It is the **only Iranian port** having **direct access to the Indian Ocean**.
- It consists of two separate ports called **Shahid Beheshti** and **Shahid Kalantari**.
- It's geographic **proximity** to countries such as **Afghanistan, Pakistan, and India**, as well as its status as a **key transit center** on the burgeoning International North-South Transport Corridor (INSTC), gives it the potential to develop into one of the most important commercial hubs in the region.
- **INSTC** is a **multi-modal transportation route** linking the **Indian Ocean** and the **Persian Gulf** to the **Caspian Sea** via **Iran**, and onward to **northern Europe** via **Saint Petersburg** in **Russia**.
- **Kandla port** in **Gujarat** is **550 Nautical Miles** from **Chabahar** port, while the distance between **Chabahar** and **Mumbai** is **786 Nautical Miles**.

#### The Chabahar Project:

- In **May 2016**, **India** signed a **tripartite agreement** with **Iran and Afghanistan** to develop the **Shahid Beheshti Terminal** at **Chabahar**.
- It is India's **first foreign port project**.
- The deal agreement aims to **establish an international transport and transit corridor in Chabahar**.
- The construction of the **Chabahar Port** and the construction of a **rail line from Chabahar Port to Zahedan** are the major highlights of this project.
- The idea was that the port would enable **India to bypass Pakistan** and access **Afghanistan**, and ultimately **Central Asia**.
- Moreover, the port could **serve as a hub for transit trade between India, Iran, and**

**Afghanistan** and provide an alternative route to the traditional Silk Road that passes through China.

- India recently signed a **10-year agreement with Iran** to develop and manage the **Chabahar port**, marking a pivotal development in bilateral ties between the two nations.

Santorini Island



- Santorini, or **Thera**, as it is also known, is a **volcanic crater island** that is located in the southern part of the **Aegean Sea** in **southeastern Greece**.
- It is the southernmost island in the **Cyclades Island group**.
- It is located approximately 128 nautical miles southeast of the Greek mainland and about 63 nautical miles north of Crete, the largest Greek island.
- Santorini is the **remaining portion of an exploded volcano** and forms the most active volcanic centre of the South Aegean Volcanic Arc.
- Santorini's volcano is one of the **few active volcanoes on Greek and European land**.
- It is well known for its **sea-filled volcanic caldera** that is **surrounded by high colourful cliffs** on its three sides.
- It is also known for its **pristine whitewashed houses** spread across jagged cliffs, astonishing **blue waters**, dramatic

views, fabulous sunsets, and the ancient settlement of Thira.

## TERMS IN NEWS

### Exercise Ekuverin



- Recently, the 13th edition of joint military exercise 'Ekuverin' between the **Indian Army and the Maldives National Defence Force** has commenced.
- Ekuverin meaning '**Friends**' in Dhivehi language started in the year 2009.
- It is a bilateral military annual exercise conducted alternatively in India and Maldives.
- **Aim of Exercise Ekuverin:** It is aimed at enhancing interoperability in counter insurgency and counter terrorism operations, and carry out joint humanitarian assistance and disaster relief operations.
- It is being conducted in Maldives this year. In 2023, it was conducted at Chaubatia in Uttarakhand.
- Both nations have very close and friendly relations in economic, cultural and military cooperation.
- 'Ex Ekuverin' will assist in further bolstering these ties between the two nations.
- **Exercise Ekatha:** It is an annual exercise conducted between the navies of India and Maldives.

### Ambergris



- Ambergris is a waxy substance often called whale **vomit** which is produced by **sperm whales**.

#### How is Ambergris formed?

- Scientists believe that ambergris is formed in the **intestines of sperm whales**.
- The substance is created when the **whale consumes indigestible materials**, such as squid beaks, and forms ambergris to help expel these foreign objects.
- Once expelled, the ambergris floats in the ocean, and if you're lucky enough to find it, you could be looking at a valuable treasure.
- Its rarity and desirability make ambergris one of the most expensive substances in the world

#### Appearance of Ambergris

- It is **soft and has a waxy, greasy** consistency. Over time, as it floats in the ocean and is exposed to sunlight, saltwater, and air, it hardens and develops a rock-like appearance.
- The outer layers become crusty and rough, resembling a stone, while the inside may retain a softer, waxier texture.

- It is highly sought after in the **perfume industry**, as it helps make fragrances last longer.
- There is a ban on the possession and trade of ambergris in countries like the **USA, Australia and India**.
- In India, the sale and trade of ambergris are strictly prohibited under **the Wildlife Protection Act, 1972**.

#### Stryker Infantry Combat Vehicle

- Stryker is a family of **eight-wheel-drive combat vehicles built for the US Army**.
- It was **jointly developed by** General Dynamics Land Systems (GDLS) **Canada and** the General Dynamics Land Systems Division in the **United States**.
- It was the **first new military vehicle inducted into US Army service since the Abrams tank** in the 1980s.
- The Stryker family includes **various configurations** such as **Infantry Carrier Vehicle (ICV), Mobile Gun System (MGS), medical evacuation vehicle, fire support vehicle, anti-tank guided missile carrier, and reconnaissance vehicle, among others**.
- These vehicles are valued for their **speed and flexibility**, particularly in **urban warfare** and quick response scenarios.
- Stryker can be **transported on the ground using trucks or by air on C-17 and C-130 aircraft** already in the Indian Air Force fleet.



#### PRACTICE QUESTIONS

**Q1: The term Ambergris, often seen in the news is related to which of the following?**

- A. Space Exploration
- B. Perfume Industry
- C. Rare Earth Minerals
- D. Deep Sea Mining

**Q2: Exercise Ekuverin is conducted between Indian Army and National Defence force of which of the following nations?**

- A. Bangladesh
- B. Myanmar
- C. Maldives
- D. Nepal

**Q3: Santorini Island is located in which of the following water bodies?**

- A. Adriatic Sea
- B. Ionian Sea
- C. Aegean Sea
- D. Red Sea

**Q4: The Mirage 2000 is often seen in the news regarding operations of the Indian Armed Forces. It is related to which of the following?**

- A. Long Range Cruise Missile
- B. Air Defense System

- C. Frigate
- D. Fighter Jet

**Q5: Consider the following seaports with regard to their location**

1. Rotterdam
2. Chabahar Port
3. Gwadar Port
4. Vizhinjam Port

**Arrange the above ports from West to East**

- A. 1-2-4-3
- B. 2-1-3-4
- C. 4-3-2-1
- D. 1-2-3-4

**Answers**

1. B
2. C
3. C
4. D
5. D