

# Daily Defence Current Affairs

## 17 March 2025

### Operation Aspides

- EU foreign ministers will Monday discuss extending the bloc's Red Sea naval mission to help reopen the strategically vital Strait of Hormuz, the bloc's top diplomat Kaja Kallas said.
- The Iran war has virtually halted activity in the key waterway, through which a fifth of the world's crude supplies and a substantial amount of gas normally run - sending oil prices soaring.
- "It is in our interest to keep the Strait of Hormuz open, and that's why we are also discussing what we can do in this regard," Kallas told journalists in Brussels ahead of the talks. An option on the table would be to change the mandate of the EU's naval mission in the Red Sea, Operation Aspides, Kallas said.
- Launched in 2024 to prevent attacks on trade vessels by Iran-backed Houthi rebel forces, Aspides currently has three warships -- one French, one Greek and one Italian.
- French President Emmanuel Macron said last week that Paris and its allies were preparing a "defensive" mission to reopen the strait.



## India's Homegrown 1 kN Turbojet

- The Council of Scientific and Industrial Research – National Aerospace Laboratories (CSIR-NAL) has achieved a significant milestone in India's defence self-reliance by developing the indigenous NJ100 small turbojet engine.
- Rated at 1 kN thrust, this compact powerplant is tailored for unmanned aerial vehicles (UAVs), loitering munitions, and missile systems. Unveiled amid growing emphasis on Atmanirbhar Bharat in aerospace, the NJ100 marks a departure from reliance on foreign imports for critical propulsion technologies.
- CSIR-NAL, a premier R&D institution under the Council of Scientific and Industrial Research, spearheaded the project through its **Gas Turbine Research Establishment (GTRE)** collaboration and in-house expertise.
- The engine's development aligns with national priorities to indigenise small turbojet engines, previously sourced from international suppliers like France's Turbomeca or the United States. This breakthrough enhances India's strategic autonomy in drone swarms and precision-guided munitions.
- At its core, the NJ100 delivers 1 kilonewton (approximately 102 kgf) of thrust, making it ideal for lightweight platforms weighing 50-150 kg.
- Its single-spool design features a centrifugal compressor, annular combustor, and axial turbine, optimised for high thrust-to-weight ratios exceeding 6:1. Dry weight hovers around 15-20 kg, enabling seamless integration into air-launched cruise missiles and high-speed target drones.
- CSIR-NAL aims for Technology Readiness Level (TRL) 8 by 2027, following user trials with DRDO and tri-services. Export potential to friendly nations like Vietnam or the Philippines further amplifies its strategic value.



**NJ-100**  
Small gas turbine engine  
Developed by :  
**CSIR**  
National Aerospace Laboratories

## Exercise 'Freedom Shield'

- The United States and South Korea have started their annual Freedom Shield joint military exercise. The drills come at a time when there are growing discussions about possible U.S. military movements related to tensions in the Middle East.
- Freedom Shield is a large annual defense exercise conducted by the armed forces of **United States and South Korea**. The exercise focuses on improving coordination between the two allies and strengthening their ability to respond to possible security threats.
- The drills include:
  - Command-post simulations
  - Field training exercises
  - Joint military coordination activities



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## Trump Seeks Support From Allies

- The war in West Asia involving Iran, the United States and Israel entered 18th day on Tuesday, with growing global concern over energy supplies and maritime security.
- The US and Israel have kept pummeling what they describe as military targets in Iran's capital, and Israel stepped up its campaign against Iran-backed militants in Lebanon. More than 1 million people have been displaced in Lebanon — roughly

20% of the nation's population — as UN peacekeepers say Israel is massing ground troops along the border.

- Iran has retaliated with persistent drone and missile attacks on neighboring countries, including oil fields in Iraq and the United Arab Emirates, where a drone strike temporarily closed Dubai's airport, a crucial travel hub.
- The war has killed at least 1,300 people in Iran, at least 880 in Lebanon and 12 in Israel, according to officials in those countries. The U.S. military says 13 U.S. service members have been killed and about 200 wounded.
- US President Donald Trump said he has demanded about seven countries send warships to keep the Strait of Hormuz open as fears of a global energy crisis persist. Iranian strikes on commercial ships in and around the strait, and even just the threat of attacks, have slowed shipping there to a trickle.



## Indian Navy Unveils RD-33MK Preservation Bay

- On 12 March 2026, the Indian Navy marked a significant advancement in naval aviation by inaugurating a dedicated Preservation Bay for RD-33MK engines at the Naval Aircraft Yard. This facility supports the MiG-29K fleet, a cornerstone of India's carrier-based air power.
- The RD-33MK, a navalised variant of the Klimov RD-33 turbofan engine, powers the MiG-29K fighters deployed on INS Vikramaditya and the upcoming INS Vikrant. This afterburning engines deliver thrust up to 81.4kN with afterburner, enabling supercruise capabilities and high-altitude intercepts over maritime domains.
- Preservation bays are critical for ground-based storage and maintenance of aero-engines in controlled environments. They mitigate corrosion, thermal

stress, and humidity—key threats in coastal settings like the Naval Aircraft Yard, where salt-laden air accelerates wear on turbine blades and compressor stages.

- The new bay features a custom ground preservation rig, jointly designed and developed by the Indian Navy and IIT Bombay. This rig employs advanced environmental controls, including dehumidification systems maintaining relative humidity below 40%, temperature regulation at 20–25°C, and nitrogen purging to prevent oxidation.
- Engine preservation now follows a streamlined protocol: post-flight inspections lead to disassembly, component cleaning with non-corrosive solvents, and installation on the rig for long-term monitoring. Sensors track vibration, oil contamination, and pressure differentials in real time, feeding data to a central Navy-IIT analytics platform.



## REVIEW QUESTIONS

**1. Operation Aspides is primarily related to:**

- A. Space exploration
- B. Cyber security
- C. Protection of maritime trade routes
- D. Nuclear energy

**ANSWER: C**

**2. The Strait of Hormuz is strategically important because it:**

- A. Connects Europe and Africa
- B. Handles a large portion of global oil trade

- C. Is a major fishing zone
- D. Is used only for military ships

**ANSWER: B**

**3. India's NJ100 turbojet engine is mainly designed for:**

- A. Passenger aircraft
- B. Heavy cargo planes
- C. UAVs and missile systems
- D. Submarines

**ANSWER: C**

**4. Exercise Freedom Shield is conducted between:**

- A. India and USA
- B. USA and South Korea
- C. Japan and South Korea
- D. NATO countries only

**ANSWER: B**

**5. The RD-33MK engine is used in which aircraft?**

- A. Tejas
- B. Rafale
- C. MiG-29K
- D. Sukhoi Su-30MKI

**ANSWER: C**

**6. Home Port of The INS Satpura Is In Joint Exercises B/w**

- A. ENC
- B. WNC
- C. SNC
- D. None

**ANSWER: A**

**7. INS Satpura Is A**

- A. Destroyer
- B. OPV
- C. Submarine
- D. Frigate

**ANSWER: D**

**8. INS Satpura Is Manufactured By**

- A. DRDO & ISRO
- B. DRDO & Israel Aerospace Industries
- C. CSL
- D. MDL

**ANSWER: D**

**9. Cho La Incident Was Done In**

- A. 1967
- B. 1988
- C. 1998
- D. 1980

**ANSWER: A**

**10. VL-SRSAM Is A Quick Reaction Surface-to-air Missile Developed By**

- A. NASA
- B. BEL
- C. DRDO
- D. ISRO

**ANSWER: C**

**11. Peacetime Gallantry Award Is/Are**

- A. Param Vir Chakra
- B. Maha Vir Chakra
- C. Vir Chakra
- D. None of the above

**ANSWER: D**

**12. WNC Hq Is In**

- A. Mumbai
- B. Kochi
- C. Chennai
- D. Panaji

**ANSWER: A**

**13. Mitra Shakti Ex Held B/w India &**

- A. Sri Lanka
- B. USA
- C. UK

D. Nepal

**ANSWER: A**

**14. SLNS Sayurala Is A Ship Of**

A. Oman

B. Qatar

C. Sri Lanka

D. Maldives

**ANSWER: C**

**15. "The Blue Book: A Writer's Journal" Book Is Written By**

A. Amitava Kumar

B. Vikas Kumar Jha

C. Usha Uthup

D. Richa Mishra

**ANSWER: A**

**16. CONAKRY Is The Capital Of**

A. GUINEA

B. GUATEMALA

C. GRENADA

D. GREECE

**ANSWER: A**

**17. IRBM Stands For**

A. Intermediate Resource Ballistic Missile

B. Intermediate Range Ballistic Missile

C. Intermediate Range of Ballistic Missile

D. Intermediated Range Ballistic Missile

**ANSWER: B**

**18. BEL HQ Is In**

A. Bengaluru

B. Noida

C. New Delhi

D. Chennai

**ANSWER: A**

**19. Major Rank Of Indian Army Is Equivalent To Which Rank Of The Indian Navy?**

- A. Captain
- B. Inspector
- C. Lt Commander
- D. Vice-admiral

**ANSWER: C**

**20. War Cry of ASSAM REGIMENT**

- A. Parakramo Vijayate
- B. Rhino Charge
- C. Jai Bajrangbali
- D. Duty, Honour, courage

**ANSWER: B**