Daily Defence Current Affairs
07 January 2025

India Strengthening Shield Against Drone Attacks

- At a time when the Centre is working on Mission Sudarshan Chakra to create a massive air defence shield, the Indian defence forces are working towards creating a joint Counter Unmanned Aerial System (CUAS) grid to foil any enemy drone attacks.
- The joint CUAS grid being created by networking all the CUAS systems of the forces will be separate from the existing air defence networks of the defence forces, such as the **Integrated Air Command and Control Systems** (IACCS) of the Indian Air Force.
- The joint CUAS grid would be established with the existing Joint Air Defence Centres (JADC), including the three services, and deployed to monitor all drone movements, they said.
- The CUAS grid will integrate a large number of counter-drone air defence systems acquired by the three services over the last five to 10 years.
- The Indian Army is also now working on deploying air defence guns in population centres to protect them from any type of aerial attacks by enemy drones and other aircraft.

510 Base Workshop, TASL Team Up To Overhaul And Upgrade Pinaka Launchers

- The Indian Army's decision to partner with TATA Advanced Systems Limited (TASL) and the 510 Army Base Workshop (ABW) for overhauling and upgrading the Pinaka Multiple Launch Rocket System (MLRS) marks a shift towards life-cycle modernisation rather than buying entirely new launchers.
- By opting for a structured mid-life upgrade of older launchers, the Army is maximising past investments while rapidly integrating next-generation guided rocket capabilities.
- Under a formal public–private partnership, TASL has received a supply order to overhaul and upgrade Pinaka launchers that have been in service for over fifteen years. These systems, worn by extensive operational use and harsh environments, will undergo comprehensive refurbishment and capability enhancement instead of routine maintenance.
- In the initial phase, TASL will directly execute a batch of upgrades, using its design and integration expertise to de-risk the process, validate engineering changes and standardise procedures, particularly for new fire-control, electronic subsystems and structural modifications needed for guided rockets.

Indian Navy Setting Up A New Base At Haldia

- The Indian Navy is establishing a new naval base at Haldia in West Bengal to bolster its operational footprint in the Bay of Bengal. This development underscores India's strategic intent to enhance maritime surveillance and rapid response capabilities amid evolving regional security dynamics.
- Situated on the Hooghly River near its confluence with the Haldi River, Haldia benefits from proximity to the Bay of Bengal, approximately 130 kilometres from the deep-sea Sandheads area.
- The existing Haldia Dock Complex, operational since the 1970s, already handles bulk cargo and accommodates vessels up to Panamax size with a draft of 9.1 metres, providing a solid infrastructural foundation for naval adaptation.
- The base will primarily support smaller warships, including Fast Interceptor Crafts and New Water Jet Fast Attack Craft, enabling swift deployment for coastal defence and anti-piracy patrols.
- This aligns with the Navy's broader constabulary roles, such as maritime domain awareness and humanitarian assistance, in a region witnessing heightened extra-regional naval activity.
- Recent announcements highlight the base's role in supporting fast-attack craft amid growing focus on the Bay of Bengal, where militarisation has intensified with over a hundred warships from extra-regional navies operating routinely.

- This move enhances India's deterrence posture without escalating tensions, leveraging the Navy's attributes of mobility and flexibility.

ISRO Explores Establishing Orbiting AI Data Centres

- ISRO has indeed embarked on a preliminary study assessing the feasibility of establishing in-orbit Artificial Intelligence data centres, as confirmed by the Department of Space in response to a query in the Rajya Sabha.
- This initiative reflects a strategic push towards edge computing in space, where satellites could process and store vast amounts of data directly in orbit rather than transmitting raw information back to Earth.
- Such an approach promises to alleviate bandwidth constraints and reduce latency for time-critical applications, particularly in satellite imaging and communications.
- Preliminary evaluations by ISRO indicate that the concept is technically viable, leveraging advancements in onboard processors, satellite hardware, and solar power systems. The organisation is now conceptualising a proof-of-concept system capable of handling computation and storage in orbit.
- Launch costs, though declining with reusable rocket technologies, remain a barrier to scaling such systems. High-bandwidth communication links between satellites and ground stations are essential yet challenging, requiring optical inter-satellite networks for terabit-per-second throughput.
- Orbital debris management and international regulatory approvals for large constellations further complicate deployment.

ISRO Bets On Industry-Led 'Soorya'

- ISRO's adoption of an industry-centric model for the Next Generation Launch Vehicle (NGLV), informally referred to as "Soorya", represents a structural shift in India's space ecosystem.
- Instead of relying primarily on government-owned facilities, the program is being conceived from the outset with deep private sector participation, similar in philosophy to the AMCA fighter aircraft program.
- This approach positions industry not merely as a vendor, but as a co-developer and production partner with long-term stakes in the launch vehicle's success.
- At the core of this model is early-stage private investment in infrastructure and manufacturing capacity. Indian companies are expected to create facilities for prototyping, structural fabrication, engine production and integration, rather than waiting for fully matured designs.
- This forward investment is made viable by ISRO's commitment to long-term production contracts, which reduce demand uncertainty and make capital-intensive facilities commercially bankable. In turn, this builds an indigenous industrial base capable of supporting high launch cadence and rapid scaling for heavy-lift missions.
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REVIEW QUESTIONS

1. **What is the primary objective of creating a joint Counter Unmanned Aerial System (CUAS) grid?**

A. To replace existing air defence systems
B. To counter enemy missile attacks
C. To foil enemy drone attacks
D. To control civilian air traffic

ANSWER: C

2. **The joint CUAS grid will function separately from which existing air defence network of the Indian Air Force?**

A. Akash Missile Network
B. Integrated Air Command and Control Systems (IACCS)
C. National Air Defence Grid
D. Ballistic Missile Defence System

ANSWER: B

3. **Which organisations have partnered to overhaul and upgrade the Pinaka Multiple MRL?**

A. DRDO and HAL
B. ISRO and BEL
C. Tata Advanced Systems Limited (TASL) and 510 Army Base Workshop
D. L&T and Ordnance Factory Board

ANSWER: C

4. **The new Indian Navy base at Haldia will primarily support which category of vessels?**

A. Aircraft carriers
B. Nuclear submarines
C. Large destroyers
D. Fast Interceptor Crafts and fast attack crafts

ANSWER: D

5. **What is the key advantage of ISRO's proposed orbiting AI data centres?**

A. Reduced satellite manufacturing costs
B. Elimination of ground stations
C. Lower latency and reduced bandwidth dependency
D. Increased launch frequency

ANSWER: C

6. **Defence Industrial Corridors Was Inaugurated In**

A. 2018
B. 2021
C. 2022
D. 2016

ANSWER: A

7. **The Karakorams Range covers parts of**

A. Afghanistan, China, Indonesia
B. Afghanistan, China, India
C. Afghanistan, China, India, Pakistan, and Tajikistan
D. None of the above

ANSWER: C

8. **Army War College Is In**

A. Mhow
B. New Delhi
C. Noida
D. Nagpur

ANSWER: A

9. Sarvatra Vijay Is The Motto Of

A. RAJPUT REGIMENT
B. DOGRA REGIMENT
C. SIKH REGIMENT
D. None of the above

ANSWER: A

10. Where Is The Training Command of The IAF?

A. Bengaluru
B. Vishakhapatnam
C. Pune
D. Mumbai

ANSWER: A

11. Exercise Cope India Conducted b/w

A. USA
B. Russia
C. Israel
D. Japan

ANSWER: A

12. "Kartavyam Anvatma" (Duty before death) Is The Motto Of

A. RAJPUT REGIMENT
B. DOGRA REGIMENT
C. SIKH REGIMENT
D. None of the above

ANSWER: B

13. The Cheetah Is A

A. Helicopter
B. Machine Gun
C. UAV
D. Fighter Jet

ANSWER: A

14. INS Khanderi Is A

A. Destroyer
B. OPV

C. Submarine
D. Tank
ANSWER: C

15. Which of the following is NOT a landlocked country?
A. Laos
B. Serbia
C. Ethiopia
D. Cambodia
ANSWER: D

16. “THE ROOM ON THE ROOF " Book Is Written By
A. Ruskin Bond
B. Satyajit Ray
C. Manohar Malgonkar
D. Nirad C. Chaudhuri
ANSWER: A

17. Exercise Lamitiye Conducted b/w India &
A. Qatar
B. Oman
C. UAE
D. Seychelles
ANSWER: D

18. Rashtriya Raksha University Is In
A. Gandhinagar
B. Mumbai
C. New Delhi
D. Chennai
ANSWER: A

19. HSTDV Stands For

A. Hypersonic Technology Vehicle
B. Hypersonic Technology Demonstrator Vehicle
C. Hypersonic Technology Detonator Vehicle
D. None of the above
ANSWER: B

20. Joint Ex B/w The India And Singapore Is Called:

A. Bold Kurukshetra
B. SLINEX
C. Indra
D. Yudha Abhyas

ANSWER: A