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Daily PIB Summary

19 June, 2026

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1.PRESIDENT OF INDIA GRACES INTERNATIONAL SICKLE CELL DAY COMMEMORATION AT OMKARESHWAR, MADHYA PRADESH

Key Highlights

I. International Sickle Cell Day observed on **19 June**.
II. President emphasized:
   A. Early diagnosis and screening.
   B. Timely treatment and counselling.
   C. Community awareness.
   D. Special focus on tribal populations.
III. Reinforced the goal of **eliminating Sickle Cell Disease as a public health problem by 2047**.

ABOUT INTERNATIONAL SICKLE CELL DAY

International Sickle Cell Day

Observed On

- **19 June** every year.

Declared By

- **United Nations General Assembly** in **2008**.

Objective

I. Raise awareness about:
   A. Sickle Cell Disease.
   B. Early diagnosis.
   C. Treatment and care.
   D. Genetic counselling.
   E. Research and public health interventions.

ABOUT SICKLE CELL DISEASE (SCD)

Sickle Cell Disease

What is it?

- A **hereditary genetic blood disorder** caused by a mutation in the **hemoglobin (HBB) gene**.
- Red blood cells become **sickle (crescent)-shaped**, making them rigid and prone to blocking small blood vessels.

Causes

- Inherited in an **autosomal recessive** pattern.
- A person develops the disease only if **both parents pass on the mutated gene**.

Symptoms

- Severe pain episodes (vaso-occlusive crises).
- Chronic anaemia.
- Frequent infections.
- Fatigue.
- Organ damage in severe cases.

NATIONAL SICKLE CELL ANAEMIA ELIMINATION MISSION

National Sickle Cell Anaemia Elimination Mission

Launched

- **2023**

Nodal Ministry

- Ministry of Health and Family Welfare

Goal

- Eliminate **Sickle Cell Disease as a public health problem by 2047**.

Key Components

- Universal screening of vulnerable populations, especially in tribal areas.
- Genetic counselling.
- Early diagnosis and treatment.
- Awareness campaigns.
- Digital health records and monitoring.

WHY IS SCD A MAJOR CONCERN IN INDIA?

I. Higher prevalence among **Scheduled Tribe (ST)** populations.
II. Significant burden in states such as:
   A. Madhya Pradesh
   B. Maharashtra
   C. Gujarat
   D. Chhattisgarh
   E. Odisha
   F. Jharkhand

SIGNIFICANCE

Public Health

- Early detection reduces complications and mortality.

Social Justice

- Improves healthcare access for vulnerable tribal communities.

Genetic Counselling

- Helps families understand inheritance and make informed reproductive choices.

Universal Health Coverage

- Supports equitable access to diagnosis and treatment.

CHALLENGES

- Low awareness in remote areas.
- Limited access to specialized healthcare.
- Social stigma associated with genetic disorders.
- Need for wider screening and counselling services.

WAY FORWARD

- Expand newborn and community screening programmes.
- Strengthen healthcare infrastructure in tribal districts.
- Promote genetic counselling and awareness campaigns.
- Improve access to medicines, blood transfusion services, and comprehensive care.
- Enhance research on gene-based therapies and affordable treatments.

KEY HIGHLIGHTS

- **Occasion:** International Sickle Cell Day.
- **Date:** 19 June.
- **Venue:** Omkareshwar, Madhya Pradesh.
- **National Mission:** National Sickle Cell Anaemia Elimination Mission.
- **Target:** Eliminate Sickle Cell Disease as a public health problem by **2047**.

PRELIMS BOOSTER BOX

I. **Sickle Cell Disease (SCD)**
   A. An **autosomal recessive genetic disorder** caused by a mutation in the **HBB gene**.
   B. Characterized by abnormal sickle-shaped red blood cells that can obstruct blood flow.

II. **Sickle Cell Trait**
   A. Individuals inherit **one normal and one mutated HBB gene**.
   B. Usually asymptomatic but can pass the mutated gene to their children.

III. **National Sickle Cell Anaemia Elimination Mission**
   A. Launched in **2023**.
   B. Aims to screen **about 7 crore individuals aged 0–40 years** in affected tribal areas by **2047**.

IV. **Haemoglobin**
   A. An iron-containing protein in red blood cells responsible for transporting oxygen from the lungs to body tissues.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. Sickle Cell Disease is inherited in an autosomal recessive pattern.
2. International Sickle Cell Day is observed annually on 19 June.
3. The National Sickle Cell Anaemia Elimination Mission aims to eliminate Sickle Cell Disease as a public health problem in India by 2047.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Answer: (d)

2.SECURING THE NATION

Key Highlights

I. Strengthening national security through a **whole-of-government approach**.
II. Focus on:
    A. Defence modernization.
    B. Border infrastructure.
    C. Maritime security.
    D. Counter-terrorism.
    E. Cybersecurity.
    F. Indigenous defence manufacturing.
III. Promotes self-reliance under **Atmanirbhar Bharat** while enhancing operational preparedness.

KEY PILLARS OF NATIONAL SECURITY

Defence Modernization

- Induction of advanced indigenous defence platforms.
- Modernization of the Armed Forces through network-centric and technology-driven capabilities.

Border Infrastructure

I. Development of:
    A. Border roads.
    B. Strategic tunnels.
    C. Bridges.
    D. Forward connectivity.
II. Enhances rapid deployment and logistics.

Maritime Security

- Strengthening coastal surveillance.
- Expanding the capabilities of the **Indian Navy** and the **Indian Coast Guard**.
- Ensuring security in the **Indian Ocean Region**.

Internal Security

- Enhanced intelligence coordination.
- Counter-terrorism measures.
- Capacity building of police and security forces.

Cyber Security

- Strengthening protection of critical information infrastructure.
- Enhancing cyber resilience against evolving threats.

MAJOR INITIATIVES

Atmanirbhar Bharat in Defence

- Promotes indigenous defence production and procurement.

Innovations for Defence Excellence (iDEX)

- Supports defence innovation through startups, MSMEs, and academia.

Border Infrastructure Development

- Accelerated construction of strategic infrastructure in border areas.

Maritime Domain Awareness (MDA)

- Improves surveillance and monitoring of India's maritime interests.

SIGNIFICANCE

National Sovereignty

- Strengthens India's ability to safeguard territorial integrity.

Strategic Preparedness

- Enhances readiness against conventional and emerging security threats.

Economic Security

- Protects trade routes and critical infrastructure.

Technological Advancement

- Encourages indigenous innovation in defence and cybersecurity.

Regional Stability

- Reinforces India's role as a net security provider in the Indian Ocean Region.

CHALLENGES

- Emerging cyber threats.
- Cross-border terrorism.
- Maritime security challenges.
- Rapid technological evolution in warfare.
- High capital requirements for defence modernization.

WAY FORWARD

- Expand indigenous defence R&D.
- Strengthen cyber security architecture.
- Improve jointness among the Armed Forces.
- Enhance maritime surveillance capabilities.
- Promote greater public-private collaboration in defence technology.

KEY HIGHLIGHTS

- **Focus:** Comprehensive national security.
- **Priority Areas:** Defence modernization, border management, maritime security, internal security, and cybersecurity.
- **Approach:** Technology-driven, self-reliant, and integrated security framework.

PRELIMS BOOSTER BOX

I. **Chief of Defence Staff (CDS)**
   A. Created in **2019**.
   B. Acts as the principal military adviser to the Government.
   C. Promotes **jointness** and **theatre command** integration among the three services.

II. **Border Roads Organisation (BRO)**
   A. Established in **1960**.
   B. Responsible for constructing and maintaining strategic road infrastructure in border areas.

III. **Maritime Domain Awareness (MDA)**
   A. Refers to the effective understanding of activities in the maritime domain that could affect security, safety, the economy, or the environment.

IV. **Critical Information Infrastructure (CII)**
   A. Infrastructure whose disruption can have a debilitating impact on **national security, economy, public health, or public safety**.
   B. Protected under the **Information Technology Act, 2000**, with the **National Critical Information Infrastructure Protection Centre (NCIIPC)** serving as the nodal agency for its protection.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The Chief of Defence Staff (CDS) is the principal military adviser to the Government of India.
2. The Border Roads Organisation (BRO) is responsible for developing strategic road infrastructure in border areas.
3. The National Critical Information Infrastructure Protection Centre (NCIIPC) is the nodal agency for protecting India's Critical Information Infrastructure.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Answer: (d)

3.ASTRONOMERS FIND CLUES TO THE ORIGIN OF ENERGETIC COSMIC X-RAY FLASHES

Key Highlights

I. Researchers have identified mechanisms that may explain the origin of powerful cosmic X-ray flashes.
II. The study enhances understanding of:
   A. High-energy astrophysical processes.
   B. Matter under extreme gravity.
   C. Accretion around compact objects.
III. Findings may improve models of stellar evolution and extreme cosmic environments.

WHAT ARE COSMIC X-RAY FLASHES?

Definition

- **Cosmic X-ray flashes** are **brief, intense bursts of X-ray radiation** originating from highly energetic astrophysical events.

Characteristics

- Very short duration (from milliseconds to minutes).
- Extremely high energy.
- Detected only by **space-based X-ray observatories**, as Earth's atmosphere absorbs X-rays.

POSSIBLE SOURCES

Neutron Stars

Neutron star

- Formed after the collapse of massive stars during supernova explosions.
- Possess extremely high density and strong magnetic fields.
- Can emit X-ray bursts when matter accumulates on their surface.

Black Holes

Black hole

- Matter falling into a black hole forms an **accretion disk**.
- Friction within the disk heats matter to millions of degrees, producing X-rays.

Binary Star Systems

- Many X-ray flashes originate in **X-ray binaries**, where a neutron star or black hole accretes matter from a companion star.

WHY ARE THEY IMPORTANT?

Understanding Extreme Physics

- Provide insights into matter under immense pressure, temperature, and gravity.

Stellar Evolution

- Help explain the life cycle and death of massive stars.

Testing Fundamental Physics

- Offer opportunities to study **General relativity** in extreme gravitational environments.

Space Astronomy

- Improve knowledge of high-energy processes across the universe.

HOW ARE X-RAYS DETECTED?

I. Earth's atmosphere blocks X-rays.
II. Detection requires **space-based X-ray telescopes** aboard satellites.
III. These observatories study:
    A. Black holes.
    B. Neutron stars.
    C. Supernova remnants.
    D. Active galactic nuclei.

SIGNIFICANCE

Astrophysics

- Advances understanding of compact celestial objects.

Fundamental Science

- Helps investigate gravity, magnetism, and nuclear matter under extreme conditions.

Space Exploration

- Supports future high-energy astronomy missions.

Technology Development

- Drives innovation in advanced space observatories and detectors.

CHALLENGES

- X-ray flashes are short-lived and unpredictable.
- Require highly sensitive space-based instruments.
- Difficult to determine precise origins due to their transient nature.

WAY FORWARD

- Develop next-generation X-ray observatories.
- Strengthen international collaboration in space astronomy.
- Integrate observations across X-ray, radio, optical, and gravitational-wave astronomy.
- Improve theoretical models of compact objects and high-energy phenomena.

KEY HIGHLIGHTS

- **Phenomenon:** Cosmic X-ray flashes.
- **Possible Sources:** Neutron stars, black holes, and X-ray binary systems.
- **Importance:** Understanding extreme astrophysical processes and testing theories of gravity.
- **Observation:** Through space-based X-ray telescopes.

PRELIMS BOOSTER BOX

I. **X-rays**
   A. A form of **electromagnetic radiation** with wavelengths shorter than ultraviolet light and longer than gamma rays.
   B. Earth's atmosphere absorbs X-rays, necessitating **space-based observations**.

II. **Neutron Star**
   A. Forms after the gravitational collapse of a massive star following a **supernova**.
   B. Composed predominantly of neutrons and is among the densest known objects in the Universe.

III. **Accretion Disk**
   A. A rotating disk of gas and dust spiralling into a compact object such as a **black hole** or **neutron star**.
   B. Friction within the disk generates intense heat, producing high-energy radiation, including X-rays.

IV. **Electromagnetic Spectrum (in increasing energy)**
   A. Radio waves → Microwaves → Infrared → Visible light → Ultraviolet → **X-rays** → Gamma rays.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. Earth's atmosphere absorbs most incoming X-rays from outer space.
2. Neutron stars are formed from the remnants of massive stars after supernova explosions.
3. An accretion disk around a black hole can emit X-rays due to intense heating caused by friction.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Answer: (d)

4.MAHINDRA GROUP COMPANIES JOIN GOVERNMENT OF INDIA SCHEME TO OFFER DISCOUNTS FOR REPLACEMENT OF OLD TRUCKS AND BUSES IN DELHI-NCR

Key Highlights

I. Mahindra Group companies have become part of the replacement incentive programme.
II. Applicable to:
    A. Old trucks.
    B. Old buses.
III. Focus Area:
    A. Delhi-NCR.
IV. Objectives:
    A. Reduce vehicular emissions.
    B. Improve air quality.
    C. Modernize commercial vehicle fleets.
    D. Enhance road safety.

ABOUT THE VEHICLE SCRAPPING POLICY

Vehicle Scrapping Policy

Launched

- **2021**

Nodal Ministry

- Ministry of Road Transport and Highways

Objectives

- Phase out old and polluting vehicles.
- Reduce vehicular emissions.
- Improve fuel efficiency.
- Enhance road safety.
- Promote scientific recycling of end-of-life vehicles.

Key Features

- Mandatory **fitness testing** for older vehicles.
- Scrapping through **Registered Vehicle Scrapping Facilities (RVSFs)**.
- Incentives for owners purchasing new vehicles after scrapping eligible old ones.

SIGNIFICANCE

Cleaner Air

- Accelerates replacement of highly polluting commercial vehicles in Delhi-NCR.

Road Safety

- Newer vehicles are equipped with improved safety features and comply with modern standards.

Fuel Efficiency

- Modern commercial vehicles consume less fuel and emit fewer pollutants.

Circular Economy

- Scientific recycling enables recovery of valuable materials such as steel, aluminium, plastics, and rubber.

Economic Benefits

- Supports the automobile manufacturing sector and the organized vehicle recycling industry.

CHALLENGES

- High replacement costs for transport operators.
- Limited scrappage infrastructure in some regions.
- Need for greater awareness of available incentives.
- Financing constraints for small fleet owners.

WAY FORWARD

- Expand Registered Vehicle Scrapping Facilities across India.
- Strengthen access to affordable financing for vehicle replacement.
- Increase public awareness regarding scrappage benefits.
- Encourage broader participation by automobile manufacturers.
- Ensure effective implementation of emission and fitness regulations.

KEY HIGHLIGHTS

- **Company:** Mahindra Group.
- **Region:** Delhi-NCR.
- **Target Vehicles:** Old trucks and buses.
- **Objective:** Reduce pollution, improve road safety, and modernize commercial transport.
- **Supporting Policy:** Vehicle Scrapping Policy, 2021.

PRELIMS BOOSTER BOX

I. **Vehicle Scrapping Policy (2021)**
   A. Seeks to remove **unfit and highly polluting vehicles** from Indian roads.
   B. Encourages replacement with safer and cleaner vehicles through incentives.

II. **Registered Vehicle Scrapping Facility (RVSF)**
   A. An authorized centre for the **scientific dismantling and recycling** of end-of-life vehicles.
   B. Ensures environmentally sound disposal and recovery of recyclable materials.

III. **Bharat Stage (BS) Emission Standards**
   A. Emission norms prescribed by the Government to limit pollutants from motor vehicles.
   B. **BS-VI** standards are the current nationwide norms and are significantly stricter than **BS-IV**.

IV. **Commission for Air Quality Management (CAQM)**
   A. A statutory body responsible for coordinating measures to

improve air quality in the **National Capital Region (NCR)** and adjoining areas.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The Vehicle Scrapping Policy encourages the replacement of old vehicles through incentives after scientific scrapping.
2. Registered Vehicle Scrapping Facilities (RVSFs) are authorized centres for dismantling and recycling end-of-life vehicles.
3. Bharat Stage VI (BS-VI) emission standards are stricter than Bharat Stage IV (BS-IV) standards.

Which of the statements given above is/are correct?

(a) 1 and 2 only

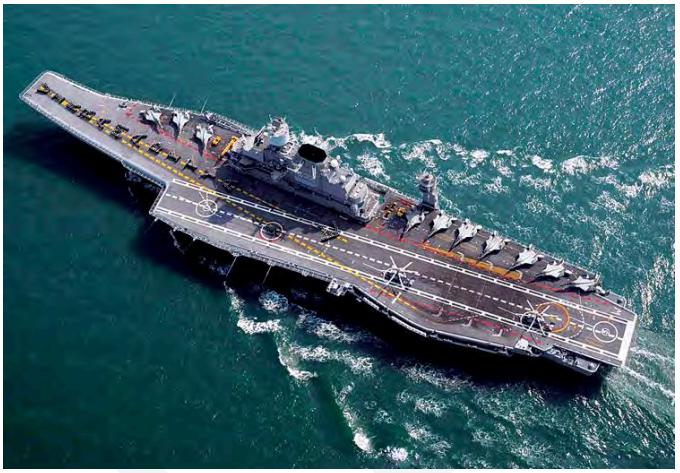
(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Answer: (d)

5.INDIAN NAVY SET TO COMMISSION THREE INDIGENOUS NAVAL PLATFORMS IN KOLKATA



Key Highlights

I. Three indigenous naval platforms are being commissioned.
II. The commissioning strengthens:
   A. Maritime security.
   B. Coastal defence.
   C. Anti-submarine warfare (ASW) capabilities.
   D. Indigenous shipbuilding ecosystem.
III. Demonstrates India's growing self-reliance in defence production.

THE THREE NAVAL PLATFORMS

INS Himgiri

I. A **Project 17A stealth-guided missile frigate**.
II. Designed for:
   A. Multi-role operations.
   B. Air defence.
   C. Surface warfare.
   D. Anti-submarine warfare.

III. Features advanced stealth characteristics and modern sensors.

INS Arnala

I. An **Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)**.
II. Designed for:
    A. Detecting and tracking submarines in coastal waters.
    B. Coastal surveillance.
    C. Low-intensity maritime operations.

INS Nistar

I. A **Diving Support Vessel (DSV)**.
II. Capable of:
    A. Deep-sea diving operations.
    B. Salvage missions.
    C. Submarine rescue support.
    D. Underwater maintenance and recovery.

INDIGENOUS SHIPBUILDING

Major Shipyards

- Garden Reach Shipbuilders & Engineers Limited (GRSE)
- Mazagon Dock Shipbuilders Limited (MDL)
- Cochin Shipyard Limited (CSL)

Importance

- Reduces dependence on imports.
- Promotes indigenous technology.
- Strengthens the domestic defence industrial base.
- Generates employment and develops high-end manufacturing capabilities.

SIGNIFICANCE

Maritime Security

- Enhances India's ability to secure its coastline and maritime interests.

Force Modernisation

- Strengthens the operational capabilities of the Indian Navy.

Aatmanirbhar Bharat

- Demonstrates progress in indigenous defence production.

Blue Economy

- Supports secure sea lanes and protection of maritime trade.

Strategic Deterrence

- Improves readiness in the **Indian Ocean Region**.

CHALLENGES

- Rapid technological advancements in naval warfare.
- High capital costs of naval platforms.
- Need for continuous R&D and indigenous development of advanced systems.
- Increasing strategic competition in the Indian Ocean Region.

WAY FORWARD

- Accelerate indigenous warship and submarine construction.

- Strengthen collaboration between the Navy, DRDO, shipyards, and private industry.
- Invest in next-generation technologies such as AI, autonomous systems, and advanced sensors.
- Expand export opportunities for Indian-built naval platforms.

KEY HIGHLIGHTS

- **Event:** Commissioning of three indigenous naval platforms.
- **Location:** Kolkata.
- **Platforms:** INS Himgiri, INS Arnala, and INS Nistar.
- **Objective:** Enhance maritime security, anti-submarine warfare, and self-reliance in defence manufacturing.

PRELIMS BOOSTER BOX

I. **Project 17A**
   A. Follow-on class to the **Project 17 (Shivalik-class)** stealth frigates.
   B. Equipped with advanced stealth features, modern sensors, and network-centric combat systems.

II. **Anti-Submarine Warfare (ASW)**
   A. Military operations aimed at detecting, tracking, and neutralizing enemy submarines.
   B. Uses sonar systems, torpedoes, helicopters, and maritime patrol aircraft.

III. **Diving Support Vessel (DSV)**
   A. Provides logistical and operational support for deep-sea diving, underwater repairs, salvage operations, and submarine rescue.

IV. **Indigenous Defence Manufacturing**
   A. A key pillar of **Aatmanirbhar Bharat**, promoting domestic design, development, and production of defence equipment while reducing import dependence.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. Project 17A frigates are designed with enhanced stealth features and multi-role combat capabilities.
2. Anti-Submarine Warfare (ASW) focuses on detecting and neutralizing hostile submarines.
3. Diving Support Vessels are used for submarine rescue, underwater maintenance, and salvage operations.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Answer: (d)