

## How WhatsApp and a clot-buster eased rural access to heart care

**Prelims:** General Studies Paper - 1  
Current events of national and international importance

**Mains:** General Studies - 2  
Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

### 1. Context

- A **40-year-old man** reached Khanna sub-divisional hospital at **4:40 am (May 4)** with **chest pain and sweating**.
- **ECG(Electrocardiogram)** was done immediately and shared via **WhatsApp**; diagnosed as **STEMI (ST-Elevated Myocardial Infarction)**(severe heart attack due to artery blockage).
- He was given **tenecteplase** (clot-dissolving drug) within **30 minutes** and stabilised before referral to **Patiala Medical College**.
- This was the **100th thrombolysis case** at the hospital- the **highest in Punjab**.
- Earlier, referrals caused **40-70 minutes delay**, leading to **irreversible heart damage**.

### 2. Mission AMRIT: Key Features

- Launched in **July 2025**, based on a **hub-and-spoke model**.
- **Spokes** (district/sub-divisional hospitals) provide **ECG and thrombolysis**; **hubs** (medical colleges) provide **advanced care**.
- **Remote specialist guidance** through ECG sharing.
- Patients within **12 hours** of STEMI are treated at spokes and then **referred**.
- Built on **ICMR(Indian Council of Medical Research) STEMI ACT (2020–24)**.
- **Free treatment worth ₹35,000**; services continued during **floods and in border areas**.

### 3. Outcomes and Success

- **Early thrombolysis** improved survival and reduced heart damage.
- At Amritsar hub: **272 patients received, 265 underwent angioplasty**.
- Increased **early reporting**, especially among **rural women above 50 years**.
- Success due to **strong coordination, use of simple tech (WhatsApp), local-language training, staff motivation, and effective leadership**.

### 4. Challenges and Way Forward

- Relies on **individual effort** at spokes; **no structured follow-up system**.
- Persistent **infrastructure gaps, staff shortages, and high workload**.
- Limiting hubs to **government hospitals** reduces reach; need to include the **private sector with safeguards**.
- Strengthening **follow-up, monitoring, and scaling up** can improve cardiac care nationwide.

## Why is CBSE's evaluation system facing flak?

**Prelims:** General Studies Paper - 1  
Current events of national and international importance

**Mains:** General Studies - 2  
Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

### 1. Context

- After **Class 12 results**, the **CBSE(Central Board of Secondary Education)** faced criticism over **evaluation discrepancies** and issues in the **re-evaluation process** linked to **On-Screen Marking (OSM)**.
- The **pass percentage fell to 85.29% (from 88.39%)**, and fewer students scored **above 90%**.

- The **verification portal crashed** due to heavy demand; students reported **blurred/missing pages, unmarked answers, and wrong answer sheets**.
- The **Parliamentary Standing Committee** summoned **CBSE Chairman Rahul Singh and Ministry officials** on **June 2**.

## 2. OSM and Its Implementation

- **OSM is a digital evaluation system** where answer scripts are **scanned, anonymised, and assessed on-screen** under supervision.
- First tried in **2013-14** but failed due to **poor infrastructure**.
- A **pilot for 2024-25** was planned, and in **June 2025**, the governing body advised gradual rollout.
- Despite this, CBSE **implemented OSM fully in 2026 without adequate pilot testing**.

## 3. Challenges and Controversies

- Teachers were informed only **10 days before exams (Feb 17)**, leaving **little training time** and causing interface-related difficulties.
- Claimed benefits like **faster evaluation, fewer errors, and reduced verification** did not materialise.
- Around **17 lakh students, 98 lakh answer books, and 40 crore pages** created huge logistical strain.
- **Post-result verification requests increased**, contradicting CBSE's claims.
- While OSM works in **Cambridge, IB, Singapore, Australia**, CBSE faced issues due to **scale (33,000 schools)** and **uneven infrastructure**.
- **Rahul Gandhi (Leader Of Opposition)** alleged **irregularities** in selecting **COEMPT Edudeck (linked to Globarena)**; CBSE denied wrongdoing.
- Student **Sarthak Sidhant** alleged **tender manipulation**, including dilution of **security norms and safeguards**.
- The **portal crashed (May 19)** due to **4 lakh+ requests**.

## 4. CBSE Response

- CBSE **extended deadlines** and **revised fees**, causing confusion.
- It addressed complaints via **social media** and involved experts from **IIT Madras and IIT Kanpur**.

- A new **verification portal will reopen from June 1** for a **glitch-free process**.
- It also launched a **PR campaign**, asking schools to post content portraying CBSE as **“proactive and empathetic.”**
- CBSE should adopt a **phased rollout with pilot testing**, strengthen **digital infrastructure and teacher training**, ensure **transparent procurement and data security**, and build a **robust grievance redressal system** to restore trust.

## Why is India pushing for coal gasification?

**Prelims:** General Studies Paper - 1  
General issues on Environmental ecology, Biodiversity and Climate Change.

**Mains:** General Studies - 3  
Achievements of Indians in science & technology; indigenization of technology and developing new technology.

## 1. What is Coal Gasification?

- **Coal gasification** is the process of converting coal into **synthetic gas (syngas)**.
- Syngas can be used to produce products such as:
  - ➔ **Urea**
  - ➔ **Methanol**
  - ➔ **Ammonium nitrate**
  - ➔ **Synthetic Natural Gas (SNG)**
  - ➔ **Hydrogen**
  - ➔ **Dimethyl ether**
- India has around **401 billion tonnes of coal** and **47 billion tonnes of lignite** reserves.
- The objective is to **utilise domestic coal resources**, reduce imports, and promote **sustainable mining practices**.
- India currently imports:
  - ➔ About **20% of its urea requirement**
  - ➔ Nearly **100% of ammonia**
  - ➔ Around **80-90% of methanol** requirements.

## 2. Government Initiatives and Current Status

- The government aims to **gasify 100 million tonnes of coal by 2030**.
- To support this goal, the Union Cabinet approved a **₹37,500 crore incentive package**.
- Earlier, an **₹8,500 crore package** was approved in January 2024, with **₹6,233 crore** already disbursed to eight projects.
- Major participants include:
  - ☞ **Coal India**
  - ☞ **Bharat Heavy Electricals Limited (BHEL)**
  - ☞ **GAIL**
  - ☞ **Jindal Steel**
  - ☞ **Greta Energy and Metal**
- The government expects to support gasification of about **75 million tonnes of coal/lignite** through the new scheme.

## 3. Technology and Challenges

- Indian coal has:
  - ☞ **High ash content**
  - ☞ Variable **calorific value**
  - ☞ Complex **mineral composition**, making gasification difficult.
- Fluidised-bed gasification** is considered most suitable for Indian coal because it can handle high ash content efficiently.
  - ☞ The technology utilises a **gas stream that lifts the coal out of ash**, thereafter gasifying it with heat.
- India's technology requirements differ** from countries such as China, Australia, and the United States because of the **unique characteristics of Indian coal**.
- Coal gasification projects are **capital-intensive** and have **long gestation periods**.
- Capital costs account for nearly **30% of syngas production costs**, making financial support crucial.

## 4. Indigenous Technology and Future Prospects

- BHEL** has developed **pressurised fluidised-bed gasifier technology** specifically for Indian coal.

- According to **NITI Aayog**, India has **16 facilities** capable of producing key gasification components.
- Private firms such as **Jindal Steel** and **Greta Energy and Metal** have indigenised **80-90%** of their technology.
- Greater indigenisation could reduce project costs by **30-40%**.
- However, advanced stages of coal gasification may still require **technology imports**, particularly for specialised equipment and processes.
- The government has indicated support in obtaining **necessary approvals for such technology imports**.

## Is India getting hotter?

**Prelims:** General Studies Paper - 1  
General issues on Environmental ecology, Biodiversity and Climate Change.

**Mains:** General Studies - 3  
Conservation, environmental pollution and degradation, environmental impact assessment.

## 1. Heatwaves and Temperature Trends in India

- May 2026** was **not exceptionally hot nationwide** in terms of daytime temperatures.
- Most regions experienced **normal to below-normal maximum temperatures**, while parts of **South India, Northeast, and Northwest India** recorded above-normal temperatures.
- The month was relatively **wet**, with rainfall exceeding **110% of the Long Period Average (LPA)**.
- Long-term IMD data (1961–2020) shows:
  - ☞ **Heatwave frequency** increases by **0.1 days per decade**.
  - ☞ **Heatwave duration** increases by **0.44 days per decade**.
  - ☞ **Night-time temperatures are rising** faster than daytime temperatures (**0.21°C per decade**).
- Overall, **heatwaves are becoming more frequent and longer-lasting** due to climate change.

## 2. Was India Home to the World's Hottest Cities?

- A viral claim that **all 50 hottest cities in the world were in India** was based on data from **a single day (April 27, 2026)**.
- A one-day ranking **cannot indicate a long-term climate trend**.
- The **absence of cities** from West Asia, Africa, or Australia **reflects the composition of the dataset**.
- Rankings were based on the **24-hour average temperature**, so cities that remained **hot even during the night received higher rankings**.
- In contrast, **desert cities** become much cooler after sunset, which lowers their 24-hour average temperature.
  - ➔ Therefore, **Rajasthan**, despite recording **India's highest-ever temperature**, **appeared lower in the ranking**.
- The figures came from a private website's index rather than **official IMD station data**.
- Only about **38% of urban warming** is due to **urbanisation**, while the majority is linked to **regional climate change**.
- This indicates that **climate change is the primary driver** of rising temperatures.
- The emerging **El Niño** increases the likelihood of:
  - ➔ **Hotter temperatures**
  - ➔ **Reduced rainfall**
  - ➔ **Longer dry spells during the monsoon**
- More frequent **humid heatwaves**, especially in **Northwest India**.
- A delayed monsoon combined with El Niño could worsen **heat-related distress** across the country.

## KEYWORDS

### 3. Urban Heat Islands and the Role of Air Conditioning

- **Urban Heat Islands (UHIs)** occur when cities replace vegetation with **concrete and asphalt**, which absorb and retain heat.
- Cities can become **2-10°C hotter** than nearby rural areas, **especially during the night**.
- Major causes include:
  - ➔ **Reduced vegetation**
  - ➔ **Low surface reflectivity**
  - ➔ **Poor ventilation**
  - ➔ **Waste heat emissions**
- **Air conditioners** worsen the problem by:
  - ➔ **Cooling indoor spaces**.
  - ➔ **Releasing excess heat outdoors**, increasing ambient temperatures.
- UHIs **intensify local heat stress** but are not the sole cause of rising temperatures.

### 4. Climate Change, El Niño, and Future Heat Risks

- A 2024 study found Indian cities warming at **0.53°C per decade**, compared to **0.26°C per decade** nationally.

### United Nations Military Gender Advocate of the Year Award

- **Major Abhilasha Barak**, serving as the **Commander of the Female Engagement Team** with the Indian Battalion in the **United Nations Interim Force in Lebanon**, has been awarded the United Nations Military Gender Advocate of the Year Award 2025.
- Instituted in **2016** by the **Office of Military Affairs** under the **Department of Peace Operations (DPO)**, the award recognises an outstanding military peacekeeper who has effectively integrated a **gender perspective** into peacekeeping operations.
- The award also promotes the objectives of **United Nations Security Council Resolution 1325**, which focuses on **Women, Peace and Security**.
- Recipients are selected annually from nominations submitted by **Force Commanders** and **Heads of Mission** across UN peacekeeping missions worldwide.

### Respiratory Syncytial Virus (RSV)

- **Respiratory Syncytial Virus (RSV)** is an **RNA virus** belonging to the **Pneumoviridae family**, which also includes the **Human Metapneumovirus (HMPV)**.

- It exists in two genotypes: **RSV-A** and **RSV-B**.
- RSV is a **human-specific pathogen** that infects the **respiratory tract**, ranging from the **nose to the lungs**.
- It can cause a broad spectrum of illnesses, from **mild upper respiratory tract infections** to **severe and potentially life-threatening lower respiratory tract infections**.
- **Infants**, particularly those **below six months of age**, face the highest risk of **severe disease and death**.
- RSV can also lead to serious illness in **elderly individuals** and people with **underlying health conditions**.
- Until recently, there were **no vaccines** available to protect these vulnerable groups.
- However, in recent years, several **RSV vaccines** and a **long-acting monoclonal antibody** have been approved and are being used to prevent **severe RSV disease** among high-risk populations.

## Species in news

### Amolops kamal



- It is a **newly discovered species of cascade-dwelling frog**, commonly known as the **Nagaland Cascade Frog**.
- The species was discovered in **August 2024** by a team of six scientists from the **Zoological Survey of India (ZSI)**.

- It was identified in the **isolated, rugged hill-stream habitats near Singrep village in Kiphire district of Nagaland**, close to the **India-Myanmar border**.
- It was officially named **Amolops kamal** in honor of **Kamal Choudhury**, a former teacher of the lead author.
- **Molecular phylogenetic and integrative taxonomic analyses** confirmed that it represents a **distinct evolutionary lineage** within the **Amolops indoburmanensis species complex**.

### Dung beetles

- **Dung beetles are insects of the family Scarabaeidae**, known for feeding on and recycling animal dung, and are found across **tropical and temperate regions**, including India.
- They are classified into **three functional groups-rollers, tunnelers, and dwellers**, based on how they process dung (rolling balls, burying it, or living within it).
- They play a crucial ecological role in **nutrient recycling, soil aeration, and improving soil fertility**, thereby supporting agriculture and grassland ecosystems.
- By rapidly removing dung, they help in **reducing parasites, flies, and greenhouse gas emissions (like methane)**, contributing to environmental health.
- Dung beetles are considered **bioindicators of ecosystem health**, and their decline is linked to factors like **pesticide use, habitat loss, and veterinary drugs in livestock dung**.

