



## **CURRENT AFFAIRS MCQs WITH EXPLANATION**

**DATE-07/10/2025**

### **1. Nagaland University's Energy Storage Innovation**

#### **News in Brief**

- **Researchers at Nagaland University** have developed an **energy storage device (flexible supercapacitor)** using **cobalt-doped molybdenum diselenide (Co-MoSe<sub>2</sub>)**.
- The study demonstrates **India's advancement in flexible energy devices** for future wearable electronics and electric vehicles (EVs).

#### **About the Research**

- Conducted at the **Advanced Materials for Device Applications Laboratory**, Nagaland University, Lumami campus.
- Researchers experimented with doping **MoSe<sub>2</sub>** (molybdenum diselenide) using **tungsten (W)**, **vanadium (V)** and **cobalt (Co)** to enhance its electrochemical properties.
- **Cobalt-doped MoSe<sub>2</sub>** showed the best performance and was used as the **electrode material** for a prototype **flexible supercapacitor**.

#### **Why Cobalt Doping?**

- **Increases conductivity** of MoSe<sub>2</sub>.
- **Enhances surface area** for ion transfer.
- Improves **energy density and charge-discharge efficiency**.

#### **Significance**

- **Indigenous innovation** in advanced materials and clean energy tech.
- Supports **Atmanirbhar Bharat** in green energy storage systems.
- Promotes **sustainable and flexible energy solutions** for next-gen electronics.
- Strengthens India's position in **nanotechnology and applied material research**.

#### **Challenges Ahead**

- Large-scale manufacturing and cost optimization.
- Integration with flexible, solid-state electrolytes.
- Commercial viability and long-term field testing.

1. **Researchers at Nagaland University have developed an energy storage device using which doped compound?**

- a) Nickel-doped graphene
- b) Cobalt-doped molybdenum diselenide
- c) Lithium-doped carbon nanotube
- d) Titanium-doped zinc oxide



**Answer: b) Cobalt-doped molybdenum diselenide**

*Developed at Lumami Campus under ANRF funding; eco-friendly and scalable for industrial use.*

2. **North East Meet of Astronomers (NEMA-XI)**

**In News**

- The **11th North East Meet of Astronomers (NEMA-XI)** was hosted by **Rajiv Gandhi University (RGU), Arunachal Pradesh in October 2025.**
- The event aims to **strengthen collaboration and astronomy research** across the **Northeast region of India.**

**About NEMA**

- **Started in 2015** — an initiative by **Tezpur University** and the **Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune.**
- Conducted annually or biennially across **Northeastern states.**
- Acts as a **platform for networking and capacity building** in **astronomy and astrophysics** among students and researchers.

**Objectives of NEMA-XI**

1. **Strengthen collaboration** between astronomy departments of NE universities.
2. **Promote research and training** in observational and theoretical astronomy.
3. **Encourage young students** to take up careers in astrophysics.
4. **Create awareness** about astronomy in schools and colleges through outreach and sky-watch programs.
5. **Leverage NE's geographical advantages**—clear skies, low light pollution—for astronomical studies.

**Significance**

- Builds **regional scientific ecosystem** in a previously underrepresented area.
- Contributes to **Skill India and NEP 2020 goals**—encouraging scientific temperament.
- Supports **India's space and astrophysics missions** by fostering local talent.
- Aligns with the vision of **“Science for All”** and **“Viksit Bharat @2047”** through regional inclusion in research.
- Enhances **public engagement in astronomy**, boosting interest in STEM education.

3. **The North East Meet of Astronomers (NEMA-XI) was hosted by which university?**
- Rajiv Gandhi University, Arunachal Pradesh
  - Gauhati University
  - North Eastern Hill University
  - Nagaland University

**Answer: a) Rajiv Gandhi University, Arunachal Pradesh**

*Aims to strengthen collaboration and astronomy research in the Northeast.*

### **3.BP Energy Outlook 2025: India's Energy Demand Projection**

#### **In News**

According to the **BP Energy Outlook 2025**, **India's oil and energy demand will account for around 12% of the global energy demand by 2050**. This makes India the **world's fastest-growing energy market** through the mid-century period.

#### **About the Report**

The **BP Energy Outlook** is an annual publication released by **British Petroleum (BP)** that analyzes long-term trends in global energy demand, supply, and emissions up to 2050. It presents various scenarios, including the "Current Trajectory" and "Net Zero" pathways, to forecast possible futures for the global energy system. The **2025 edition** provides detailed insights into regional trends, including India's rapid rise as a key energy consumer.

#### **India's Energy Outlook 2050 (Key Findings)**

India's **primary energy consumption** is projected to nearly **double** from its 2022 level by 2050. Its share in global energy demand will rise from around **7% in 2022 to about 12% by 2050**. The increase is driven by rapid **economic growth, industrialization, and urbanization**, making India a central player in the global energy transition.

Despite India's growing renewable energy capacity, **fossil fuels, particularly oil and gas, will continue to play a major role** in meeting the country's rising energy needs. However, the **growth rate of renewable energy**—especially solar and wind—is expected to outpace that of fossil fuels in the coming decades.

Natural gas is projected to become the **only fossil fuel showing absolute growth** in both BP's scenarios, while the share of coal and oil gradually declines as India strengthens its renewable portfolio.

#### **Reasons for Rising Energy Demand**

The rise in India's energy share can be attributed to several structural and demographic factors.

- Rapid economic growth** and infrastructure expansion will increase industrial and transport energy requirements.
- Population growth** and higher living standards will boost household and commercial energy consumption.
- Urbanization and electrification** of rural areas will intensify power demand.
- Expansion of manufacturing and digital economies** will require more reliable and diversified energy sources.
- Slower energy growth in developed countries** will make India's contribution to global demand appear larger.

### Significance of the Projection

This projection highlights India's **strategic importance in the global energy landscape**. As energy demand rises, India's policies will significantly influence global oil, gas, and renewable energy markets. It underscores the need for India to pursue a **balanced energy transition**—ensuring energy security while reducing carbon intensity.

India's position as the **fastest-growing major energy market** presents both opportunities and challenges. The country will need to expand renewable infrastructure, improve storage capacity, and strengthen transmission networks to manage the shift toward sustainable energy systems.

### Challenges Ahead

While the projection reflects India's growth potential, it also reveals significant challenges. Dependence on fossil fuels could strain **import bills and environmental goals**. Managing **carbon emissions**, ensuring **energy affordability**, and maintaining **energy security** amid geopolitical uncertainties will be major policy priorities. India must accelerate efforts toward **energy efficiency, green hydrogen, and clean mobility** to stay aligned with its **Net Zero by 2070** commitment.

4. According to BP's Energy Outlook 2025, by 2050 India's oil demand will account for what percentage of global energy demand?

- a) 9%
- b) 10%
- c) 12%
- d) 15%

**Answer:** c) 12%

*India will remain the world's fastest-growing energy market*

### 4.1965: A Western Sunrise — Hindi Edition & Assamese War Hero

#### Key Fact / Prelims Fact

- A new **Hindi edition** of 1965: A Western Sunrise highlights the bravery of **Wing Commander Utpal Barbara** (an Assamese war hero).

#### About 1965: A Western Sunrise

- 1965: A Western Sunrise is a military history book by **Shiv Kunal Verma**, covering India's 1965 war with Pakistan, with detailed accounts of operations, tactical decisions, and personal bravery.
- In its accounts, the book mentions **Wing Commander Utpal Barbara**, who flew reconnaissance missions in the Gulf of Kutch / Rann of Kutch region during hostilities.
- Specifically, Barbara (flying a two-seater Vampire T55) along with Flying Officer Joy Prakash Chhetry undertook low-altitude sorties to photograph Pakistani armor, under challenging conditions of low visibility and radar threat.

#### About Wing Commander Utpal Barbara & His Act of Bravery

- **Utpal Barbara** was an Indian Air Force pilot (later Wing Commander) originally from Assam. His role in 1965 involved **reconnaissance, photographic missions**, flying low over adversarial territory to gather intelligence on enemy armor.
  - During one such sortie, Barbara flew at very low altitudes ( $\approx 50$  feet) in a dust haze, maintaining tactical formation with his wingman, and captured photographic evidence of Pakistani armor column movements.
  - The mission was notably perilous because the pilots had **no radar cover**, were under **radio silence**, and flew in terrain with limited visual references — yet he succeeded without being shot down and safely returned.
  - His actions reflect **courage, precision flying, and contribution to strategic intelligence** during wartime, making him a celebrated war hero, particularly in his home region of Assam.
5. **A new Hindi edition of 1965: A Western Sunrise highlights the bravery of which Assamese war hero?**
- a) Captain Jintu Gogoi
  - b) Wing Commander Utpal Barbara
  - c) Lt. Tridiv Hazarika
  - d) Major B K Handique



**Answer:** b) Wing Commander Utpal Barbara

A Vir Chakra awardee celebrated for his valour during the 1965 Indo-Pak war.

## 5. Dorabeel Wetland, Assam

### **In News**

- **Dorabeel Wetland in Kamrup district of Assam** was recently in news due to threats from proposed industrial and logistic projects near its periphery.
- The wetland is **ecologically significant** as it **hosts four endangered species of vultures and about 74 fish species**.

### **Location & Overview**

- Dorabeel (also spelled *Dora Beel*) is a **floodplain wetland** located near **Bijoynagar–Rampur area** of Kamrup district.
- It is linked hydrologically to the **Kulshi (Koloji) River**, a tributary of the Brahmaputra.
- The wetland area spans around **1,800 bighas**, forming a vital part of the **Kulshi river basin ecosystem**.

### **Ecological Significance**

- The wetland provides a **rich habitat for diverse aquatic and avian species**.
- It supports **74 species of fish**, including several indigenous varieties vital for local fisheries.
- Dorabeel is home to **four endangered vulture species**—
  - ✓ *White-rumped vulture*
  - ✓ *Slender-billed vulture*
  - ✓ *Indian vulture*
  - ✓ *Red-headed vulture*
- The surrounding region also attracts **over 200 migratory and resident birds**, including storks, herons, and ducks.
- Acts as a **flood buffer, groundwater recharger**, and **carbon sink**, thereby mitigating flood risks and maintaining ecological balance.

- Serves as a **livelihood source** for local communities dependent on fishing, grazing, and agriculture.

### Current Threats

- The Assam government's plan to **develop a logistics and industrial park** by de-reserving adjacent grazing land (nearly 150 bighas) has raised environmental concerns.
- **Encroachment, pollution, sand mining, and hydrological disruption** due to human activity threaten the wetland's integrity.
- Locals and environmental groups have protested, demanding recognition and protection under the **Wetlands (Conservation and Management) Rules, 2017**.
- Unregulated development could destroy aquatic habitats, reduce flood absorption, and affect thousands of dependent families.

### Conservation Importance

- Dorabeel acts as a **natural floodplain ecosystem**, maintaining the **hydrological stability** of the Brahmaputra valley.
- Protecting Dorabeel aligns with India's obligations under the **Ramsar Convention (1971)** to safeguard wetlands of ecological importance.
- It supports the goals of **Sustainable Development Goal (SDG) 15 — Life on Land** — by conserving biodiversity and ecosystems.

### 6. Dorabeel wetland in Assam, recently in news, is ecologically significant because—

- a) It is a Ramsar site supporting the Gangetic dolphin
- b) It hosts four endangered species of vultures and 74 fish species
- c) It is located in Kaziranga National Park buffer zone
- d) It is the largest oxbow lake in Northeast India



**Answer: b) It hosts four endangered species of vultures and 74 fish species**

Dorabeel near Bijoynagar sustains 200+ bird species and 3,000 dependent families; now threatened by an industrial park project.

## 6. Assam Vehicle Scrapping Policy, 2022 – OTS Scheme Extension

### In News

- The **Government of Assam** has extended the **One-Time Settlement (OTS) Scheme** under the **Assam Vehicle Scrapping Policy, 2022** till **March 31, 2026**.
- The scheme offers financial relief to owners of old and unfit vehicles opting for voluntary scrapping.

### Background

- The **Assam Vehicle Scrapping Policy, 2022** was notified to phase out **End-of-Life Vehicles (ELVs)** that contribute to pollution, road safety risks, and traffic congestion.
- It aligns with the **National Vehicle Scrappage Policy (2021)** introduced by the Government of India.
- The policy aims to create a **formal ecosystem for vehicle recycling** through registered **Vehicle Scrapping Facilities (RVSFs)** in Assam.

### About the OTS Scheme

- The **One-Time Settlement (OTS) scheme** was introduced to encourage **voluntary deregistration** of unfit vehicles.
- Under the scheme, vehicle owners can **deregister their vehicles by paying only 25% of pending taxes, penalties, or arrears**, receiving a **75% waiver** on outstanding dues.
- Once the vehicle is deregistered, owners can take it to a **Registered Vehicle Scrapping Facility (RVSF)** for dismantling.
- After scrapping, the owner receives a **Certificate of Deposit**, which offers tax rebates when purchasing a new vehicle —
  - ✓ **25% rebate** on road tax for private vehicles.
  - ✓ **15% rebate** for commercial vehicles.

### Extension of the Scheme

- The OTS scheme was originally valid till 2024 but has now been **extended to March 31, 2026**.
- This gives more time to vehicle owners to avail the benefits and help in removing old, polluting vehicles from Assam's roads.

### Objectives

1. **Reduce Vehicular Pollution:** Remove end-of-life and highly polluting vehicles.
2. **Promote Green Mobility:** Encourage adoption of cleaner and fuel-efficient vehicles.
3. **Ensure Road Safety:** Reduce accidents caused by mechanically unfit vehicles.
4. **Encourage Recycling Industry:** Boost employment and resource recovery through RVSFs.
5. **Ease Financial Burden:** Offer relief through tax and penalty waivers for vehicle owners.

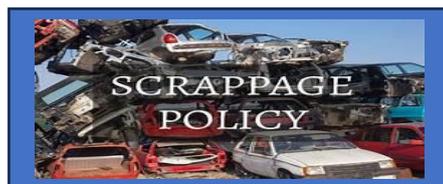
### Significance

- Supports **Assam's clean air and transport modernization goals**.
- Promotes **circular economy principles** by recycling metals, plastics, and other components.
- Encourages **compliance through incentives** rather than punishment.
- Aligns with **India's commitment to net-zero emissions by 2070** and sustainable urban transport.
- Improves **public health and urban environment** by cutting emissions from old vehicles.

7. **The Assam government extended the One-Time Settlement (OTS) scheme under the Assam Vehicle Scrapping Policy, 2022 till—**

- a) December 31, 2025
- b) March 31, 2026
- c) June 30, 2026
- d) September 30, 2026

**Answer: b) March 31, 2026**



*Vehicle owners scrapping unfit vehicles get a 75% tax waiver and up to 25% rebate on new vehicle purchases.*

## 7. Assam Government Bicycle Scheme for Class IX Students

### **In News**

- The **Assam Cabinet** has approved a new scheme to **provide bicycles to all Class IX students** studying in government and provincialized schools.
- The main objective is to **reduce school dropouts and improve student retention** at the secondary level.
- The scheme will benefit **over 3.11 lakh students** at an estimated cost of **₹130 crore**.

### **Objective**

- To **ensure access to education** for students, especially those from rural and remote areas who face transportation difficulties.
- To **improve retention and transition rates** from secondary to higher secondary levels.
- To promote **regular school attendance** and address the high dropout rate among adolescent students, particularly girls.

### **Key Features**

- **Coverage:** All Class IX students enrolled in government and provincialized schools across Assam.
- **Financial Outlay:** ₹130 crore approved by the Assam Cabinet.
- **Beneficiaries:** About **3.11 lakh students** will receive bicycles in the first phase.
- **Implementation:** The Education Department will oversee procurement and distribution through district authorities.
- **Monitoring:** Schools will maintain a record of beneficiaries to prevent duplication and ensure transparency.

### **Expected Impact**

- **Improved Retention:** Regular attendance and continued schooling among rural students.
- **Reduced Dropouts:** Especially among girls who often drop out due to distance and safety concerns.
- **Enhanced Access:** Bicycles improve connectivity between home and school in rural and hilly areas.
- **Empowerment:** Promotes a sense of independence, mobility, and confidence among students.
- **Indirect Benefits:** Health improvement through cycling and contribution to environmental sustainability by promoting eco-friendly transport.

### **Significance**

- The scheme aligns with **NEP 2020 goals** of equitable access and inclusive education.
- Supports **SDG 4 – Quality Education**, ensuring inclusive and equitable education for all.
- Reflects Assam's commitment to improving **educational infrastructure and outcomes** under state-specific social welfare initiatives.
- Encourages **gender equality** and supports **rural education** by removing mobility barriers.

## 8. Assam Cabinet approved bicycles for all Class IX students in government schools. The main objective is—

- a) Promoting gender equality
- b) Reducing dropouts and improving retention
- c) Encouraging sports and physical fitness
- d) Supporting Made in Assam products



**Answer: b) Reducing dropouts and improving retention  
Over 3.11 lakh students to benefit under a Rs 130 crore scheme.**

### **8. Shradhanjali Scheme, Assam**

#### **In News**

- The **Government of Assam** launched the **Shradhanjali Scheme** to **repatriate the mortal remains of Assamese people who die outside the State**, ensuring a **dignified return to their homeland**.
- The scheme is implemented by the **Special Branch of Assam Police** and can be accessed via **Helpline 112** or the **Sewa Setu Portal**.

#### **Objective**

- To assist in the **transportation and repatriation of mortal remains** of Assamese citizens from outside the State.
- To provide **financial, logistical, and administrative support** to bereaved families who are unable to afford the process.
- To ensure **dignity in death** for every Assamese citizen, irrespective of their socio-economic background.

#### **Key Features**

- **Implementing Agency:** Assam Police's **Special Branch** in coordination with the Home and Political Department.
- **Eligibility:**
  - ✓ Applies to **Assamese domiciles** (students, workers, or residents) who die outside the State.
  - ✓ Primarily meant for **economically weaker families**.
- **Exclusions:**
  - ✓ Deaths during **paid medical treatment** outside the State are not covered.
- **Process:**
  - ✓ Families can request assistance through:
    - **Helpline 112 (State Police Emergency Response)**
    - **Special Branch Control Room: 0361-2381511**
    - **Sewa Setu Portal** or WhatsApp helpline (+91 91810-14888)
  - ✓ Assam Police coordinates with respective State authorities for documentation, postmortem, and transport.
  - ✓ Full **transportation cost (₹40,000–₹50,000)** is borne by the Assam Government.

#### **Significance**

- **Humanitarian Support:** Provides relief to grieving families and ensures dignified final rites for deceased Assamese citizens.
- **Equity & Inclusion:** Assists low-income families who cannot afford transportation from distant states.
- **Good Governance:** Institutionalizes a formal mechanism for repatriation, earlier managed on an ad-hoc basis.
- **Inter-State Coordination:** Demonstrates efficient collaboration between Assam Police and other State agencies.
- **Public Trust:** Strengthens confidence in the State's welfare-oriented governance and compassionate administration.

### Associated Departments

- **Home and Political Department**, Government of Assam
- **Special Branch**, Assam Police
- Supported by **District Administration, Resident Commissioners, and State Transport Departments** across India.

9. The 'Shraddhanjali Scheme' launched in Assam aims to—

- a) Offer scholarships to students abroad
- b) Repatriate mortal remains of Assamese from outside the State
- c) Provide life insurance to migrant workers
- d) Fund funeral ceremonies of poor families

**Answer:** b) Repatriate mortal remains of Assamese from outside the State  
Implemented by Assam Police's Special Branch; accessible through helpline 112 and Sewa Setu Portal.

10. **The Shraddhanjali Scheme will be executed by—**

- a) Department of Social Justice
- b) Assam Police Special Branch
- c) Assam Disaster Management Authority
- d) Health & Family Welfare Department

**Answer:** b) Assam Police Special Branch



## 9. Foxtail Millet (*Setaria italica*)

### In News

- The **Assam Agricultural University (AAU)** mentioned *Foxtail Millet* in its Expression of Interest (EoI) under its millet promotion and research initiatives.
- It is classified as a **cereal crop of the C<sub>4</sub> photosynthetic pathway**, known for its high productivity, climate resilience, and nutritional value.

### Scientific Classification

- **Scientific name:** *Setaria italica*
- **Family:** Poaceae (Grass family)
- **Type:** Small millet / Nutri-cereal
- **Photosynthetic pathway:** C<sub>4</sub> (Hatch–Slack pathway)

### Agronomic & Ecological Features

- **Origin:** East Asia (China, India among early cultivators).
- **Climate:** Thrives in **semi-arid and drought-prone regions**; tolerant to poor soils.
- **Duration:** Short-duration crop (~90–120 days).
- **Uses:** Food, fodder, and bird feed; suitable for intercropping and dryland farming.
- **Soil:** Grows well on light, well-drained loamy or sandy soils with low fertility.



## Nutritional & Economic Importance

- Recognized as a “**Nutri-cereal**” under the Ministry of Agriculture’s **Millets Mission**.
- Rich in **protein, fiber, iron, calcium, magnesium, and antioxidants**.
- Helps manage **diabetes and obesity** due to low glycemic index.
- Increasingly used in **functional foods** and **health-based diets**.

## Relevance in Assam

- Known locally as “**Konidan**”, foxtail millet is gaining importance in **Assam’s crop diversification program** under AAU.
- Promoted under **Assam Millet Mission** to encourage climate-resilient and sustainable agriculture.
- Suitable for **upland and rainfed areas** of the State.

## Environmental Significance

- Requires **70–80% less water** than rice or wheat.
- Ideal for **low-input sustainable farming** systems.
- Plays a role in **climate adaptation** due to drought and heat tolerance.

11. “**Foxtail millet**” mentioned in the EoI by AAU is classified as—

- a) Cereal crop of C4 pathway
- b) Pulses crop
- c) Oilseed crop
- d) Leguminous forage crop

**Answer: a) Cereal crop of C4 pathway**

## SPORTS

12. The **BWF World Junior Championships 2025 (Suhandinata Cup)** began in which Indian city?

- a) Hyderabad
- b) Guwahati
- c) Pune
- d) Bengaluru

**Answer: b) Guwahati**



13. Assam’s **Ankushita Boro** recently won a **gold medal** in which tournament?

- a) India Open 2025
- b) BFI Cup 2025
- c) Khelo India Boxing Championship
- d) Asian Boxing Invitational

**Answer: b) BFI Cup 2025**

Ankushita (60–65 kg) defeated Parthavi Grewal (Rajasthan) 3–2 in Chennai; Saraswati Boro and Bhupali Hazarika won bronze.

