## **LUKMAAN IAS**

# PRELIMS MANTRA – 34 (28/03/2025 & 28/03/2025)

# Why is Myanmar frequently rocked by earthquakes?

- A powerful earthquake of magnitude 7.7 and at least six aftershocks struck central Myanmar on 28<sup>th</sup> March 2025, bringing buildings down in country's second-largest city, Mandalay, and killing at least 144 people.
- Its epicentre was located 17.2 km from Mandalay, a metropolis with a population of around 1.5 million people.
- $\circ$  It was a shallow earthquake, with a depth of only 10 km.
- Shallow quakes are generally more dangerous as they carry more energy when they emerge to surface when compared to quakes that occur deeper underneath surface.
- While deeper quakes do indeed spread farther as seismic waves move radially upwards to the surface, they lose energy while travelling greater distances.
- Earthquakes occur when two tectonic plates suddenly slip past one another. This releases stored up "elastic strain" energy in the form of seismic waves, and causes the ground to shake.
- Myanmar earthquake took place due to "strike slip faulting" between Indian and Eurasian plates, meaning these two plates rubbed sideways against each other.
- Quake took place on the Sagaing Fault, which runs north to south through centre of Myanmar and is prone to earthquakes.
- A fault is a fracture or zone of fractures between two blocks of rock, which allows blocks to move relative to each other, sometimes leading to earthquakes.
- Location below earth's surface where earthquake starts is called focus or hypocenter, and location directly above it on surface of earth is called epicentre.
- Magnitude tells how big seismic waves are, while strength refers to the energy they carry. While each whole number increase in magnitude represents a tenfold increase in measured amplitude, it represents 32 times more energy release.
- Over last 100 years, Myanmar has witnessed 14 earthquakes of magnitude 6 or above.

### **Exercise 'Prachand Prahaar':**

 Indian Army conducted a tri service integrated multi domain warfare exercise, 'Prachand Prahaar', in highaltitude terrain of Arunachal Pradesh from March 25 to 27, 2025.

### Latakia province in Syria:

 Israeli air strikes hit Latakia province in Syria, targeting Al-Abyad port and the city.

### Orwellian government:

 It refers to a political system that mirrors oppressive, totalitarian state depicted in George Orwell's novel Nineteen Eighty-Four, characterized by extensive surveillance, propaganda, and control over people's lives and thoughts.

#### Sangita Kalanidhi Award:

- The Music Academy, Chennai, has chosen violinist and composer Rudrapatna Krishnamurthy Shriramkumar for this year's prestigious Sangita Kalanidhi Award.
- Shriramkumar is an acknowledged authority on 19th century composer and writer Subbarama Dikshitar, nephew of poet-saint Muthuswami Dikshitar, one of the

holy trinity of Carnatic music (other two being Tyagaraja and Syama Sastri).

- Sangita Kalanidhi, which translates as 'Treasure of Music and Art', is highest honour in Carnatic music. It is awarded annually by Madras Music Academy, one of the oldest academies of Carnatic music in India.
- Music Academy was established in 1928, following a decision taken at Indian National Congress session in Chennai in December 1927 to promote Carnatic music and Bharatanatyam.

## Gaia Space Observatory:

- European Space Agency (ESA) shut down its space observatory mission, Gaia on March 27.
- Gaia was launched in December 2013 aiming to create the most precise, three-dimensional map of galaxy. It began taking observations on July 24, 2014, finally shutting its eyes on January 15, 2025.
- Originally named Global Astrometric Interferometer for Astrophysics (GAIA), mission was renamed Gaia.
- Gaia was designed for astrometry, the science of mapping the cosmos, through precise measurement of location and movement of stars and other celestial bodies.
- Gaia was positioned in the Lagrange point 2 (L2), around 1.5 million kilometres 'behind' Earth, when viewed from the Sun. This effectively allows spacecraft to view larger cosmos unhindered by the planet, the Sun and the Moon.
- Spacecraft is fitted with three instruments an astrometer, a photometer and a spectrometer – that help interpret the location and motion of stars and other objects.

### Kosi Mechi Intra-State Link Project of Bihar:

- Cabinet Committee on Economic Affairs (CCEA) has approved inclusion of Kosi Mechi Intra-State Link Project of Bihar under Pradhan Mantri Krishi Sinchai Yojana-Accelerated Irrigation Benefits Programme (PMKSY-AIBP) of Ministry of Jal Shakti.
- It envisages diversion of part of surplus water of Kosi River for extending irrigation to Mahananda basin lying in Bihar by way of remodelling of existing Eastern Kosi Main Canal (EKMC) and extending the EKMC up to river Mechi so that rivers Kosi and Mechi which flow through Bihar could be linked together within Bihar.
- Pradhan Mantri Krishi Sinchai Yojana (PMKSY) was launched during the year 2015-16, with an aim to enhance physical access of water on farm and expand cultivable area under assured irrigation, improved on-farm water use efficiency, introduce sustainable water conservation practices, etc.

### Use of Artificial Intelligence in Agricultural Sector:

- 'Kisan e-Mitra', an Al-powered chatbot, has been developed to assist farmers with responses to queries about PM Kisan Samman Nidhi scheme. This solution supports multiple languages and is evolving to assist with other government programs.
- National Pest Surveillance System, for tackling loss of produce due to climate change, utilizes AI and Machine Learning to detect pest infestation in crop issues, enabling timely intervention for healthier crops.
- 3. Al-based analytics using field photographs for crop health assessment and crop health monitoring using

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## UPSC CSE 2025

Satellite, weather & soil moisture datasets for rice and wheat crops. Under Bharatmala Pariyojana of Ministry of Road Transport and Highways, six Multi Modal Logistics Parks (MMLPs) are to be developed in the following "port cities": 1. Chennai, Tamil Nadu 2. Mumbai, Maharashtra 3. Kolkata, West Bengal 4. Cochin, Kerala 5. Vishakhapatnam, Andhra Pradesh 6. Kandla, Gujarat 'One Nation One Port Process (ONOP)' initiative: OMinistry of Ports, Shipping and Waterways has launched 'One Nation One Port Process (ONOP)' initiative which focuses on mapping and standardizing port processes and documentation. Q1. Consider the following port locations:

 Implementation of ONOP initiative will reduce the processing time of documentation which will lead to a reduction in logistics cost.

 Ministry of Ports, Shipping and Waterways has prioritized the digitization and automation of port processes and documentation through the National Logistics Portal – Marine (NLP-Marine) which also integrates the Enterprise Business System (EBS) as the port operating system.

# PRACTICE MCQs

- 1. Ennore, Tamil Nadu
- 2. Kolkata, West Bengal
- 3. Cochin, Kerala
- 4. Vishakhapatnam, Andhra Pradesh
- 5. Kandla, Gujarat

Multi Modal Logistics Parks Under Bharatmala Pariyojana are being developed in how many of the above locations?

- a) Only two
- b) Only three
- c) Only four
- d) All five

## Answer: C

Q2. Kosi-Mechi River link project is undertaken in which of the following states?

- a) Bihar
- b) West Bengal
- c) Uttar Pradesh

# d) Assam

## Answer: A

Q3. Latakia province, recently seen in the news, is located in -

- a) Syria
- b) Lebanon
- c) Israel
- d) Turkey

## Answer: A

Q4. Which of the statements is incorrect about Gaia Space Observatory?

- a) It was launched by NASA in 2013.
- b) Its aim was to create the most precise, three-dimensional map of galaxy.
- c) It was originally named Global Astrometric Interferometer for Astrophysics.
- d) Gaia was positioned in Lagrange point 2 (L2), around 1.5 million Kms 'behind' Earth, when viewed from Sun.

ebrating 13 years of its establishment

### Answer: A

Q5. Which of the following best describes the term 'Orwellian state'?

- a) A welfare state.
- b) A totalitarian and oppressive government.
- c) All means of production lies with the government.
- d) Transparent and accountable government.

# Answer: B