## **LUKMAAN IAS**

# PRELIMS MANTRA – 48 (22/04/2025)

## UPSC CSE 2025

## Economy Index of Eight Core Industries (ICI):

- Index of Eight Core Industries (ICI) increased by 3.8 per cent (provisional) in March 2025 as compared to the Index in March 2024.
- ICI measures combined and individual performance of production of eight core industries viz. Coal, Crude Oil, Natural Gas, Refinery Products (highest weightage), Fertilizers, Steel, Cement and Electricity (2<sup>nd</sup> highest weightage).
- The eight core industries comprise 40.27% of the weight of items included in Index of Industrial Production (IIP).
- $\circ\,$  It is released by the Office of Economic Advisor within the Department for Promotion of Industry and Internal Trade.

 $\,\circ\,$  It is released on monthly basis.

#### (PIB)

#### BharatNet Project:

- It is an ambitious project of Government of India aimed at providing broadband connectivity to all Gram Panchayats (GPs) in country.
- It initially aimed to connect approximately 2.5 lakh Gram Panchayats across the country.
- Telecom Commission approved the implementation of the project in three phases on 30.04.2016
- BharatNet is primarily funded through Digital Bharat Nidhi (DBN), which is a fund that replaced Universal Service Obligation Fund (USOF).
- It is being executed by a Special Purpose Vehicle (SPV) namely Bharat Broadband Network Limited (BBNL), which was incorporated on 25.02.2012 under the Indian Companies Act 1956.
- Under the Amended BharatNet Program, BSNL is appointed as the single Project Management Agency (PMA) for Operation & Maintenance of the entire network.
- Amended BharatNet Program (ABP): Approved in August
  2023, ABP is a design improvement aiming for Optical Fibre (OF) connectivity to 2.64 lakh GPs in ring topology (a network design where connected devices form a circular data channel) and OF connectivity to the remaining non-GP villages on demand.
- As of 19th March 2025, 2,18,347GPs have been made service ready under BharatNet project in the country. (PIB)

#### RBI permits minors above 10 to operate bank accounts:

- Reserve Bank of India (RBI) on April 21, 2025, permitted banks to allow minors above age of 10 years to open and operate savings/ term deposit accounts independently.
- $\circ\,$  They may also be allowed to open such accounts with their his/ her natural or legal guardian or mother as guardian.
- The banks will have to ensure that accounts of minors, whether operated independently or through a guardian, are not allowed to be overdrawn and that these always remain in a credit balance.

## <u>(TH)</u>

#### India imposes 12% temporary tariff on steel imports:

- India imposed a 12% temporary tariff, locally known as a safeguard duty, on some steel products to stem unbridled imports.
- $\circ$  Tariffs would be applicable for 200 days.

- It is primarily aimed at China, which was the secondbiggest exporter of steel to India behind South Korea in 2024-25.
- India was a net importer of finished steel for the second consecutive year in the 2024-25 fiscal year.
- $\circ$  India is currently the world's second largest producer of crude steel after China.

<u>(IE)</u>

## International Developments

#### **Draft World Pandemic Treaty:**

- WHO Member States finalised the draft World Pandemic Treaty to boost global pandemic preparedness.
- It is a **legally binding** international instrument.
- It is developed by Intergovernmental Negotiating Body (INB) that was constituted under WHO in December 2021.
- Aim: To improve pandemic prevention, preparedness, and equitable response, using a One Health approach involving human, animal, and environmental health.
- Important features:
  - Establishes pathogen access and benefit-sharing systems.
  - Strengthens global supply chains and logistics for health emergencies.
  - Promotes technology and knowledge transfer for vaccines, diagnostics, and therapeutics.
  - Mobilises skilled global health workforce and supports geographically balanced R&D capacities.
  - ✓ Respects national sovereignty does not allow WHO to mandate lockdowns, travel bans, or vaccines.

<u>(TH)</u>

#### **Science & Technology**

#### Bullseye Galaxy:

- A team of international researchers recently discovered a galaxy with nine rings.
- Using Hubble space telescope, team confirmed presence of eight rings, while data from W.M. Keck Observatory in Hawaii confirmed the existence of the ninth ring.
- This unusual galaxy has been **named LEDA 1313424** but its common name is more memorable: **Bullseye Galaxy**.
- It is nearly 2.5-times larger than the Milky Way with a diameter of 250,000 light-years.
- It contains signs that it could one day evolve into a giant low surface brightness (GLSB) galaxy, which are important in the study of dark matter.
- Giant low surface brightness (GLSB) galaxies are the largest of the low surface-brightness galaxies
- <u>(TH)</u>

## **Geography/Places in the News**

#### Rare earth elements:

- Amid the ongoing U.S.-China trade war, Chinese authorities have reportedly imposed export controls on rare earth elements (REEs) and magnets that are needed in a range of manufacturing activities, from semiconductor fabrication units to defence equipment.
- Rare earth elements are a series of 17 substances that are present in the earth's crust.
- Unlike what the name may indicate, rare earths occur plentifully in nature, but rarity comes from ability to

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isolate them chemically and make them usable in industrial applications.

- Heavy and light rare earths occur naturally in several countries, such as India, China, Myanmar, Japan, Australia and North Korea.
- China's curbs target dysprosium, gadolinium, lutetium, samarium, scandium, terbium, and yttrium, seven of the 17 elements classified as REEs.
- **Dysprosium's** so-called magnetic susceptibility makes it ideal for use in hard disks and car motors.
- **Gadolinium** is used in nuclear reactors for shielding and in some medical equipment.
- Lutetium and compounds with it are used in PET scanners and in petroleum refineries.
- **Samarium** is used in powerful magnets in personal electronics.
- o Scandium-aluminium alloys are used in fighter aircrafts.
- o Terbium is used in lighting for personal electronics,
- $_{\odot}$  Yttrium is used in cancer treatments and superconductors. (TH)

#### Cloudbursts and landslips in Jammu & Kashmir:

- Torrential rainfall and hail in Ramban tehsil of Jammu and Kashmir on April 20 morning.
- According to India Meteorological Department (IMD), in 24 hours ending 8:30 am on April 20, Jammu and Kashmir received 16.9 mm of rainfall, which is a 575% departure from normal of 2.5 mm.
- Cloudburst has specific technical definition rainfall of 10 cm or more in an hour, over a roughly 10 km x 10 km area.
- Cloudbursts are more common in hilly areas because of a phenomenon called 'orographic lift', which basically means warm air rising up the side of a mountain.
- As warm air 'climbs' a mountain, it expands because of the low pressure above. The expanding air cools, releasing the moisture it was holding as rain. But if more

and more warm air keeps rising, it prevents that rain, till a large amount of rain builds up and bursts out in a massive shower all at once.

- Sudden rain released by a cloudburst can quickly overwhelm drainage systems and lead to flash floods and landslides.
- Flash flood happens quickly, when a lot of rain suddenly enters into the drainage systems (waterbodies, drains), and water overflows.
- Flash floods are more common in hills, because rocky terrain does not absorb water very well.

## <u>(IE)</u>

- Pistachio:
- Pistachio-filled 'Dubai chocolate' is helping drive up pistachio prices.
- It is a small to medium-sized tree of the cashew family, originating in Persia (Afghanistan, Iran and Central Asia). It produces seeds that are widely consumed as food.
- Pistachio is a desert plant and is highly tolerant of saline soil. Long, hot summers are required for proper ripening of the fruit.
- The pistachio tree may live up to 300 years.
- Production is alternate-bearing or biennial-bearing, meaning the harvest is heavier in alternate years.
- Raw pistachios contain 4% water, 45% fat, 28% carbohydrates, and 20% protein.
- United States is the biggest producer in the world (followed by Iran), with 99 per cent of the country's cultivation concentrated in California.
- United States, Iran, and Turkey combined account for about 90% of the total production.
- When the fruit ripens, the shell changes from green to an autumnal yellow/red and abruptly splits partly open. This is known as **dehiscence** and happens with an audible pop.

#### PRACTICE MCQS

<u>(IE)</u>

Q1. Consider the following statements about Pistachio tree:

- 1. It is a desert plant and is highly tolerant of saline soil.
- 2. It is native tree of Persia region.
- 3. Iran is the largest producer of pistachios.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

#### Answer: A

**Q2.** Which of the following correctly explains the term 'Bullseye' recently seen in the news?

- a) A.I. powered tool developed in India to help farmers.
- b) Supercomputer developed by C-DAC.
- c) Recently discovered galaxy with nine rings.
- d) Biotechnology tool developed for gene editing.

#### Answer: C

Q3. Consider the following statements:

- 1. India is a net importer of finished steel.
- India is second largest producer of steel in the world.

3. China is the second-biggest exporter of steel to India after South Korea.

How many statements given above are correct?

- a) Only one Child the Child
- b) Only two
- c) All three

# d) None

## Answer: C

**Q4.** Consider the following statements with reference to the Index of Eight Core Industries:

- 1. Eight core industries comprise about 40% of the weight of items included in Index of Industrial Production (IIP).
- 2. Electricity is given highest weightage after Refinery Products while calculating this index.
- 3. It is released by the Office of Economic Advisor within the Department for Promotion of Industry and Internal Trade.
- 4. It is published on bi-monthly basis.
- Which of the statements given above are correct?
  - a) 1 and 3 only
  - b) 2 and 3 only
  - c) 3 and 4 only

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d) 1 and 4 only

Answer: A

**Q5.** Consider the following statements about BharatNet Project:

- 1. It aims to provide broadband connectivity to all Gram Panchayats in the country.
- 2. It is being executed by a Special Purpose Vehicle Bharat Broadband Network Limited.
- 3. It is primarily funded through Digital Bharat Nidhi.
- Which of the statements given above are correct?
  - a) 1 and 2 only
  - b) 2 and 3 only
  - c) 1 and 3 onlyd) 1, 2 and 3
- Answer: D



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