

22. With reference to Madhav National Park, which of the following statements is/are correct?

1. It was declared a Tiger Reserve in India in 2025.
2. Sakhya Sagar, which is designated as a Ramsar Site, is situated within this National Park.
3. Its area is shared between Madhya Pradesh and Rajasthan.

Select the answer using the code given below :

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

Answer-B

527. Tiger Reserves in India(“)

- established under the Project Tiger Initiative
- The state government in consultation with forest officials and conservation experts, proposes an area for declaring it a tiger reserve
- The NTCA evaluates the proposal and ensures that it meets the requirements of the Wildlife (Protection) Act 1972.
- Once the NTCA approves the proposal, the respective state government issues a notification under the Wildlife (Protection) Act, 1972 to officially declare the area as a tiger reserve

Zoning of the Tiger Reserve:

- a. Core Area: Strictly protected area where no human activity is allowed. It is part of a national park or Wildlife sanctuary.
 - b. Buffer Area: A surrounding area where limited human activity (e.g. grazing, sustainable resource use) is allowed.
- There are total 68 Tiger reserves in India(April 2025)
- Madhav Tiger Reserve, latest(58th)

Sl. No.	Tiger Reserve	State	Year	Core Area (sq km)	Buffer Area (sq km)	Total Area (sq km)
1	Bandhavgarh	MP	1973	100	1000	1100
2	Bandhavgarh	MP	1973	100	1000	1100
3	Bandhavgarh	MP	1973	100	1000	1100
4	Bandhavgarh	MP	1973	100	1000	1100
5	Bandhavgarh	MP	1973	100	1000	1100
6	Bandhavgarh	MP	1973	100	1000	1100
7	Bandhavgarh	MP	1973	100	1000	1100
8	Bandhavgarh	MP	1973	100	1000	1100
9	Bandhavgarh	MP	1973	100	1000	1100
10	Bandhavgarh	MP	1973	100	1000	1100

Newest-Orang Largest- Kaziranga(Core area) Manas(Total Area)

Largest Tiger Reserves(India)

- Nagarjunasagar-Srisaigram Tiger Reserve(3,725 sq km), Andhra Pradesh and Telangana- largest tiger reserve.



4. 58th Tiger Reserve

Current news?

- The Madhav National Park in Madhya Pradesh has been declared India's 58th Tiger Reserve.
- Union Environment Minister Bhupendra Yadav made the announcement.
- It is Madhya Pradesh's 9th Tiger Reserve, highest for any State.



10th March 2025

Topic 526

Q526. This protected area has recently been designated as India's 58th Tiger Reserve; it encompasses the Sakhya Sagar wetland, a Ramsar site, and served as a key site for the tiger reintroduction programme in the Chambal region.

Which of the following protected areas is best described above?

- a. Bandhavgarh National Park
- b. Pench National Park
- c. Madhav National Park
- d. Panna National Park

Ans) c

Exp) Option c is the correct answer.

Recently, the Government of India, following the recommendation of the National Tiger Conservation Authority (NTCA), notified Madhav National Park as the 58th Tiger Reserve. Madhav National Park encompasses the Sakhya Sagar and Madhav Sagar lakes. Sakhya Sagar was designated as a Ramsar Site (Wetland of International Importance) in 2022. To restore the ecological balance, a major Tiger Reintroduction Project was launched. Tigers were translocated in Madhav National Park from other high-density reserves like Panna, Bandhavgarh, and Satpura.

30th Oct 2025

25. Consider the following statements with reference to the Sagarmala Programme of the Government of India :

- I. The Sagarmala Programme seeks to achieve port-led economic growth through cost-effective and sustainable coastal infrastructure.
- II. The success of the Sagarmala Programme is reflected in significant growth in coastal and inland waterway shipping, along with improved global port rankings.
- III. Sagarmala 2.0 aims to position India as a global maritime innovation hub aligned with Atmanirbhar Bharat and Viksit Bharat 2047 visions.

Which of the following relationships among the above statements is/are correct ?

1. Statement II validates the effectiveness of the strategies envisioned in statement I.
2. Statement III extends the objectives of statement I by embedding them into a future-oriented innovation framework.
3. Statement I contradicts statement III by focusing only on traditional infrastructure instead of modern innovation.

Select the answer using the code given below :

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

Answer-B

Major Government Initiatives in Maritime Sector

1. Sagarmala Programme

- Launched 2015
 - Aims at **port modernization**.
 - **13 major ports (12 operational)** and over **200 non-major (minor) ports** across coastal states.
 - **Vizhinjam Port**, India's **first deep-water international transshipment hub**, is now **operational**.
- 2. Maritime India Vision (MIV) 2030**
- A **blueprint for the next decade** of maritime growth
 - **Invest ₹3 lakh crore** in port infrastructure.
 - **Reduce logistics cost** by **5-10%**
 - **Double port capacity to 2,500 MTPA** (million tonnes per annum).
 - Make India a **top 10 shipbuilding nation**.



Major Ports of India



Vizhinjam Port

- Owned by the **Government of Kerala**
- Operated by a private entity, the **Adani Group**, under a **public-private partnership (PPP) model**.
- Vizhinjam Port is **not officially a "major port"** as per official categorisation.

506. PM Gati Shakti Scheme ("")

- To provide **speed (Gati)** and **power (Shakti)** to **infrastructure projects**.
- It envisages a **centralised portal** to unite the infrastructural initiatives planned and initiated by as many as **16 central ministries and departments**.
- **Infrastructure schemes** of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN will be subsumed etc.

It targets to-

1. Cut logistic costs
2. Increase cargo handling capacity
3. Reduce the turnaround time

Progress so far

- **208 big-ticket infrastructure projects** of different ministries, including roads and railways, worth **Rs 15.39 lakh crore** have been recommended for approval **under the PM Gati Shakti initiative so far**.



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27. Which one of the following statements with regard to the Moidams, built by the Tai-Ahom kingdom and inscribed as a World Heritage Site by UNESCO, is/are correct ?

1. They acted as army fortresses.
2. They were recreation centres of the Royals and Nobles.
3. They were burial grounds of the Royals and Nobles.
4. They were battle drill centres of the Royals and Nobles.

Select the answer using the code given below :

- (a) 1 only
- (b) 1 and 3
- (c) 3 only
- (d) 2 and 4

Answer-c

Day 34

UNESCO's Heritage convention

1. **UNESCO 1972 World Heritage Convention**
 - Gives recognition to **cultural and natural heritage** sites globally.
 - Such heritages are known as, '**Tangible heritages**'.
 - Advisory Bodies: **ICOMOS for cultural heritage, IUCN for natural heritage**
2. **UNESCO 2003 Convention**
 - Safeguarding of the **Intangible Cultural Heritage**
 - **five broad 'domains** for protection-Oral traditions, Performing arts, Social practices, Knowledge, Traditional craftsmanship.

There are some **Mixed heritage sites** also. They contain elements of both **natural and cultural significance**. **India** has **44 World Heritage Properties: 36 Cultural, 7 Natural and 1 Mixed (Khangchendzonga National Park, Sikkim).**

Overall India 1st site- Ajanta Caves; Ellora Caves; Agra Fort; Taj Mahal — all inscribed in 1983.
Latest(44th)- Maratha Military Landscapes of India(2025)

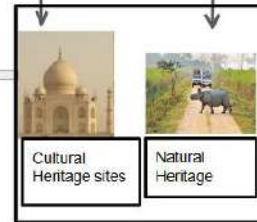
Assam

1. **Cultural- Moidam-Burial System of the Ahom Dynasty**
2. **Natural- Kaziranga and Manas NP**

Heritage-Something that has been inherited from past and should be passed to future generations

Tangible- things which you can touch

Intangible-things that can be experienced



32.

With respect to the Western Hoolock Gibbons, which of the following statements is/are correct ?

1. A Sanctuary in North-east India is home to this ape species listed as Endangered in the International Union for Conservation of Nature (IUCN) Red List.
2. They have specialized brachiation and can easily swing between trees.
3. They possess a strong and heavy build like gorillas, yet are remarkably agile tree climbers.

Select the answer using the code given below :

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

Answer-b

559. Hoollongapar Gibbon Wildlife Sanctuary

- Tailless Hoolock Gibbon is the **only ape found in India**
- Found in **eastern Bangladesh, Northeast India and Southwest China.**

Types

1. **Western hoolock gibbon**
 2. **Eastern hoolock gibbon**
- A study by the **Centre for Cellular and Molecular Biology (CCMB) in Hyderabad** said there is **actually only one species of gibbon** in India. The **difference in coat color is superficial** difference but **genetically they are same.**

Hollongapar Gibbon Wildlife Sanctuary

- **Jorhat district,**
- **Bhogdoi River** borders the sanctuary.

Fauna:

- Home to India's only gibbons, the **Hoolock Gibbons.**
- **Northeast India's only nocturnal primate,** the **Bengal Slow Loris,** is found here.

Current concerns

- A **Railway line passes** through the **Hollongapar Gibbon Sanctuary.**
- The **railway line was a threat** for animals

WESTERN HOOLOCK GIBBON

HABITAT
Tropical evergreen rainforests, tropical evergreen and semi-evergreen forests etc.

EASTERN HOOLOCK GIBBON

HABITAT
Evergreen, scrub & semi-deciduous forests, mountainous broadleaf & pine forests

HOLLONGAPAR GIBBON SANCTUARY

Evergreen forest area located in the **Jorhat district, Assam**

Home to western hoolock gibbon and **Bengal slow loris** (NE India's only nocturnal primate).

Bengal Slow Loris
LORIS OF INDIA

HOOLLONGAPAR GIBBON SANCTUARY

33. Which of the following best explain(s) the rationale for protecting mangrove ecosystems in the context of climate resilience ?

1. Mangroves reduce tidal energy and store freshwater, making them ideal sites for paddy cultivation in saline estuarine belts.
2. Their salt-sensitive roots filter seawater, making mangroves key to converting coastal land into freshwater aquaculture zones.
3. By withstanding tidal surges and offering biomass resources, mangroves function both as natural bio-shields and livelihood bases for rural communities.

Select the answer using the code given below :

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

Answer-d

26th July 2025

4. World Mangroves day

Current context

- July 26 is observed as World Mangroves Day.

Mangroves

- Mangroves are salt-tolerant trees and shrubs that grow in intertidal zones of tropical and subtropical coastal regions.
- 0.1% Earth has Mangroves.
- Highest in South Asia

Environmental significance of Mangroves

- Indicator of coastal ecosystem
- Arrest erosion of soil
- Respiratory roots above soil – 10 times more carbon capture
- Shock absorber- Ease wind / water force during cyclone & storm.



34. In what way(s) does the Vizhinjam International Seaport represent a structural shift in India's maritime trade and logistics policy ?

1. By functioning exclusively as a domestic cargo hub to reduce reliance on coastal shipping and eliminate the need for foreign collaborations.
2. By focusing primarily on passenger cruise tourism and heritage shipping to increase Kerala's profile as a maritime heritage destination.
3. By leveraging its natural deep draft and strategic location to reduce dependence on foreign trans-shipment ports, enhance revenue retention, and reposition India in regional maritime trade.

Select the answer using the code given below :

- (A) 1 only
- (B) 1 and 2
- (C) 2 and 3
- (D) 3 only

Answer-d

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16th May 2025

36. Which of the following with reference to Indian States is/are not correct ?

1. Uttar Pradesh shares its boundary with the highest number of other Indian States.
2. Rajasthan shares the longest international border among all Indian States.
3. Sikkim is the only State that shares its boundary with just one other Indian State.

Select the answer using the code given below :

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

Answer-c

1. Sikkim statehood day

Brief history of Sikkim

- Sikkim was a **Buddhist kingdom** under the **Namgyal dynasty from 1642 to 1975**.
- During British rule over India, **Sikkim was a protectorate state of Britishers**.
- After **independence**, Sikkim became **protectorate state of India**.

What is a protectorate state?

- A **protectorate state** is the one that is **independent** but whose **foreign policy is guided by some other country**.
- In **December 1950**, by signing the "**India - Sikkim Peace Treaty**", Sikkim **became India's protectorate**.



37. Which of the following statements with regard to the arrival of Amur Falcons at Doyang Lake in Nagaland each year from Mongolia is/are correct ?

1. It showcases how sustained local conservation efforts can contribute to the arrival and protection of international migratory birds.
2. It reflects the global success of advanced tracking technologies that guide migratory birds back to their stopover sites.
3. It confirms that Amur Falcons have adapted to permanent residency in India due to favourable habitat changes.

Select the answer using the code given below :

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

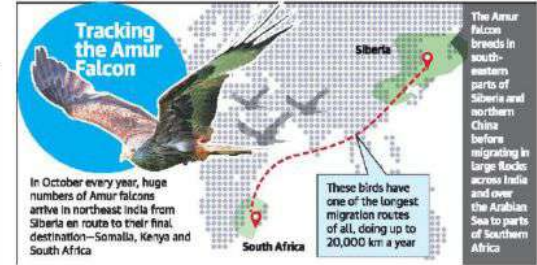
Answer-a

3rd March 2026

3. Amur Falcons Tagged in Manipur Reach Africa

Amur Falcon-longest travelling raptors

- Amur falcons, the world's **longest travelling raptors** (birds that swoop down on their prey) start travelling with the **onset of winters in Siberia**.
- Every year in the **month of October** millions of Amur falcons migrate from the eastern countries of **Siberia, China and North Korea to Southern Africa**, in order to **escape the bitter cold** of the east and to embrace the summers of the **African subcontinent**.
- **Doyang Lake in Nagaland** is better known as a **stopover (roosting site)**.
- **Nagaland** is also known as the **"Falcon Capital of the World."**



Doyang Lake in Nagaland

38. Which among the following is/are the objective(s) of the Rainfed Area Development (RAD) initiative under the National Mission for Sustainable Agriculture (NMSA) ?

1. Encouraging monoculture in rainfed areas
2. Increasing rice cultivation in irrigated regions
3. Enhancing productivity and minimising climatic risks through Integrated Farming Systems (IFS)

Select the answer using the code given below :

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

Answer-d

490. Natural Farming and Organic Farming(*)

Organic Farming

- Uses organic manures bought from market like **bio-fertilizer**
- Verification & **certification required** regarding inputs
- Higher cost as **external inputs** from **market taken**.

Natural Farming

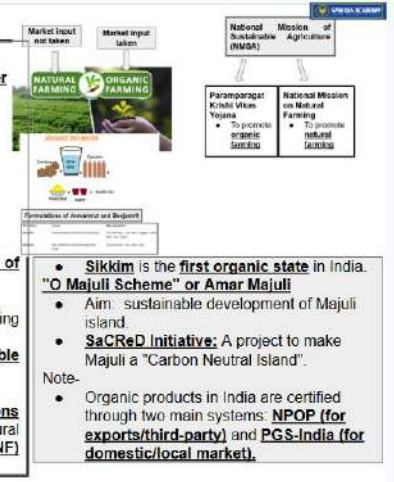
- **No external inputs** (zero budget)
- **No certification** needed
- Very **low cost**
- Fully **self-reliant**

National Mission on Natural Farming (NMNF)

- Launched in **2024**.
- It is a **centrally sponsored scheme** under the **Ministry of Agriculture and Farmers' Welfare**
- It focuses on **"chemical-free" farming**
- **18.75 lakh farmers** will be **trained** to prepare natural farming inputs like **Jeevamrit and Beejamrit**.
- Launched under **National Mission of Sustainable Agriculture (NMSA)**.

What are Jeevamrit and Beejamrit?

- Jeevamrit and Beejamrit are **natural farming formulations** developed by **Subhash Palekar**, an Indian agricultural scientist, as part of the **Zero Budget Natural Farming (ZBNF) methodology**.



Note-

- **Sikkim** is the **first organic state** in India. **"O Majuli Scheme" or Amar Majuli**
- Aim: sustainable development of Majuli island.
- **SaCReD Initiative**: A project to make Majuli a "Carbon Neutral Island".

39. Which of the following is/are the most significant implication(s) of obtaining Oeko-Tex certification for Eri Silk in the global textile industry ?

1. It allows Indian exporters to compete in high-end markets that prioritise chemical-free products.
2. It confirms that Eri Silk meets international safety, environmental, and quality standards, enabling its entry into premium eco-conscious markets.

Select the answer using the code given below :

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2**
- (d) Neither 1 nor 2

Answer-c

19th Aug 2024

5. Oeko tex certification

Current news?

- The North Eastern Handicrafts and Handlooms Development Corporation (NEHHDC) under the Ministry of Development of North Eastern Region (DoNER) has successfully obtained the prestigious Oeko-Tex certification from Germany for Eri silk of NE region.

Oeko-Tex certification

- The Oeko-Tex certification ensures that Eri silk is tested for harmful substances and produced under environment-friendly conditions.
- It is certification for sustainable fabric.
- The certification is seen as a crucial step in bringing Eri silk to the global export market.



Prelims facts

- Sualkuchi Known as the "Manchester of Assam" for its popular silk products.
- Assam has got GI tag for both Eri and Muga silk.
- Muga silk is known for its golden yellow color and is a UNESCO-recognized heritage product.

40. Ships from which of the following countries have to cross the Strait of Hormuz to reach out to the Indian Ocean ?

1. Bahrain
2. Syria
3. Qatar
4. Egypt

Select the answer using the code given below :

- (a) 1 and 2
 (b) 1 and 3
 (c) 2 and 3
 (d) 3 and 4

Answer-b

306. West Asia Politics()**

- On February 28, 2026, **Israel** carried out a **missile attack on Iran**.
- US President Donald Trump confirmed that the **US supported Israel in the attack**.
- The strikes have been dubbed **Operation Epic Fury** by the **United States** and **Operation Roaring Lion by Israel**.
- The attack led to **death of Supreme leader of Iran Ayatollah Khamenei**.
- **Iran retaliated** with missile attacks on **Israeli territory** and subsequently expanded its retaliation by **targeting US bases** in **Qatar, Bahrain, Jordan, Kuwait, and the UAE**.

Note-

- A similar attack was done by the US in **June 2025** that was named **“OPERATION MIDNIGHT HAMMER”**.



41. Match List I with List II and select the answer using the code given below the Lists :

List I	List II
(INTERPOL Notice)	(Description)

- | | |
|------------------|---|
| A. Silver Notice | 1. To seek information on unidentified bodies |
| B. Blue Notice | 2. To collect additional information about a person's identity, location, or activities in relation to a criminal investigation |
| C. Black Notice | 3. To provide warning about a person's criminal activities, where the person is considered to be a possible threat to public safety |
| D. Green Notice | 4. To identify and trace criminal assets |

Code :

- | | | | | |
|-----|---|---|---|---|
| | A | B | C | D |
| (a) | 3 | 1 | 2 | 4 |
| (b) | 3 | 2 | 1 | 4 |
| (c) | 4 | 2 | 1 | 3 |
| (d) | 4 | 1 | 2 | 3 |

Answer-c

351. Interpol and Bharatpol(**)

- **195-member intergovernmental organisation** headquartered in **Lyon, France**.
- It was formed in **1923**.
- **India joined** the organisation in **1949**, and is **one of its oldest members**.

What does Interpol do?

- The Interpol basically **connects police across the world**.
- The agency is **focused** on several key areas of crime – **Terrorism, Sexual abuse of children and child pornography, Organized crime International fugitives**.

Funding –

- Most of Interpol's funding comes from the **member countries themselves**.

Bharat Pol

- **Earlier only CBI could connect** to Interpol from India but now, even **State police and other enforcement agencies can connect** to Interpol **via CBI** with help of **Bharatpol Portal**.
- it will strengthen **India's efforts** in **combating transnational crimes**.
- It has been developed by **Central Bureau of Investigation (CBI)**.



- The **President of Interpol** is **elected** by the **General Assembly of Interpol** and holds office for **four years**.
- **CBI** assumes this role of **liaisoning with Interpol** in **India**.

44. Which of the following statements about DHRUV64 is/are correct ?

1. It is the third chip fabricated under the DIR-V Programme with an overall aim to enable the creation of microprocessors for India.
2. It is India's first homegrown 1.0 GHz, 64-bit dual-core microprocessor.

Select the answer using the code given below :

- (a) 1 only
 (b) 2 only
 (c) Both 1 and 2
 (d) Neither 1 nor 2

Answer-c

633. DHRUV64 microprocessor and RISC-V()**

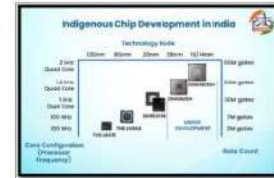
- DHRUV64 is India's **first homegrown 1.0 GHz, 64-bit dual-core microprocessor** has been launched.
- It has been created by the Centre for Development of Advanced Computing (C-DAC) under the **Microprocessor Development Programme (MDP)** of **Ministry of Electronics and Information Technology (MeitY)**.
- It is supported by **Digital India RISC-V (DIR-V) programme.**

Digital India RISC-V (DIR-V) programme

- **Lets first understand what is RISC-V?**
- RISC-V is a **free set of instructions** that guides how a **microprocessor** should work.
- RISC-V was developed by **researchers at the University of California, Berkeley** and is in use since 2010.
- **Other instruction sets** (like ARM or Intel x86) are **owned by companies** and **cost money**.
- **RISC-V is open**, so universities, companies, or even students can build processors using it.

What is Digital India RISC-V Programme?

- Started by the **Government of India (MeitY) in 2022**
- Build **India's own ecosystem** for designing and **making RISC-V based processors.**
- It supports **chip development projects** like **DHRUV64** microprocessor.



- **Before DHRUV64**, India had already begun expanding its **Indigenous microprocessor development ecosystem** in recent years. Eg **THEJA S64 (2025, C-DAC)**.
- **DHANUSH64 and DHANUSH64+** System on a Chip (SoC) variants are currently **under development**.

Tensor Processing Units (TPUs)

- **Special computer chips** made by Google that are designed specifically for **Artificial Intelligence (AI)** and **Machine Learning tasks.**
- CPU-General computing
- GPU-Graphics & parallel computing
- TPU-AI & machine learning only

48. Which one of the following pairs of semiconductor plants in India and their locations is **not** correctly matched?

- (a) CG Power and Industrial Solutions Pvt. Ltd. in partnership with Renesas Electronics and STARS Microelectronics : Gujarat
- (b) Tata Semiconductor Assembly and Test Pvt. Ltd. : Assam
- (c) HCL-Foxconn Joint Venture India Chip Ltd. : Madhya Pradesh
- (d) SicSem Pvt. Ltd. : Odisha

Answer-c

316. Strategic Partnership vs Natural Allies(*)

India and Singapore(after the PM's visit in Sept 2024)
 a. elevated their bilateral relations to a "comprehensive strategic partnership."
 b. MoU signed on cooperation in semiconductors.

Semiconductors

- heart and soul of modern electronics industry.
- Leaders **US, South Korea, Taiwan, Singapore**, etc
- **RoC(Taiwan)** survives- **Silicon shield** (TSMC of Taiwan is one of the largest Semiconductor Chip producer-US doesn't want it to be controlled by China)

Semiconductor Mission

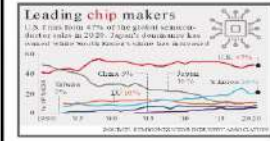
- Started by **government of India in 2021**
- **Financial outlay of Rs. 76,000 crore**
- **Ministry of Electronics and IT (MeitY)**

Upcoming three Semiconductor Manufacturing units in India

- a. **2 in Gujrat**
 - **Semiconductor fab unit in Dholera**, Gujarat by **Tata group**
 - Semiconductor unit in **Sanand**, Gujarat-**CG Power**, in conjunction with **Japan's Renesas** and **Stars Microelectronics of Thailand**
- b. **1 in Assam**
 - **Semiconductor unit in Morigaon, Assam- by Tata group**
 - investment of **Rs 27,000 crore/ target 48 million semiconductor chips** per day

Taiwan Semiconductor Manufacturing Company (TSMC)

- TSMC is the world's largest dedicated independent semiconductor foundry, commanding **roughly 67%** of the global market share as of early 2026.
- Founded in 1987 in **Taiwan**, it produces advanced chips for companies like Apple, Nvidia, and Broadcom.



NPA-7 May 2026

3. 12 chip plants under India Semiconductor Mission phase 1

Current news?

- Recently the Union government approved **two new semiconductor plants**.
- With this, **total 12 Semiconductor plants** will be established under India **Semiconductor Mission phase 1**.
- The Union Cabinet also announced establishment of **India's first display fabrication facility** (display fab).
India's first display fabrication facility
 - India's first display fabrication facility (display fab) is being **established in Telangana** by **Elest**, a subsidiary of Rajesh Exports, with an **investment of ₹24,000 crore**.
 - The project, **part of the India Semiconductor Mission**, will focus on producing **Gen-6 AMOLED displays** for **smartphones, tablets, and laptops**.

Project No.	Company/Partner	Location	Investment	Target Production
1	Tata Electronics	Dholera (Gujarat)	₹27,000 crore	48 million chips/day
2	CG Power	Sanand (Gujarat)	₹27,000 crore	48 million chips/day
3	Tata Electronics	Morigaon (Assam)	₹27,000 crore	48 million chips/day
4	HCL-Foxconn	Pradesh	₹27,000 crore	48 million chips/day
5	Elest	Telangana	₹24,000 crore	Gen-6 AMOLED displays
6	...	...	...	...
7	SicSem	Telangana	₹24,000 crore	Gen-6 AMOLED displays
8	...	...	...	...
9	...	...	...	...
10	...	...	...	...
11	...	...	...	...
12	...	...	...	...

49. Which of the following statements with regard to India's indigenous new high resolution weather model, the 'Bharat Forecast System,' is/are correct ?

1. Its objective is to generate forecasts at the Panchayats cluster level.
2. It was developed by IIT Delhi.

Select the answer using the code given below :

- (a) 1 only
 (b) 2 only
 (c) Both 1 and 2
 (d) Neither 1 nor 2

Answer-a

27th May 2025

1. Bharat Forecast System

Current news?

- The India Meteorological Department (IMD) will adopt the Bharat Forecast System (BFS) for weather forecasting.

What is Bharat Forecast System?

- It is an indigenously built advanced weather forecasting system.
- Developed by Indian Institute of Tropical Meteorology, Pune.
- It will provide forecasts with a 6 km resolution-the highest in the world.
- It will allow forecasters to predict small-scale weather features more accurately.
- This resolution is advanced in comparison to the previous 12-km Global Forecast System (GFS) used in India so far.
- This finer resolution will help in more precise predictions of localised weather events like heavy rainfall and cyclones.



The BFS has shown a 30% improvement in forecasting extreme rainfall events compared to previous models.

50. Consider the following statements with regard to the film 'Boong':

1. The film has recently won the British Academy of Film and Television Arts (BAFTA) Award in the Children's and Family Film category.
2. The film is directed by Lakshmi Priya Devi.
3. This is the first Indian film to win a BAFTA award in the Children's and Family Film category.

Which of the statements given above is/are correct?

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

Answer-a

27. Boong Wins BAFTA

- Manipuri film Boong won the **Best Children's & Family Film** award at the **BAFTA Awards**.
- It became the **first Indian film** to win in **this category**.
- Directed by **Lakshmi Priya Devi** (debut film).
- The film is in the Manipuri language.

BAFTA Awards

- BAFTA stands for **British Academy of Film and Television Arts**.
- Often considered the **British equivalent of the Oscars**.



Winning team: Director Lakshmi Priya Devi with producers Alan McAlex, left, Farhan Akhtar, and Ritesh Sidhwani in London. AP

WINNERS AT THE 2026 BAFTA FILM AWARDS

A NIGHT OF BOLD CINEMA AND BREAKOUT TALENT

<p>LEADING ACTRESS Annie Markey "The Girl on the Train"</p>	<p>SUPPORTING ACTOR Sean Penn, One Star "The Brutalist"</p>
<p>LEADING ACTOR Robert Pattinson "The Brutalist"</p>	<p>SUPPORTING ACTRESS Ariana Greenblatt "The Brutalist"</p>
<p>BEST FILM "The Brutalist"</p>	<p>ORIGINAL SCREENPLAY Sean Penn "The Brutalist"</p>
<p>ADAPTED SCREENPLAY "The Brutalist"</p>	<p>EDITING "The Brutalist"</p>
<p>PRODUCTION DESIGNER "The Brutalist"</p>	<p>CASTING "The Brutalist"</p>
<p>SCREENPLAY "The Brutalist"</p>	<p>PRODUCTION DESIGNER "The Brutalist"</p>
<p>PRODUCTION DESIGNER "The Brutalist"</p>	<p>PRODUCTION DESIGNER "The Brutalist"</p>
<p>PRODUCTION DESIGNER "The Brutalist"</p>	<p>PRODUCTION DESIGNER "The Brutalist"</p>

51. Which of the following statements regarding the features of blockchain technology are correct?

1. Records stored in the database may be made visible to relevant stakeholders without risk of alteration.
2. Copies of the entire database are stored on multiple computers on a network, syncing within seconds.
3. Consortium blockchain is a blend of public and private blockchains allowing selective data access.
4. Mathematical algorithms make it impossible to change or delete any data once recorded and accepted.

Select the answer using the code given below :

- (a) 1 and 3
 (b) 2 and 4 only
 (c) 1, 2 and 4
 (d) 1 and 4 only

Answer-c

438. Blockchain technology(**)

- Bitcoin and other Cryptocurrencies operates on a **blockchain technology**.

Blockchain technology

- It is a **decentralized ledger system** that **records transactions** in a **secure, transparent, and tamper-resistant manner**.
- **Transactions** are grouped into **blocks**.
- **Each block** is **connected** to the **previous one** using a cryptographic hash, **forming a chain** (hence the name "**blockchain**").
- Once a **block is added** to the chain, it is **very difficult to alter**.
- It was initially **introduced** as the underlying **technology behind Bitcoin** but has since **evolved** to support **various applications beyond cryptocurrencies**.

Concerns associated with Cryptocurrencies?

1. Volatility in price
2. Lack of regulation by any authority
3. Risk of cyber threats
4. Misuse like- Terror Financing, Drug Trafficking

For such reasons **governments are apprehensive of Cryptocurrencies**



2 segments of e-Rupee

1. **e₹-W (Wholesale Segment)**

- Designed only for financial institutions (banks, large entities).
- Used for interbank transactions and settlement of large-value payments.

Example:

- When two banks settle a government bond transaction, they can use e₹-W instead of traditional settlement systems.

2. **e₹-R (Retail Segment)**

- Designed for general public (you and me).
- Used for daily transactions like cash.
- Works via digital wallets (like UPI apps but issued by RBI)

Use case:

- P2P (person-to-person) payments
- P2M (person-to-merchant) payments

33. Which one of the following correctly represents the three key sub-indices of the Financial Inclusion Index (FI-Index) of the Reserve Bank of India (RBI) ?

- Credit access, Insurance depth, and Pension coverage
- Banking access, GDP contribution, and Financial literacy
- Access, Usage, and Quality
- Access, Affordability, and Transparency

Answer-c

416. Financial Inclusion Index(**)

Objectives of financial inclusion to ensure following facilities to all:

- A basic **no-frills banking account** for making and receiving payments
- Saving products** (including **investment** and **pension**)
- Simple credit products and **overdrafts linked** with no-frills accounts
- Remittance**, or money transfer facilities
- Micro insurance** (life) and non-micro insurance (life and non-life)
- Micro pension** eg Atal Pension Scheme etc

Schemes for financial inclusion

- Pradhan Mantri Jan Dhan Yojana accounts**
 - Total number of accounts -Around **56 crore**.
- Other financial inclusion schemes in India**
 - Jeevan Jyoti Bima Yojana, PM Jeevan Suraksha Yojana, Pradhan Mantri Vaya Vandana Yojana, Pradhan Mantri Mudra Yojana, Stand Up India scheme, Pradhan Mantri Suraksha Bima Yojana (PMSBY), Atal Pension Yojana (APY), Sukanya Samridhi Yojana etc
- JAM Trinity**
 - More banks account opened.
 - Digital banking also promoted.

Financial Inclusion Index

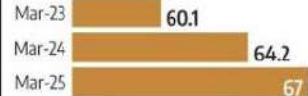
- RBI releases **annually**
- The FI-Index** comprises three broad parameters -- **Access (35%)/Usage (45%)/Quality (20%)**



JAM Trinity helps in **DBT** for prevention of leakage and issue of **ghost beneficiaries in welfare schemes**.

Improving parameters

RBI financial-inclusion index



Source: RBI

Current news?

- The **FI-Index of 67%** for **2025** indicates that **33%** people are **still financially excluded**.

54.

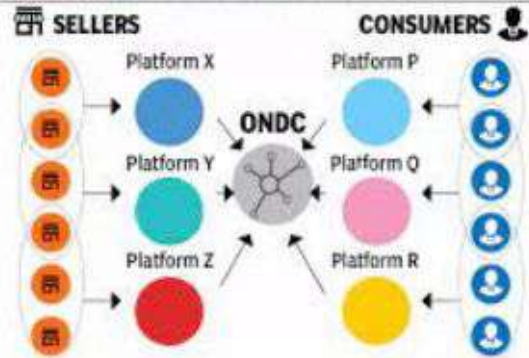
Which one of the following best describes the key objective of India's 'Open Network for Digital Commerce' (ONDC) initiative?

- (a) To allow government control over all digital commerce transactions
- (b) To replace private e-commerce players.
- (c) To break the dominance of large e-commerce platforms by enabling interoperability across networks
- (d) To mandate UPI-based payments for all online transactions

Answer-c

Day 58-Topic Number 6

Transactions Across Platforms



Open Network for Digital Commerce

- ONDC is like UPI of e-commerce platforms.
- Here a buyer **registered** on one participating e-commerce site (for example, Amazon) may **purchase goods** from a seller on **another participating e-commerce site** (for example, Flipkart).

55. Which one of the following statements about Unified Payments Interface (UPI) and Central Bank Digital Currency (Digital Rupee) is **not** correct?

- (a) UPI is a real-time payment system but Digital Rupee is akin to sovereign paper currency.
- (b) In case of UPI, settlement for end users happens instantly as the money gets immediately debited or credited but in case of Digital Rupee, there is no settlement as the wallet balance gets transferred to another wallet.
- (c) UPI transactions are recorded by banks and reflected in bank statements but in case of Digital Rupee, no data is captured in bank statements as transactions are from one wallet to another.
- (d) In both the cases (UPI and Digital Rupee), the liability lies with the users and their respective banks.

Answer-d

436. Digital currency(**)

- A **Digital currency** is that which is only **available** and **transacted** in **electronic form**.
- It is **stored and transacted only** through **designated software** and **applications** through **secure, dedicated networks**.

Digital currencies are of two types-

1. **Regulated/Centralized Virtual currencies**

- Regulated by a **Centralized agency** like **e-Rupee** which regulated by RBI.

2. **Private Virtual currencies**

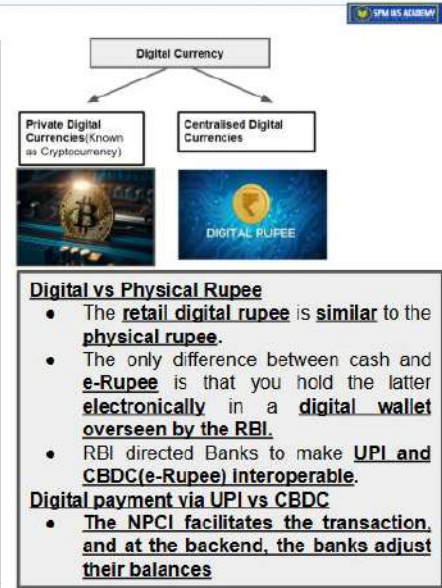
- **Not controlled** by any **centralized authority**.
- **Examples** of Virtual currency- **Bitcoin, Litecoin etc**

Centralised digital currency of India-e-Rupee

- On 1st December 2022 the Reserve Bank of India (RBI) **launched e-rupee** or **Central Bank Digital Currency (CBDC)** or digital rupee.

What is e-Rupee?

- e-rupee is the **same as a fiat currency** and is **exchangeable** one-to-one with the fiat currency.
- The conversion rate is **1 e-Rupee = 1 Indian Rupee**.
- Only its **form is different**.
- It can be accepted as a **medium of payment**, legal tender and a **safe store of value**.



and their respective banks.

56

Which of the following statements about Real-World Assets (RWA) Tokenization are correct ?

1. Tokenization is the process of turning real world assets into digital tokens using blockchain technology.
2. Tokenization of real world assets offers 24 × 7 access, promoting financial inclusion.
3. Tokenization of real world assets will allow the access to high growth investment opportunities for individuals in India.

Select the answer using the code given below :

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

Answer-a

440. Non Fungible Tokens (**)

- **Asset**-anything that has some **stored value**.
- **What is Fungible property/Asset?**
- Assets that are **identical and interchangeable**.
 Eg Money (₹100 = another ₹100)/ Gold (1 gram = another 1 gram)/ Shares of same company

What is Non-fungible property?

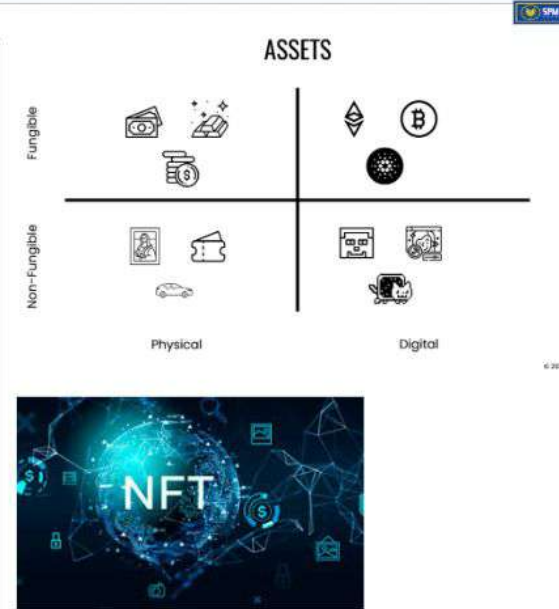
- **An asset** that is **unique** and **cannot be replaced** by another **identical unit**.
- Each unit is **different in characteristics**, so **can't be exchanged even if it is of same value**.
- **Eg: House, Land/plots etc**

Non-Fungible Tokens (NFTs)

- **Unique digital tokens** stored on a **blockchain that represent ownership** of a **specific digital or real-world asset**.
- **Examples:** Digital art, Music, Videos, Gaming items etc

Note-

- NFTs are not the asset itself, but a **proof of ownership (token) of that asset**.



25th Oct 2025

59. Which one of the following best describes the 'Crowding Out Effect' in the context of fiscal policy ?

- (a) A situation where private investment increases due to increased Government spending
- (b) A situation where Government borrowing leads to higher interest rates, which reduces private investment
- (c) A situation where an increase in taxes leads to increased private sector investment
- (d) A situation where Government spending has no impact on aggregate demand

Answer-b

2. Debt to GDP ratio of major economies

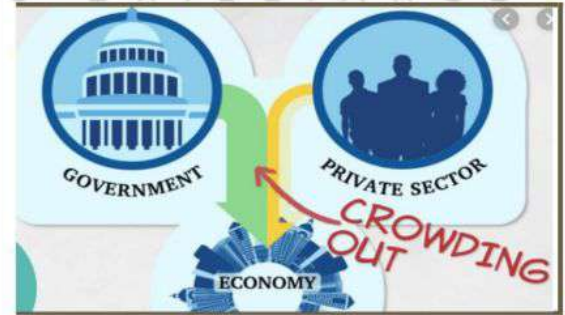
Prelims Practice Question

Q1. Consider the following question regarding 'Crowd Out Effect-

1. It may happen when government increases its spending.
2. It may happen in case of rising Fiscal deficit.

Option

- a. 1 only
- b. 2 only
- c. Both
- d. None



60. Which of the following statements about Rare Earth Elements (REEs) and Critical Minerals is/are correct?

1. Modern technological innovations including Artificial Intelligence, robotics and space exploration extensively utilise Rare Earth Elements (REEs).
2. China has the highest share in mining of REEs followed by India.
3. The Government of India launched the National Critical Mineral Mission (NCMM) in 2025 to establish a robust framework for self-reliance in the critical mineral sector.
4. Rare Earth Elements are a set of 13 metallic elements.

Select the answer using the code given below :

- (a) 1 and 3 only
 (b) 3 only
 (c) 1, 3 and 4
 (d) 1, 2 and 4

268. Rare Earth Minerals and Rare Earth Magnets(*)

- **Rare Earth Elements (REEs)** — are a group of **17 metallic elements** that are essential for modern technology and clean energy systems.

They include:

- **15 lanthanides** (from **lanthanum** (atomic number 57)) to **lutetium** (atomic number 71)). Plus **scandium and yttrium**, which have similar chemical properties.

Why are they called 'rare'?

- REEs are **not truly rare**.
- They are **moderately abundant** but found in **low concentrations**, making extraction difficult and expensive.

Significance of REE

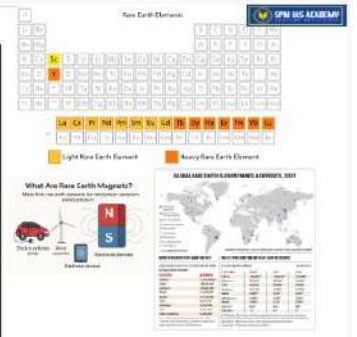
- They are essential for **high-tech industries** — **magnets, batteries, electronics, renewable energy, defence systems**, etc.
- **China** dominates with over **60% of global REE production**.
- China uses its control as a geopolitical and trade leverage ("**trade weapon**").
- China has **restricted exports** during trade tensions, affecting global tech supply chains.

Rare earth magnets

- **Strong permanent magnets** made from **alloys of rare earth elements**.

Example of Rare earth magnets

1. **Neodymium-Ferrous-Boron (NdFeB): Strongest Magnet**
2. **Samarium-Cobalt (SmCo): corrosion-resistant**-Used in Aerospace, military equipment, high-temperature motors etc



In the **Union Budget 2026-27** the **FM announced Dedicated parks for critical mineral processing** will be established. These parks will be set up in: **Odisha, Andhra Pradesh, Kerala, Tamil Nadu**. **6,000 metric tonnes per annum** of rare-earth permanent magnets. Financial outlay of **₹7,280 crore**.

63. With reference to different Committees in India, consider the following details :

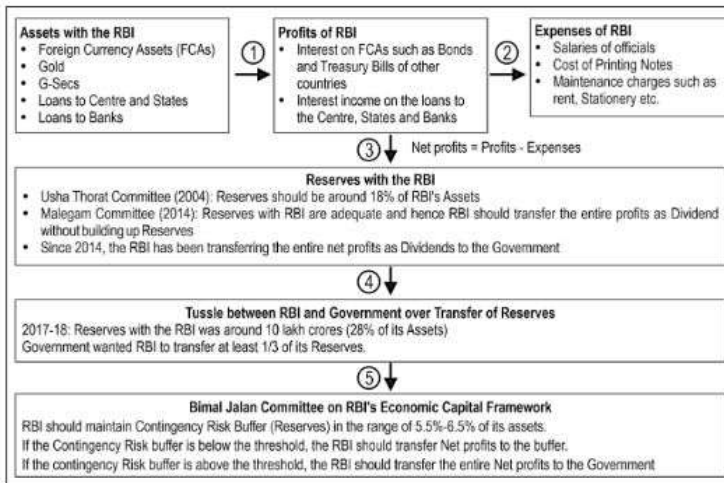
Sl. No.	Committee	Objective	Organization under which it was formed
1.	R.N. Malhotra Committee	Comprehensive reforms of Insurance sector in India	Insurance Regulatory and Development Authority of India
2.	L.C. Gupta Committee	Preparing a roadmap for the introduction of derivatives trading in India	Securities and Exchange Board of India
3.	Urjit R. Patel Committee	Preparing a roadmap for reforming bank lending to the Housing sector	Reserve Bank of India
4.	Y.H. Malegam Committee	Preparing a roadmap for reforms in Microfinance sector in India	Reserve Bank of India

In which of the above rows are all the details correctly matched ?

- (a) 2 only
 (b) 2 and 3
 (c) 1, 3 and 4
 (d) 2 and 4

Answer-c

441. Bimal Jalan Committee on Economic Capital Framework of RBI(**)



SURPLUS TRANSFERRED TO GOVERNMENT

Year	Dividend transfer
2016-19	₹1,76,051 Cr
2019-20	₹57,128 Cr
2020-21	₹99,122 Cr
2021-22	₹30,307 Cr
2022-23	₹67,416 Cr
2023-24	₹2,10,874 Cr
2024-25	₹2,68,590 Cr

Source: RBI

LARGE \$ SALES BOOST DIVIDEND

■ The record dividend payout for 2024-25 was on account of robust earnings of the RBI led by large amounts of dollar sales to support the falling rupee and higher revenue earned on foreign assets due to rise in interest rates in the international markets

- **Printing notes** is a **cost/expenditure** for the **RBI**.
- A **₹500** note costs about **₹2.30**.
- **Seigniorage (Profit) for RBI**
- While printing is an expense, it is a **highly profitable activity** for the government, as the note's face value (e.g., ₹500) far exceeds its production cost.
- Seigniorage is the **difference between** the **face value** of the currency notes and their **actual production cost**, which is considered a key source of central bank income.

64. Consider the following statements about the Non-Banking Financial Companies (NBFCs) in India :

- 1. NBFCs cannot accept demand deposits.
- 2. All the NBFCs operating in India have to be registered with the RBI.
- 3. NBFCs form part of the payment and settlement system and can issue cheque drawn on itself.
- 4. Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation (DICGC) is not available to the depositors of deposit taking NBFCs.

Which of the statements given above is/are correct ?

- (a) 1 and 4
- (b) 1, 2 and 3
- (c) 4 only
- (d) 2, 3 and 4

Answer-a

463. Flipkart received a NBFC licence()**

- A Non-Banking Financial Company (NBFC) is a **company registered** under the **Companies Act, 1956** engaged in the **business of loans and advances etc.**

Some examples of NBFCs-

- Bajaj Finance Limited, Muthoot Finance, Tata Capital Financial Services Limited etc

Categorization of NBFCs

- As part of the **2021 NBFC reforms**, the RBI classifying NBFCs **(based on Scale of Operation)**:

1. **Base Layer:** Non-systemically important NBFCs (NBFC-ND) with **smaller asset sizes**.
 2. **Middle Layer:** Systemically important non-deposit-taking NBFCs (NBFC-ND-SI), deposit-taking NBFCs (NBFC-D), and others.
 3. **Upper Layer:** Large NBFCs identified as posing significant systemic risks, based on size and interconnectivity.
 4. **Top Layer:** This layer is **currently empty**.
- This has been **reserved for NBFCs** that pose **extreme systemic risks** and may be subjected to **enhanced regulation**.

Recently **Flipkart** received a **NBFC licence**

Aspect	Bank	NBFC
Registration	Regulated under the Banking Regulation Act, 1949	Regulated under the Companies Act and RBI
Acceptance of Deposits	Can accept demand deposits (savings, current accounts)	Cannot accept demand deposits
Payment & Settlement	Part of the payment system (clearing, transfers, etc.)	Not part of the payment system
Deposit Insurance	Deposits insured by DICGC	Deposits are not insured by DICGC
Ministry Control	Subject to RBI and SEBI, RBI oversees	Not subject to CFI and SEBI
Credit Creation	Can create money through deposits	Cannot create money
Interest Rates	Flexibility, based on RBI's policy	Flexibility, higher interest rates
Priority Sector Lending	Mandatory priority sector lending	No priority sector lending norms
Foreign Exchange Services	Can provide Forex services	Cannot provide Forex services
Cheques and Drafts	Can issue cheques and drafts	Cannot issue cheques or drafts
Capital Adequacy Requirements	More stringent under Basel Guidelines	Less stringent than banks



65. Consider the following statements about Multidimensional Poverty Index (MPI) :

- MPI is calculated using Alkire-Foster methodology.
- MPI calculated by NITI Aayog has a total of twelve indicators.
- Maternal Health and Bank Account are common indicators in the MPI of NITI Aayog and MPI of United Nations Development Programme (UNDP).

Which of the statements given above is/are correct ?

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

Answer-a

Developed by:

- United Nations Development Programme
- Oxford Poverty and Human Development Initiative

It measures poverty across **three dimensions: Health, Education and Living Standards** (using **10 indicators**)

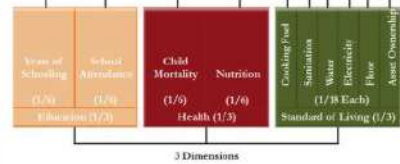
- The index is published **annually** in **Global Multidimensional Poverty Index (MPI) Report** and is **aligned with SDG-1** (No Poverty).

Global Multidimensional Poverty Index (MPI) 2025 Report titled **“Overlapping Hardships: Poverty and Climate Hazards”**

- India's **multidimensional poverty** rate fell from **55.1% (2005-06)** to **16.4% (2019-21)** ⇒ **414-415 million** people were **lifted out of poverty during this period**. **234 million** individuals living in **multidimensional poverty**.

Who is multidimensional poor?

- A person is identified as **multidimensionally poor** if their **deprivation** score is **one third (33.3%) or higher**. If a person is **deprived in an indicator**, the **weight of that indicator** is **added to their deprivation score**.



Multidimensional Poverty Index (MPI)

- Calculated using **Alkire-Foster Methodology**.
- MPI = H × A**
- H (Headcount ratio / Incidence) → proportion of people who are multidimensionally poor
- A (Intensity) → average share of deprivations among the poor

Example- Population(100)/ Poor people(30)/Average deprivation of poor(50%)
 Headcount=0.3
 Intensity= 0.5

$$MPI = 0.30 \times 0.50 = 0.15$$

216. National Multidimensional Poverty Index ()**

- In **2021**, **NITI Aayog** released India's **first National Multidimensional Poverty Index (MPI)**.
- The aim was to **measure poverty across multiple dimensions**, not just income or consumption.

The MPI evaluates deprivation in:

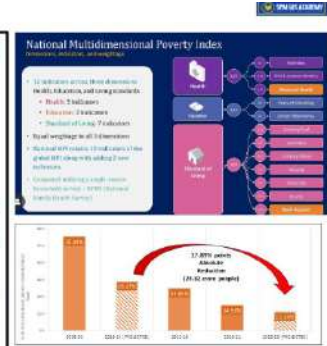
- Health
- Education
- Living standards (12 indicators)

Global vs National MPI

- India's **national MPI** retained **10 indicators** from the **Global MPI** and has added **2 new indicators**, namely **Maternal Health** (in the dimension of Health) and **Bank Account** (in the dimension of Standard of Living).

Reports released so far-

- National Multidimensional Poverty Index: Baseline Report** (2021) based on **NFHS 4**
- National Multidimensional Poverty Index: A Progress Review** (2023) based on **NFHS 5**
- Discussion Paper: **"Multidimensional Poverty in India since 2005-06" (2024)** ⇒ key findings
 - Poverty declined** from **29.17% (2013-14)** to **11.28% (2022-23)**.
 - About **24.8 crore (248 million)** people escaped multidimensional poverty during this period.



26th FEB 2026

67. Which of the following statements with regard to Large Language Models (LLMs) used in machine learning is/are correct ?

1. LLMs assign probabilities to the next possible words and then pick the one with the highest probability.
2. LLMs process data through mathematical optimization to minimise prediction errors.
3. LLMs produce unbiased outputs.

Select the answer using the code given below :

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

Answer-b

3. Training of LLMs

What are Large Language Model(LLMs)?

- Large Language Models (LLMs) are **advanced Artificial Intelligence (AI)** systems.
- LLMs can produce **human like content** based on **input prompts**.

They are called large because:

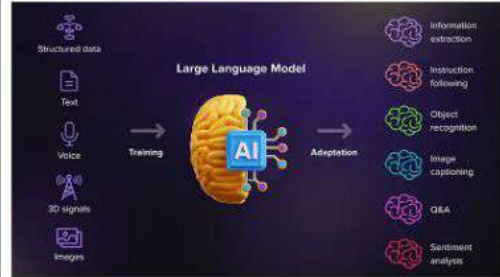
1. They are trained on **massive datasets** (books, websites, articles, etc.)
2. They have **billions or even trillions of parameters** (internal mathematical connections) to generate a response.

What parameters indicate in LLM?

- **More parameters more capacity** to learn **complex patterns**.

Recent

- At the AI Impact Summit, Bengaluru-based **Sarvam AI** released **two Large Language Models (LLMs) AI**.
- Models have **35 billion** and **105 billion parameters**.



Examples of LLM-

- ChatGPT, Gemini, DeepSeek etc

6th May 2026

68. Which of the following statements with regard to stealth technology is/are correct ?

1. Stealth objects have a very small radar cross-section and are coated with Radar Absorbing Material.
2. Stealth objects can be detected using specific frequencies.
3. Stealth objects are coated with metamaterials to increase the scattering of electromagnetic radiation.

Select the answer using the code given below :

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

Answer-c

2. Frigate development programme

Frigate development programme

- The Indian Navy's **frigate development** includes-

1. **Project 17** (Shivalik-class)-**Completed**
2. **Project 17A** (Nilgiri-class)-**On going**
3. **Project 17B-Planned**

Project 17 (Shivalik-Class)

- The P17 project produced **three multi-role stealth frigates** commissioned between 2010 and 2012: **INS Shivalik (F47)**, INS Satpura (F48), INS Sahyadri (F49).

Project 17A (Nilgiri-class)

- **7 stealth frigates** are under construction at **Mazagon Dock Shipbuilders (MDL) in Mumbai** and **Garden Reach Shipbuilders & Engineers (GRSE) in Kolkata.**
- Enhanced **stealth** with improved **radar-absorbent coatings, advanced sensors, and superior weapons.**
- **First ship, Nilgiri,** entered service in **January 2025.**
- Others include **Himgiri, Taragiri, Udaygiri, Dunagiri, Vindhya giri, and Mahendragiri.**
- Project 17A used **75% indigenous components by value.**



13th June 2025

69.

Which of the following statements with regard to Black Boxes used in modern aircrafts is/are correct ?

1. They carry a beacon emitting red light pulses to facilitate underwater detection.
2. They record both the cockpit voice and flight data.
3. Their memory units are made using either stainless steel or titanium.

Select the answer using the code given below :

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

Answer-b

5. Black Box in an aircraft

What are black boxes in an aircraft?

- Black boxes are **solid state memory chips** which store all the **information regarding causes** behind a **plane crash**.
- Just before the crash the **communication made between the pilot and the co-pilot gets recorded** in the the Black Box.
- The black box is **designed in such a manner** that even in **severe crash** the **black box remains intact**.
- Black box **reveals reason** behind the **plane crash**.



Black box



How blackbox remains intact even after crash?

- The recording devices are stored inside a unit that is **generally made out of strong substances** such as **steel or titanium** and are also insulated from factors **such as extreme heat, cold or wetness**.
- They are equipped towards the **tail end of the aircraft** – where usually **the impact of a crash is the least**.
- To **recover black box** in **case plane gets crashed into ocean** they are equipped with a beacon that sends out **ultrasound signals for 30 days**.



Tail end of the plane where black box is located



In spite of the popular name black box, flight recorders are painted a highly visible **vermillion color** known as **"international orange"**.

Q. Which of the following statements with regard to Green Hydrogen is/are correct ?

1. It is decarbonized hydrogen obtained from natural gas reforming combined with carbon capture and storage (CCS).
2. It is produced using electrolysis of water with electricity generated by renewable energy.
3. National Green Hydrogen Mission of India aims for abatement of nearly 50 MMT of annual greenhouse gas emissions by 2030.

Select the answer using the code given below :

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

Answer-b

518. Green Hydrogen(**)

- The Hydrogen is produced in **environment friendly** manner it is known **Green Hydrogen**.

Initiatives to promote Green Hydrogen production

1. **National Hydrogen Mission-**
 - Targeting a production increase to **5 million metric tonnes (MMT)** by 2030, meeting **40%** of domestic requirements.
 - **SIGHT Prog-** Focus on Electrolyser production
 - **SHIP Prog-** PPP model to promote Green Hydrogen production.
2. **Production Linked Incentive (PLI) Scheme-** Proposing a Rs 15,000-crore PLI scheme for **electrolysers**.
3. **Oil India Limited (OIL)** recently commissioned **India's first 99% pure green hydrogen plant** in eastern Assam's **Jorhat**
4. The Petroleum and Natural Gas Regulatory Board (**PNGRB**) has given approval for a **5% blending of green hydrogen with PNG** (later to be scaled to 20%)

Pink Hydrogen

- It is generated through **electrolysis powered by nuclear energy**.
- It can **also** be referred to as **purple hydrogen** or **red hydrogen**.



Petroleum and Natural Gas Regulatory Board (PNGRB)

- Regulatory and statutory body constituted under the **Petroleum and Natural Gas Regulatory Board Act, 2006**.
- **Aims** to protect **consumer interests**, **regulate petroleum** and natural gas activities.
- **The Appellate Tribunal**, established under **Section 110 of the Electricity Act, 2003**, serves as the **appeal authority under the PNGRB Act, 2006**.

Appeals against the decisions of PNGRB go to the appellate tribunals for Electricity.

Day 58

Q2. Consider the following statements with regard to involvement of private entities in India's space programme :

1. The Indian National Space Promotion and Authorisation Centre (IN-SPACe) is an autonomous agency formed to facilitate participation of private entities.
2. Agnikul Cosmos launched the world's first flight using 3D-printed rocket engine.
3. Skyroot Aerospace has developed liquid fuel for GSLV.

Which of the statements given above is/are correct ?

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

Answer-c

17. Mission Dhruvi and other space sector startups

- GalaxEye, a Bengaluru-based **space startup** has successfully launched **Mission Drishti**, the **world's first OptoSAR satellite**, using a **SpaceX Falcon 9** rocket from **California**.
- It uses both **Optical and Synthetic Aperture Radar (SAR)** images simultaneously of the same area on Earth.

Optical sensors

- Primarily use **visible light** and provide clear, **natural-looking images** but **struggle** during **clouds, rain, smoke**.

Synthetic Aperture Radar (SAR)

- It uses microwave signals, allowing **imaging in-**
 - a. through **clouds**
 - b. during **night-time**
 - c. in **bad weather**

Other successful Indian startups in space sector-

1. **Agnikul Cosmos**, start-up from IIT Madras, has built the **world's first 3-D printed rocket engine**.
2. **Skyroot** has tested **India's first privately built rocket**.

GalaxEye to Launch Mission Drishti, India's First Multi-Sensor Earth Observation Satellite



645. Indian Space Policy 2023(**)

- Main focus: **enhance private sector participation** in Space sector

Steps taken by the government to enhance private sector participation-

1. **IN-SPACE**
 - established under the **Department of Space (DoS)**
 - encourages **startups, businesses** and **academic institutions** to **participate** in India's **space activities**
2. **Indian Space Association (ISpA)**
 - it aims to **open the Indian space industry** to private companies and startups **Voluntary association** of Space industries in India.

Antrix vs NSIL

- Antrix traditionally manages older international commercial deals and marketing, while NSIL drives domestic industrial capacity building, satellite manufacturing, and commercial launch services

Indian Space Research Organization

Dept of Space and Space Commission is headed by PM



- Both ANTRIX and NSIL takes care of commercial wing of ISRO.
- How their role is different?
 - Antrix will handle ISRO's commercial deals for satellites and launch vehicles with foreign customers.
 - NSIL (New Space India Ltd) will deal with capacity building of local industry for space manufacturing.

72. Which of the following statements with regard to drone swarms is/are correct ?

1. They use Terahertz band of frequency to communicate with the command centre.
2. Individual drones in the swarm can communicate with other drones in the swarm.
3. GPS Spoofing is a commonly used technique to counter drone swarm attack.

Select the answer using the code given below :

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

Answer-b

669. GPS Spoofing(??)

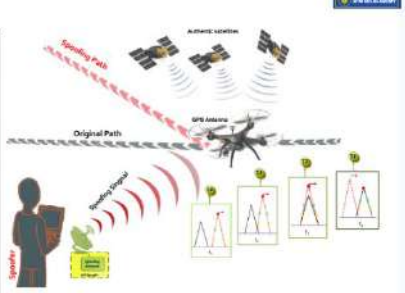
- **GPS spoofing**, also known as **GPS simulation**, refers to the practice of **manipulating or tricking a GPS receiver by broadcasting false GPS signals**.

How Does GPS Spoofing Work?

- It exploits the **inherent vulnerabilities** in the **GPS infrastructure** – the **weak signal strength** of GPS satellites.
- These **fake signals are stronger**, causing the receiver to **recognize them as authentic signals**.
- As a result, the **victim's GPS receiver ends up processing these counterfeit signals**, leading to **erroneous location information**.

Current news?

- **Instances of GPS spoofing** on passenger aircraft, including with **false signals** are on the **rise over conflict zones** globally, including on **India's borders with Pakistan**.



Day 55

India's Drone capabilities

Drone based attack capacity

1. **ALFA-S loitering munitions**
 - India's own **'Kamikaze'** category drone.
 - Developed by **DRDO**.
 - **Small in size** and packed with explosives and launched directly at the target **unmanned and explodes (suicide drones)**.

India's key 'Anti-Drone Defence Systems'

1. **Akashteer Air Defence Control System**
 - Developed by **Bharat Electronics Ltd**
 - Allows for the detection, tracking, and engagement of aerial threats.
2. **Bhargavastra**
 - Developed by: Solar Defence and Aerospace Ltd
 - Feature: Fires **64 micro-rockets in salvo**.
 - Purpose: Designed to eliminate drone swarms.
3. **DRDO's Anti-Drone System**
 - 360-degree radar coverage
 - **Soft kill:** Network Jamming/**Hard kill:** Laser neutralisation
4. **Indrajaal**
 - Developed by: Hyderabad-based startup
 - Uses AI-powered grid combining jammers, GPS spoofer.



Akashteer

- **Integrates** with ISRO's Earth observation satellites, **NAVIC for precision targeting**.
- Akashteer is **primarily for Indian Army** but it seamlessly **integrates** with the Indian **Air Force's IACCS** and the Indian **Navy's TRIGUN system**.

73. Which of the following statements with regard to GenomeIndia Project is/are correct ?

- It is a part of the Human Genome Project.
- The project is funded by the Department of Biotechnology (DBT), Government of India.
- Its primary aim is to build a catalogue of genetic diversity of the Indian population.

Select the answer using the code given below :

- 1 only
- 2 and 3 only
- 1 and 2 only
- 1, 2 and 3

Answer-b

29th Feb 2024

1. India's Genetic map

Genome India Project

- Launched in 2020 by Department of Biotechnology (DBT).
- Involves 20+ institutions to collect samples and create a reference grid.

Aim

- To sequence 10,000 Indian genomes for a reference genome by end of 2023 Phase I.

Benefits

- Healthcare**
 - To study Genetic make up Indian people + develop medical research to curb diseases like cancer, diabetes etc.
- Prenatal Genetic Screening**- screening for diseases prior to the birth.
- Evolution** Puzza-questions regarding evolution by comparing human DNA with primate DNA.
- To evaluate rare disorder

Road to Future
22 Pathways opportunities to be explored by Dept. of Biotechnology that interest the targeted.

10,000 Number of Indian genome sequence data will be generated by Phase I.

Genome India Project

- Genome India Project started after taking inspiration from the Human Genome Project.
- Started in 1990.
- It was an International research effort to determine the sequence of the human genome.
- The HGP has revealed that there are probably about 20,500 human genes.
- It was a collaborative effort led by the National Institutes of Health and the Department of Energy in the USA.

Current news?

- THE GOVERNMENT'S ambitious Genome India initiative achieved a significant milestone as researchers completed sequencing 10,000 healthy genomes from different regions of the country, representing 99 distinct populations.

Genome data storage and usage

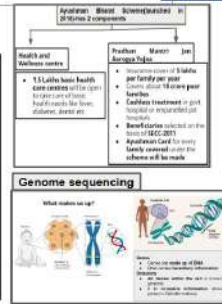
- With each sequence requiring 80 Gb storage space, the huge dataset of 8 petabytes will be stored at the Indian Biological Data Centre in Faridabad.
- This dataset will be made available to researchers as "digital public good."
- The data can be utilised to develop new diagnostics, targeted therapies, identify new rare diseases, and cure existing ones.

29th Aug 2025

1. India's Health sector

Initiatives for the Health Care Sector

- 3. Ayushman Bharat scheme** It has 2 components-
 - Health and Wellness centre
 - Pradhan Mantri Jan Arogya Yojana
- 4. National Medical Commission**
- 5. Scheme for care of Infants pregnant and lactating mothers**
- Pradhan Mantri Matru Vandana Yojana**- Rs 5,000 conditional cash transfer to pregnant women working in informal sector.
 - Janani Shishu Suraksha Karyakram (JSK).
 - Rashtriya Bal Swasthya Karyakram (RBSK).
- 6. R&D-Eg Genome India project**
 - To sequence 10,000 Indian genomes for better understanding of diseases like cancer, diabetes etc



74. Which of the following statements with regard to the National Quantum Mission (NQM) is/are correct ?

1. It aims at developing intermediate-scale quantum computers with 50 – 1000 physical qubits.
2. Its implementation includes setting up of four Thematic Hubs (T-Hubs) in academic and national R&D institutes across India.

Select the answer using the code given below

- (a) 1 only
 (b) 2 only
 (c) Both 1 and 2
 (d) Neither 1 nor 2

Answer-c

17th March 2026

2. Quantum labs under National Quantum Mission

National Quantum Mission

- **NQM** is a **flagship initiative** launched by the **Government of India** for period of **2023-2031** with an **aim** to make **India a global leader in quantum technologies**.
- To seed, nurture and **scale up scientific and industrial R&D in Quantum Technology (QT)**.
- One of the **mission's** key objectives is to **develop intermediate-scale quantum computers with 50–1000 physical qubits within the next 8 years**.
- Budget approval: **Rs.6003.65 crore**
- Implemented by the **Department of Science and Technology**

Institutions supported under NQM

Four Thematic Hubs Institutions supported under NQM



Sl. No.	Name of the T-Hub	Technology Domain
1	Foundation for QC Innovators at IISc Bengaluru	Quantum Computing
2	ITM-CQIT Bengaluru Technological Foundation at IIT Madras	Quantum Communication
3	Open Tech Foundation at IIT Bombay	Quantum Sensing & Metrology
4	QSD Foundation at IIT Delhi	Quantum Materials & Devices

Thematic Hubs (T-Hubs):

- **Four Thematic Hubs (T-Hubs)** have been established under **NQM** to strengthen India's position as a global leader in **quantum technology**. These hubs focus on **key areas**:
 - a. Quantum Computing
 - b. Quantum Communication
 - c. Quantum Sensing & Metrology
 - d. Quantum Materials & Devices.

Current news?

- **23 academic institutions** in India have been approved to set up **quantum technology laboratories** under the **National Quantum Mission (NQM)**.

75. Which of the following statements with regard to India's Deep Ocean Mission is/are correct ?

1. It was launched by the Ministry of Ports, Shipping and Waterways, Government of India.
2. Matsya-6000 has been designed to carry 3 people for deep sea exploration.
3. Samudrayaan is a project under this mission.

Select the answer using the code given below :

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

Answer-b

15th Aug 2025

2. Samudrayaan Mission

Samudrayaan Project

- The Samudrayaan Project is **India's first manned deep-sea mission**.
- To be launched by the **Ministry of Earth Sciences (MoES)**.
- It aims to **explore deep-sea resources** and **conduct oceanic research** at depths of up to **6,000 meters** in the Indian Ocean.

Matsya 6000: The Deep-Sea Submersible

- Matsya 6000 is a **three-person deep-sea submersible** designed for this mission.
- Developed by: **National Institute of Ocean Technology (NIOT)**, Chennai.
- Made of **Titanium alloy** and has **robotic arms**.

Current news?

- According to **Ministry of Science and Technology Samudrayaan Project** will be launched by **2027**.

MATSYA 6000

India's 1st Manned Deep Ocean Mission

Sending **3 humans** to **6-km ocean depth** in a **self-propelled submersible**

Exploring **deep sea resources & biodiversity assessment**

Endurance of **12 hours** under normal operation and **96 hours** in case of **emergency**



41. Which of the following statements with regard to the persons with disabilities in India is/are correct?

- The Rights of Persons with Disabilities Act, an Act passed by the Parliament of India in 2018, mandates reservation in education and employment, places a legal duty on Governments to ensure accessibility and non-discrimination.
- The Sugamya Bharat Abhiyan focuses on achieving universal accessibility for Persons with Disabilities across three key domains — built infrastructure, transport systems and information and communication technology.
- The National Divyangjan Finance and Development Corporation (NDFDC) is a public sector organisation set up by the Ministry of Corporate Affairs as a not-for-profit company to promote entrepreneurship among Persons with Disabilities (PwDs).

Select the answer using the code given below :

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

Answer-b

190. International Day of Persons with Disabilities(**)

- 3rd Dec, international annual day for persons with disability
- India has highest number of people with disabilities (2.68% of India's population).

Rights of Persons with Disabilities Act 2016

Provisions-

- The 2016 Act recognises **21 kinds of disabilities** compared to the previous **seven**. Every **child with disability** -age group of **6 and 18 years** shall have the **right to free education**.

Reservation

- higher educational institutions **5%**
- government jobs **3% to 4%**.

Current development

- persons with **3 types of blood disorders** are **not eligible** for reservation in government jobs.
 - Thalassemia**-abnormal hemoglobin production and anemia
 - Haemophilia**-bleeding disorder that **hinders the blood's clotting** ability.
 - Sickle cell disease**-misshapen red blood cells, anaemia

Sugamya Bharat Abhiyan

- The Sugamya Bharat Abhiyan, also known as the **Accessible India Campaign (AIC)**, is a flagship initiative launched by the Government of India in **2015** to make the **country more accessible and inclusive** for persons with disabilities.
- The campaign aligns with the goals of the **UN Convention on the Rights of Persons with Disabilities (UNCRPD)** and the **Rights of Persons with Disabilities Act 2016**.

Steps taken for integration of People with disability with society

International Level

- 1983-1992 was marked as the **United Nations Decade of Disabled Persons**
- UN Convention** on the **Rights of Persons with Disabilities (UNCRPD)** adopted in 2006
- India's Ratification**: October 1, **2007**
- Incheon Strategy 2012**
- To **"Make the Right Real"** for Persons with Disabilities in Asia and the Pacific
- India is signatory** to Incheon strategy

National level Initiatives

- Rights of Persons with Disabilities Act 2016 (RPWD Act)**
- Sugamya Bharat Abhiyan**



Incheon a place in **South Korea**

Consider the following statements about the provisions pertaining to the Scheduled Castes and the Scheduled Tribes in India :

1. Provisions regarding the administration of the Tribal Areas in the States of Assam, Meghalaya, Tripura and Mizoram are given in the Fifth Schedule of the Constitution of India.
2. Some tribes of India are entitled to exemption from paying Income Tax on certain incomes.
3. The Constitution of India provides for reservation of seats in Panchayats for women belonging to the Scheduled Castes and the Scheduled Tribes.

Which one of the following conclusions based on the above statements is correct ?

- (a) There are two correct statements, that include statement 2.
- (b) There are two correct statements, that are statements 1 and 3.
- (c) There is only one correct statement.
- (d) All three statements are correct.

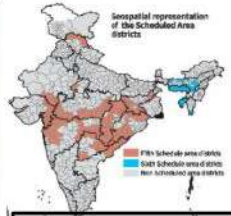
Answer-a

22. Special status for Ladakh and Asymmetric Federalism(*)

- **Symmetric federal system** - all States enjoy the same set of powers and autonomy eg **U.S. or Australia**.
- **Asymmetrical federalism**- some States and areas have **more autonomy** than others eg **Indian Constitution**.

Examples of Asymmetric federalism in Indian polity

1. **Part XXI of the Constitution- special provisions** applicable to many of the northeastern States -Articles 371A (Nagaland), **371B (Assam)**, 371C (Manipur), 371F (Sikkim), 371G (Mizoram) and 371H (Arunachal Pradesh).
2. **The Fifth Schedule**
 - **'Scheduled areas'** that are **declared by the President**.
 - **Criteria**-Preponderance of **tribal populations** and **Economic backwardness**.
 - At present **10 States** have such **'scheduled areas'** they have **Tribes Advisory Councils (TAC)-20 members-three-fourths** shall be **tribal MLAs** from the State.
 - **TAC provides advice-Governor**- welfare and **advancement of the Scheduled Tribes (ST)**.
3. **The Sixth Schedule (Current news?- Ladakh demanding Schedule 6 status)**
 - **Autonomous District councils** have up to **30 members-frame laws** on basic matters-**Land, Health, Village, Inheritance, marriage, divorce etc**
 - **Bodoland territorial council-46**(40 elected + 6 nominated) members.
 - a. **Meghalaya**-Garo, Khasi, Jaintia
 - b. **Mizoram**-Chakma, Lai Mara
 - c. **Assam**-Dima Hasao, Karbi Anglong, Bodoland
 - d. **Tripura**-Tripura Tribal Areas Autonomous District Council



The **Governor** may direct that a particular **Act of Parliament** or **State legislature** shall **not apply** or **apply with modifications** to such 'scheduled areas.'



83. Consider the following statements in respect of questions asked by the Members in the Parliament of India :

1. Unstarred questions are those to which a Member desires an oral answer in the House.
2. Starred questions are those to which a Member desires a written answer.
3. No supplementary question can be asked on an unstarred question.

Which one of the following conclusions based on the above statements is correct ?

- (a) All the three statements are correct.
- (b) There are two correct statements, that include statement 2.
- (c) There is only one correct statement.
- (d) There is no correct statement.

Answer-c

50. Parliament procedures(*)

Question Hour

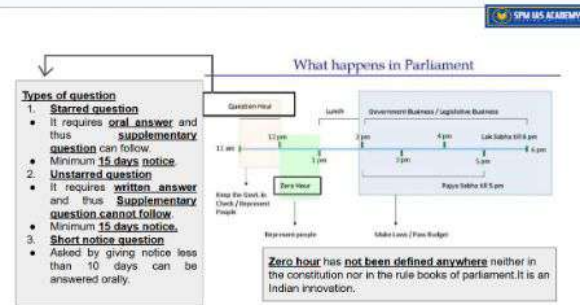
- Question Hour in both Houses is held **on all days of the session**.

But there are two days when an exception is made.

1. The **day the President addresses MPs** from both Houses in the Central Hall.
 2. The day the **Finance Minister presents the Budget**.
- Though generally **questions are asked to the ministers** but the rules of the Parliament allows them to ask **questions to the other colleagues MPs is also**.
 - **Only once** in the history of parliament question hour was **suspended**- during the **winter season of 1962 to because of Sino India war**.

Zero hour

- Zero Hour is an **Indian parliamentary innovation**.
- The concept of Zero Hour **started organically in the first decade of Indian Parliament**, when MPs felt the need for raising important constituency and national issues.



85 Consider the following statements about Mission Sudarshan Chakra of India :

1. It aims to enhance India's air defence, ballistic missile defence and aerial offensive capabilities.
2. This Mission is being designed to enhance rapid, precise, and powerful defence responses, reinforcing India's strategic autonomy.
3. One of the aims of this Mission is to cover all public places of India by an expanded nationwide security shield by 2035.

Which of the statements given above is/are correct ?

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

Answer-b

658. Integrated Air Defence Weapon System()**

- To **eliminate aerial threats.**

Components of India's Air Defence

1. **Ballistic Missile Defence (BMD) System**- To intercept **ballistic missiles.**

Two Layers:

- a. **Prithvi Air Defence (PAD)**
 - Exo-atmospheric interceptor (**outside Earth's atmosphere**).
- b. **Advanced Air Defence (AAD)**
 - Endo-atmospheric interceptor (**inside Earth's atmosphere**).

2. **Versatile defence system**

- To deal with **Cruise missiles, Fighter jets, Drones etc.**

a. **S-400 Triumf Missile**

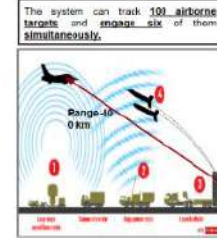
- Part of India's **Air defence system.**
- **Surface-to-air missile** system (SAM).
- **Range of 400 km**, Altitude of up to **30 km/Speed-14 mach**
- **5 units to** Imported from **Russia(Recent- India agreed to procure 5 more)**
- **3 squadrons delivered** and deployed at **Pakistan front.**
- The system **can engage all types of aerial targets** including aircraft, unmanned aerial vehicles (UAV) and **ballistic and cruise missiles.**
- Because effectiveness of **S-400 Triumf Missile**, it is also known as '**Sudarshan Chakra**'.

b. **Trishul and Akash(equipped with Rajendra Radar)**

c. **Maitri**- Joint production of **India & France/Range: 25-30Km**

d. **BARAK 8**-Joint production of **India & Israel/Range: 100Km**

e. **Akash Teer Systems with Indian Army**- Anti drone/ can destroy missiles too



Project Kushi-

- DRDC to develop S-400 type missile by 2030.

Mission Sudarshan Chakra

- The mission seeks to develop multilayered Air Defence system by 2035.



Q2. Consider the following statements with respect to the AI Impact Summit, 2026 held in New Delhi :

- The Summit's intellectual framework was based on three foundational Sutras : People, Planning, and Progress.
- The Preamble of the Summit stresses Democratizing AI Resources, which acknowledges the Charter for Democratic Diffusion of AI as a binding framework to support locally relevant innovation and strengthen resilient AI ecosystems while respecting national laws.
- The New Delhi Declaration on AI Impact was structured around seven Chakras (Pillars), which included Access for Social Empowerment, AI for Science, and Secure and Trusted AI.

Which of the statements given above is/are correct ?

- 1, 2 and 3
- 1 and 2 only
- 2 and 3 only
- 3 only

Answer-d

358. India AI Impact Summit 2026^(**)**

Other international summits on AI in the past

- Bletchley Park AI Safety Summit in 2023**
 - Held at Bletchley Park, United Kingdom in November 2023.
 - First international summit focused specifically on AI safety risks.
- The Seoul Summit on AI in 2024**
 - While the 2023 Bletchley Summit focused mainly on AI safety risks, the Seoul Summit broadened discussions to include practical implementation of AI safety measures.
- AI Action Summit in Paris in 2025**
 - The summit moved discussions from safety commitments (Bletchley 2023, Seoul 2024) to practical deployment and real-world application of AI.
 - Also it focussed on developing global AI governance frameworks.

India AI Impact Summit 2026

- India's Priorities** at the AI Impact Summit was highlighted by MANAV vision unveiled by PM Modi.



<p>CURRENT CONTEXT</p> <ul style="list-style-type: none"> Ninety-one countries endorsed New Delhi AI Declaration. Represents growing multilateral consensus on AI governance. Highlights India's leadership in global AI diplomacy. Non-binding framework shaping responsible AI deployment. 	<p>BACKGROUND</p> <ul style="list-style-type: none"> Multi-nation consensus document on AI governance. Guided by Sarvajan Hitaya, Sarvajan Sukhaya principle. Aims to bridge widening global AI divide. Promotes democratization of foundational AI resources.
<p>PRELIMS RELATED FACTS</p> <ul style="list-style-type: none"> Structured around innovative Seven Chakras Framework. Emphasises affordable digital infrastructure and connectivity expansion. Encourages voluntary benchmarks for secure trusted AI. Supports Global AI Impact Commons scaling mechanism. 	<p>PRELIMS NUGGETS</p> <ul style="list-style-type: none"> Promotes open, accessible, scalable AI ecosystems. Encourages global scientific research collaboration mechanisms. Focuses on AI literacy and workforce reskilling. Stresses energy-efficient and resilient AI infrastructure.

91

Which of the following connectivity projects is/are a part of cooperation between India and the ASEAN member countries ?

1. Kaladan Multi-Modal Transit Transport Project
2. IMT Trilateral Highway
3. Agartala-Akhaura Rail Line

Select the answer using the code given below :

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

Answer-a

238. Connectivity projects in South Asia and Southeast Asia(*)

1. **IMT trilateral highway**
 - It connects **Moreh in Manipur**, India, to **Mae Sot in Thailand**, via **Tamu and Mandalay in Myanmar**
 - 1360 km.
2. **Kaladan Multimodal Project**
 - Multimodal Transit project
 - Connect Mizoram with the Kolkata port via Myanmar
 - The project has **three different stretches**
 - a. **Shipping:** Kolkata port to Sittwe port (across Bay of Bengal)
 - b. **Inland water transport:** Sittwe port to Paletwa (through River Kaladan)
 - c. **Road stretches:** From Paletwa (Myanmar) to Lawngtlai (Mizoram, India)
 - The Kaladan Multimodal Transit Transport Project connects to **NH-502A in Mizoram** at Zorinpui, located near the India-Myanmar border.
3. **Agartala-Akhaura rail link**
 - **A rail link** connecting **Northeast India** with **Bangladesh**.
 - **Inaugurated in 2023**
 - will **cut down the travel time** between **Agartala and Kolkata**, from **31 hours to 10 hours**.
 - It will be the **first rail link** between India's **Northeastern States and Bangladesh**.
 - The rail link is also part of **India's Act East Policy**.
4. **Cross border rail connectivity with Bhutan**



The 12.24-km Agartala-Akhaura railway line, 5.46 kilometres lie on the Indian side in Tripura, and 6.78 km in the Akhaura, Bangladesh

Q83. Which of the following items of defence hardware is/are manufactured in India ?

1. Su-30 MKI Fighter Jets
2. T-90 MK-III Tanks
3. Akula Class Submarine

Select the answer using the code given below :

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

Answer-a

662. Indian Air Force (**)

Fighter Jets of India

1. **Sukhoi-MKI:** Developed by **Russia**; Build under license by HAL, Maximum Speed: Mach 2
2. **Mirage-2000:** From **France 4th generation**; Single engine aircraft; Speed: Mach 2.2 Used in Balakot Strike
3. **Mig 29:** 4th Generation; Designed by **Russian** company Mikoyan, Multi role fighter
4. **Rafael:**
 - France, **4.5th generation**; Twin-engine, multirole combat aircraft
 - Capable of carrying all combat missions such as air defence, close air support, in depth strikes etc.
 - Will carry **Meteor BVRAAM**-next generation Beyond Visual Range Air-to-Air Missile (BVRAAM) system

All above **4 are capable of carrying nuclear weapons**

5. **Tejas**
 - Indigenous **Single Seat, single engine**, multirole light aircraft.
 - Developed by Aeronautical Development Agency manufactured by **Hindustan Aeronautics Limited (HAL)**
 - Astra missile will be integrated as a standard long range weapon for Tejas.
 - **not officially designated** as a platform for carrying **nuclear weapons**.

Fighter Jets

Sukhoi-MKI	Developed by Russia, built under license by HAL, Maximum Speed: Mach 2
Mirage-2000	4th generation, single engine aircraft; Used in Balakot Strike
Mig 29	Developed by Russia, 4th Generation, Multi-role fighter
Rafael	French Dassault, 4.5th generation, Twin-engine, multirole combat aircraft; Will carry Meteor BVRAAM
Tejas	Single Seat, single engine, multirole light aircraft; Developed by Aeronautical Development Agency

Transport Planes

- C-17 Globemaster III, C-130J Super Hercules, Dornier Do-228

Indian Drones

- Lakshya, Nishant, Panchi,
- Rustom 1
- Tapas
- Ghatak
- Predator B
- Heron (procured from Israel)

97. Match List I with List II and select the answer using the code given below the Lists :

List I (BIMSTEC Centre / Establishment)	List II (Location)
A. BIMSTEC Cultural Industries Observatory	1. NOIDA
B. BIMSTEC Energy Centre	2. Bengaluru
C. BIMSTEC Centre for Weather and Climate	3. Colombo
D. BIMSTEC Technology Transfer Facility	4. Thimphu

Code :

	A	B	C	D
(a)	3	2	1	4
(b)	3	1	2	4
(c)	4	2	1	3
(d)	4	1	2	3

Answer-c

233. Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) ()**

- The It was founded as in June 1997, with Bangkok Declaration.
- Members- 7 littoral states of the Bay of Bengal**
- **Streamlines cooperation into 7 sectors, each led by one member state:**
 1. Bangladesh: Trade, investment, and development
 2. Bhutan: Environment and climate change
 3. **India: Security (including energy)**
 4. Myanmar: Agriculture and food security
 5. Nepal: People-to-people contacts
 6. Sri Lanka: Science, technology, and innovation
 7. Thailand: Connectivity

Current news?

- **6th BIMSTEC**- theme "**BIMSTEC: Prosperous, Resilient and Open**" held in **Thailand, Bangkok**.

Major India -Led Initiatives launched at 6th BIMSTEC Summit

1. **BIMSTEC Centres of Excellence**-Disaster Management, Sustainable Maritime Transport, Traditional Medicine, and Research and Training in Agriculture.
2. **BODHI** (BIMSTEC for Organized Development of Human Resource Infrastructure) For skilling the youth.
3. **Digital Public Infrastructure**
4. India to host first **BIMSTEC Games in 2027**. India would also host **BIMSTEC Traditional Music Festival.**
5. **BIMSTEC Energy Centre in Bengaluru** and **BIMSTEC Centre for Climate in Noida.**



Bangladesh, the **current chair** (will hold chairmanship for 2 years) of the BIMSTEC, will **host** the **7th BIMSTEC Summit** in Dhaka.

BIMSTEC (Headquarter)- G ulshan-02 area **Dhaka**, Bangladesh

100. Which of the following countries are members of the European Union ?

1. Belarus
2. Poland
3. Germany
4. Switzerland

Select the answer using the code given below :

- (a) 1, 2 and 4
- (b) 1 and 4 only
- (c) 2 and 3
- (d) 2 and 4 only

394. EU suspends GSP benefits to India (*)

Generalised System of Preferences(GSP)

- A **trade arrangement** which allows **developing countries and LDCs** to **export certain goods** to **developed countries** at **reduced or zero customs duty**.
- The idea is to **promote** exports, **industrialisation**, and economic growth in **developing countries**.
- It is **non-reciprocal** i.e. Developing countries do not need to give similar concessions in return.
- GSP is **allowed** under the "**Enabling Clause**" of the World Trade Organization.

GSP schemes are **offered by developed countries**, such as:

1. United States
 2. European Union
 3. Japan, Canada, Australia, etc.
- Each country has its own list of eligible products and countries.

Who receives GSP benefits?

- **Developing countries** (like India, Vietnam, Bangladesh, etc.)
- **Least Developed Countries (LDCs)** usually get maximum benefits.

Current news?

- **European Union** has **suspended GSP** (Generalised System of Preferences) benefits for **India, Indonesia and Kenya**.

ECONOMIC AND MONETARY UNION (EMU)— THE EURO ZONE

European Union countries that:

Have adopted the euro Have not adopted the euro



Eurozone

- A **monetary union** (also called a currency union) comprising those members of the European Union that have **fully adopted the euro** as their **official currency**.

Current news?

- **Bulgaria** became the **21st member** of the Eurozone bringing it closer to full European integration from **1 January 2026**.
- that will take number to **21(out of 27 EU countries)**.