Horsesoe Crab

❖ **Context**
➢ Horseshoe crabs, **medicinally priceless** and one of oldest living creatures on the earth, appear to be disappearing from their familiar spawning grounds along Chandipur and Balaramgadi coast in Odisha's Balasore district.

❖ **Key Highlights:**
• Scientists have urged Odisha government to immediately come up with a robust protection mechanism before the living fossil becomes extinct due to destructive fishing practices.
• India has two species of Horseshoe crabs and major concentration of the animal is found in Odisha.
• This is the oldest living creature on earth. Palaeontological studies say the age of Horseshoe crabs is **450 million years.**
• The creature has lived on earthy without undergoing any morphological change. Scientists are surprised to find strong immune system in animal that helped it survive millions of years.
• The animal is critical for human health.
• If we don't put any efforts now, Horseshoe crabs would not be found in India in next few years.

❖ **Medicinal Values:**
• The blood of Horseshoe crab is very important for preparation of **rapid diagnostic reagent.**
• All injectable and medicines are tested with the help of Horseshoe crabs.

• A molecule has been developed from reagent of Horseshoe crab that would help treat **pre-eclampsia and lives of many babies** could be saved in womb itself.
• The scientist said only few countries in the world have Horseshoe crab population and Indian in one among them.

❖ **Rapid Diagnostic Reagent:**
• A rapid diagnostic reagent is a substance or mixture of substances used to detect the presence or absence of **a specific target molecule,** such as a protein or nucleic acid, in a biological sample.
• These reagents are often used in **point-of-care diagnostic tests,** which provide rapid results outside of a traditional laboratory setting.
• Rapid diagnostic reagents can be based on a **variety of detection methods,** including immunological assays, nucleic acid amplification tests, & enzymatic reactions.
• They are typically designed to provide results within minutes to hours, making them useful for diagnosing infectious diseases, detecting drug use, & monitoring various medical conditions.

Shanghai Cooperation Organisation (SCO)

❖ **Context**
➢ India mooted an action plan to mark 2023 as the year of tourism development in the Shanghai Cooperation Organisation (SCO) region at the tourism ministers' conference in Varanasi.

❖ **Shanghai Cooperation Organisation (SCO)**
• It is a Eurasian **political, economic & military organization.**
• It was preceded by the **Shanghai Five mechanism (1996)** formed by the leaders of China, Russia, Kazakhstan, Kyrgyzstan, and Tajikistan.
• it was rechristened as the SCO in 2001.
• The SCO **entered into force on 19 September 2003.**
• SCO **covers 40 percent of the global population.**
• The SCO's **official languages are Russian and Chinese.**
• **Aims :**
  ▪ Security-related concerns.
  ▪ Resolving border issues.
  ▪ Military cooperation.
  ▪ Intelligence sharing.
  ▪ Countering terrorism.
  ▪ Countering American influence in Central Asia.

Member states of the Shanghai Cooperation Organisation

• **Members :**
  ▪ China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan, and Uzbekistan.
  ▪ Both India and Pakistan became full members of the SCO in 2017.
  ▪ **Four Observer States** : Afghanistan, Belarus, Iran, and Mongolia.
  ▪ **Dialogue Partners** : Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka and Turkey.
• **The Regional Anti-Terrorist Structure (RATS) :**
  ▪ In 2004, at the SCO Summit held in Tashkent, **Uzbekistan**, the Regional Anti-Terrorist Structure (RATS) was established.
  ▪ Through RATS, SCO members share crucial intelligence, know-how, legal expertise as well as allow for extradition of terrorists.

Electronic Negotiable Warehouse Receipt (e-NWR)

❖ **Context**
➢ Recently, **Punjab National Bank (PNB) and Warehousing Development & Regulatory Authority (WDRA**) signed an agreement to promote financing against **e-NWR (Electronic Negotiable Warehousing Receipt).**

❖ **Key Highlights:**
- The partnership will give farmers information about e-NWR.
- The **Reserve Bank of India (RBI)** two years ago increased the limit for loans against NWRs/eNWRs from Rs 50 lakh to Rs 75 lakh per borrower.
- The central bank aimed to encourage credit to farmers against receipts issued by warehouses registered and regulated by state-owned WDRA.
- **About e-NWR :**
  - NWR system was **launched in 2011.**
  - It allows the **transfer of ownership of a commodity** stored in a warehouse without having to deliver it physically.
  - These receipts are **issued in negotiable form,** making them **eligible as collateral.**
  - This has been enabled by enabling the **financing of warehouse receipts** through the **Warehouse (Development and Regulation) Act, 2007.**
  - The WDRA regulates the entire operation under NWR.
  - WDRA was constituted in 2010 under the Warehousing (Development and Regulation) Act, 2007.
- **Salient Features :**
  - An e-NWR is available only in electronic form.
  - The single source of information for the e-NWR is the **repository system** where e-NWR is issued by registered warehouses.
  - **Confidentiality, integrity and availability** of the e-NWR information is provided by the Repository system.
  - An e-NWR has **time validity.**
  - All e-NWRS can be **traded through off-market** or **on-market** in Commodity Exchanges platforms.
  - An e-NWR can be **auctioned under certain conditions** such as loan not repaid, on expiry and delivery not taken, and on likely damage or spoilage of the commodity in the warehouse.
  - e-NWR can be transferred fully or in part.

- **Benefits :**
  - Avoidance of forgery/loss/tamper/mutilation of a physical NWR.
  - Avoidance of **multiple financing** against the same NWR.
  - **Reduction of monitoring costs** and building credibility amongst market participants.
  - **Market participants** to have secured accessibility to view and manage their warehouse receipts via online portal.
  - **Easy access to finance** by enabling multiple transfers without physical movement of goods.
  - **Splitting of NWRs** for partial sale/pledge/withdrawal.

- **Significance :**
  - It will **help farmers/FPOs** to have **access to a large number of buyers** across the country.
  - It will help them get **better bargaining powers** and realise **higher prices** by selling graded produce.
  - It will provide them with the **facility to get their prices quoted** and **receive immediate payment**, besides avoiding distress sales by helping them get loans from banks against warehouse receipts.

News in Between the Lines

Generative AI

❖ **Context**
  ➢ Generative artificial intelligence has become a buzzword this year.
❖ **Key Highlights:**
- **About :**
  - Generative AI refers to a class of artificial intelligence techniques and models that can **generate new and original data, such as images, text, music, or even entire virtual environments, without human intervention.**
  - These AI systems can learn patterns and rules from existing data and use them to create new content that resembles the original dataset but is not an exact copy.
  - Generative AI models can be trained on a variety of tasks, such as image synthesis, language translation, text generation, and even game or movie script writing.
  - They are often **based on neural networks** and deep learning algorithms, which allow them to learn complex patterns and generate high-quality outputs.
- **Significance :** Generative AI has numerous practical applications, such as in the creation of personalized content designing new products or services & improving existing ones.

Face to Face Centres

DELHI MUKHERJEE NAGAR: 9205274741, 42 | **LAXMI NAGAR :** 9205212500, 9205962002 | **RAJENDRA NAGAR:** 9205274743 | **UTTAR PRADESH** PRAYAGRAJ: 0532-2260189, 8853467068 | **LUCKNOW** (ALIGANJ): 0522-4025825, 9506256789 | **LUCKNOW** (GOMTI NAGAR): 7234000501, 7234000502 | **GREATER NOIDA:** 9205336037, 38 | **KANPUR:** 7887003962, 7897003962 | **GORAKHPUR :** 7080847474, 9161947474 | **ODISHA** BHUBANESWAR: 9818244644/7656949029

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02

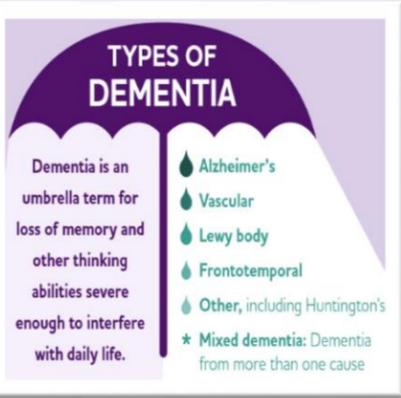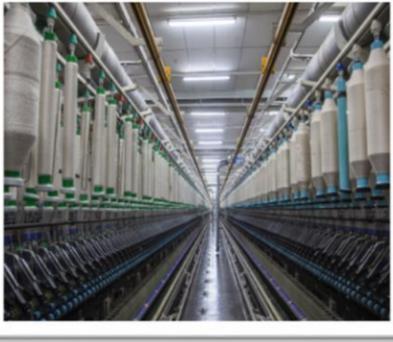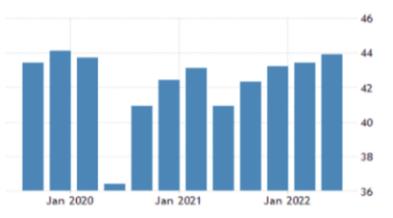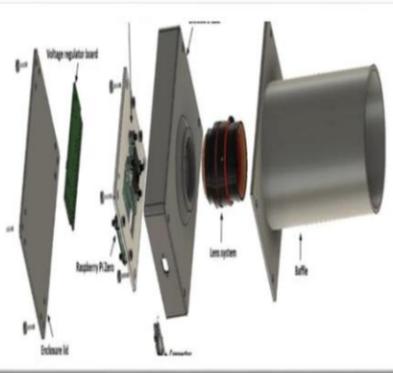|	
	• **Concerns :** It raises **ethical and social concerns**, such as the potential misuse of AI-generated content for malicious purposes, the impact on jobs and creativity, and the potential bias in the data used to train these models. • **Side Note :** The most famous generative AI application is **ChatGPT**, a chatbot that Microsoft-backed OpenAI released late last year. ▪ The AI powering it is known as a large language model because it takes in a text prompt and from that writes a human-like response.

Racoon Dogs	❖ **Context**
	  ➤ A new analysis of genetic data collected from the Huanan Seafood Market in Wuhan, China, has **linked coronavirus to raccoon dogs.**
	  ➤ It added evidence to the belief that the pandemic might have originated from the infected animals sold at the site.
	❖ **Raccoon Dogs:**
	  • Raccoon dogs are neither dogs nor raccoons.
	  • They **belong to the canid family** and are closely related to foxes.
	  • They are the **only canids** that hibernate during the winter.
	  • As per Slate, there are two species of raccoon dogs:
	    ▪ **Nyctereutes procyonoides**- The common raccoon dog (the species that was in the Wuhan market)
	    ▪ **Nyctereutes p. viverrinus**- The Japanese raccoon dog.
	  • These animals, weighing around 16 pounds on average, are **omnivores** and relish food sources such as rodents and berries.
	  • "Although they appear svelte in the summer, they pack on the pounds for winter, when their fur also becomes thicker. They are **monogamous, often living in pairs.**
	  • Raccoon dogs are originally from East Asia and are commonly found in parts of China, Korea and Japan, where they are known as tanuki.

Dementia	❖ **Context**
	  ➤ Recent research from Sweden suggests that all players – except for goalkeepers – had an increased risk of Alzheimer's disease and other types of dementia.
	❖ **About SCO:**
	  • Dementia is a general term for **loss of memory, language, problem-solving and other thinking abilities** that are severe enough to interfere with daily life.
	  • Alzheimer's is the most common cause of dementia.
	  • It is **progressive and irreversible.**
	  • It usually begins with mild memory loss, and as symptoms grow severe, patients lose the ability to perform even simple tasks. Pathology of the disease is deposition of an abnormal protein called beta-amyloid in the brain.
	❖ **Indian Scenario:**
	  • In India, **only 1 in 10 people with dementia receive any diagnosis, treatment or care** for the disease.
	  • **Lack of awareness** is a major problem in battling the disease. Most of the Indian population accepts it as normal aging, which is incorrect.
	  • An increasing **prevalence of diabetes, hypertension, and obesity** is expected to **drive up the incidence of dementia** in India in the coming decades.
	  • India could see a 197% jump in dementia, including Alzheimer's, from 3.84 million cases in 2019 to 11.44 million cases by 2050.
	
	TYPES OF DEMENTIA
	Dementia is an umbrella term for loss of memory and other thinking abilities severe enough to interfere with daily life.
	  🔹 Alzheimer's
	  🔹 Vascular
	  🔹 Lewy body
	  🔹 Frontotemporal
	  🔹 Other, including Huntington's
	  ✳ Mixed dementia: Dementia from more than one cause

Ganeshaiah's Dwarf Gecko	❖ **Context**
	  ➤ Cnemaspis ganeshaiahi, a new species of gecko, has been discovered in Male Mahadeshwara Hills in Karnataka, India.
	❖ **Key Highlights:**
	  • This gecko is unique because it has a distinct morphological and color pattern that is not present **in other closely related species.** `
	  • This gecko species is endemic to this area and has been named after KN Ganeshaiah.
	  • Cnemaspis ganeshaiahi is a diurnal gecko species that resides in dry deciduous and scrub forests.

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03

	• These geckos are typically found in crevices of walls or boulders. • This species has a unique combination of morphological and color patterns, which is not present in other closely related species.
Textile Parks	❖ **Context** ➤ The Central Government has announced plans to set up mega textile parks in Tamil Nadu, Telangana, Gujarat, Karnataka, Madhya Pradesh, Uttar Pradesh, & Maharashtra. ❖ **Key Highlights:** • The step is inspired by the 5F vision of the Prime Minister, which includes**, Farm to Fibre to Factory to Fashion to Foreign.** • The seven selected sites were chosen out of 18 proposals for PM MITRA parks received from 13 states. • The eligibility of the states and sites was evaluated **using a transparent challenge.** • It was based on objective criteria, taking into account a variety of factors such as **connectivity, the existing ecosystem, textiles, industry policy, infrastructure, utility services, etc.** • The parks will receive financial assistance from the Ministry of Textiles in the form of development capital support up to Rs. 500 crore (per park). ❖ **Significance:** • The parks will provide top-notch infrastructure, plug-and-play features, and industry training and study facilities. • Through these parks, an expenditure of almost **70,000 crores** of rupees and the creation of 20 lakh jobs are anticipated. • It is expected that these parks will enhance the competitiveness of the **textile industry by helping it achieve economies** of scale & attract global players to manufacture in India.
Worker-Population-Ratio Rises	❖ **Context** ➤ The unemployment rate in the country is witnessing a declining trend. ❖ **Key Highlights:** • India's worker-population-ratio rises to 52.9% in 2021-22 • The unemployment rate was 4.8 per cent in 2019-20, which was subsequently, reduced to 4.1 per cent in 2021-22. • The worker-population ratio is witnessing an increasing trend as per the latest Periodic Labour Force Survey. • The worker population ratio has increased from 50.9 per cent in 2019-20 to 52.9 per cent in 2021-22, reflecting higher engagement of people in productive activities.
Low-Cost Star Sensor [MCQ Quiz](#) [Daily Current Affairs](#) [Daily Pre PARE Daily](#)	❖ **Context** ➤ Researchers at the Indian Institute of Astrophysics (IIA) have developed a low-cost star sensor for **astronomy and small CubeSat class satellite missions.** ❖ **Key Highlights:** • The star sensor named Starberry-Sense can help small CubeSat class satellite missions find their orientation in space. • The Starberry-Sense is ready for launch on the **PS4-Orbital Platform by ISRO** and can be used for CubeSats and other small satellite missions in the future. • Based on commercial/off-the-shelf components, this star sensor costs less than **10% of** those available in the market. • The brain of the instrument is a **single-board Linux computer** called Raspberry Pi, which is widely used among electronics hobby enthusiasts. • Some highly optimised algorithms have been coupled with a **Raspberry Pi** and turned into a potent star sensor, named StarBerry-Sense. • Any satellite needs to know where it is pointed in space, and the instrument used for this purpose is called a **star sensor.** • The position of stars in the sky is fixed **relative to each other** and can be used as a stable reference frame to calculate the orientation of a satellite in orbit. • This is done by correctly identifying the stars in the sky towards which the star sensor is pointed. The star sensor is **essentially a celestial compass.**