

## UPSC Daily Current Affairs | Prelim Bits 31-08-2024

### Project NAMAN

*The Indian Army launched the first phase of Project NAMAN recently.*

- **Aim-** It is designed to provide dedicated support and services to **Defence pensioners, veterans, and their families.**
- **Ministry** - Ministry of Defence.
- **Enabled by** - Tripartite Memorandum of Understanding (MoU) between
  - The Indian Army's Directorate of Indian Army Veterans,
  - Common Service Centre (CSC) e-Governance India Limited, and
  - HDFC Bank Limited.
- **SPARSH-** The project is centred on SPARSH (System for Pension Administration Raksha), a **digital pension system** that streamlines pension-related processes for Defence Pensioners.

*SPARSH is implemented by Ministry of Defence for meeting the pension sanction and disbursement requirements for Armed Forces viz. Army, Navy, Air Force and Defence Civilians.*

- **Beneficiaries** - It extends services to the entire resident population of military stations and surrounding localities.
- **Common Services Centres-** In the 1<sup>st</sup> phase **14 CSCs have been established across India** in key locations such as New Delhi, Jalandhar, Leh, Dehradun, Lucknow, Jodhpur, etc.
- There is a plan to establish around 200 centres nationwide over the next 2-3 years.
- **Support and Management-** **HDFC Bank** will provide IT infrastructure while local military stations contributed physical infrastructure for CSCs.
- Each CSC is managed by a **Village Level Entrepreneur** (VLE) selected from veterans or Next of Kin (NOKs) by Local Military Authorities.
- **Significance-** The project reflects the Indian Army's commitment to the welfare of veterans and their families.
- It also creates entrepreneurial opportunities for Veterans and NOKs, empowering them to contribute to their communities.

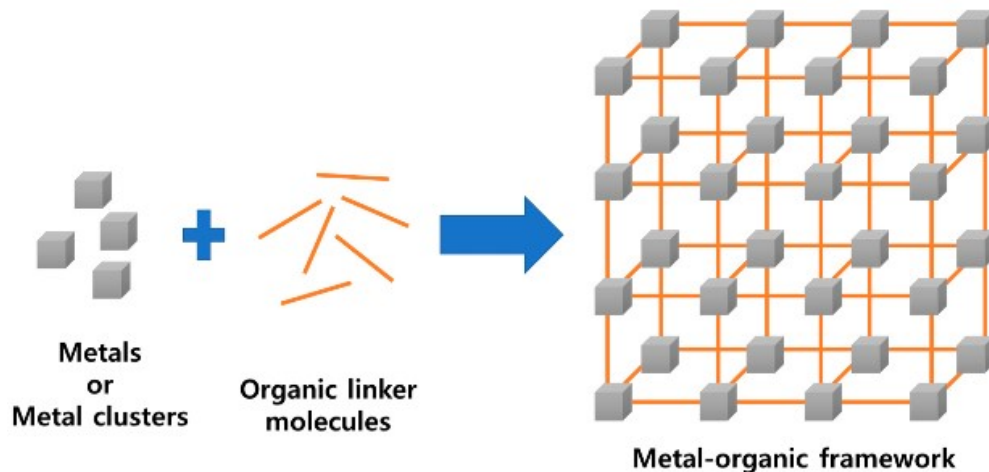
### References

1. [PIB | PROJECT NAMAN](#)
2. [News on air | Indian Army Launches Project NAMAN](#)

## Biosensors on Metal-organic frameworks (MOF) and 2-dimensional (2D) materials

Recently Scientist have developed a bunch of electrochemical and optical biosensors-based on Metal-organic Frameworks(MOF) and 2 dimensional (2D) materials.

- **MOFs** - They are a group of chemical compounds or polymers of nano size that are formed by linking inorganic and organic units by strong bonds in a certain geometrical structure.



- **2D materials** - They are crystalline solids consisting of a single layer of atoms with only one dimension is nano-sized, resembling a large, but very thin sheet.
- The electrochemical and optical biosensors-based on MOF and 2D materials is developed **by Institute of Nano Science and Technology (INST), Mohali, Punjab.**
- **Characteristics of the Sensors** - They are porous materials with large surface area, Functionality, and Optoelectronic properties.
- They can be integrated with biorecognition molecules robustly for reliable sensor performance.
- **Nano to Pico Sensitivity** - The bioconjugation of biorecognition elements over the MOF and 2D materials-based interfaces with a greater density facilitates nano- to picomolar level sensitivities.

*Bioconjugation is a chemical process that creates a stable covalent bond between two molecules, at least one of which is a biomolecule.*

- **Useability** - They can be developed into disposable electrodes, optical kits, fiber optic sensors, colorimetric strips, etc.
- **Application** - They can be used
  - To develop electrochemical and optical sensors for different analytes, such as bacteria, Aflatoxins, and heavy metals
  - For rapid and convenient detection of several health, food quality, and environmental parameters.
  - For analyzing food toxins such as Aflatoxins and Zearaloene in water, milk and staple food samples.
  - In low-cost point of care devices for quick detection and screening of diseases

such as anaemia, cancer.

- As gas and heavy metal detection tools to monitor the environmental quality.

## References

[PIB | Novel nano polymers pave way for low-cost, efficient sensors](#)

## Fluoxetine (Prozac) & its effects on guppy fish

*A recent study has revealed that long-term exposure to fluoxetine (Prozac) can significantly disrupt the behavior and reproductive traits of the male guppy fish.*

- **Fluoxetine (Prozac)** - Fluoxetine is ***an antidepressant*** that belongs to a group of medicines called serotonin selective reuptake inhibitors (SSRIs).
- It works by increasing the amount of a natural chemical called serotonin in the brain.
- **Effects of Low Concentrations**
  - It reduced activity levels and increased refuge-seeking behaviour in male guppies.
  - It altered their body condition, increased the size of their reproductive organs, and reduced sperm velocity.
  - Reduced flexibility in response to environmental changes.

*Refuge-seeking behaviour refers specifically to how much time the fish spend in hiding or protected areas, as opposed to open, potentially more dangerous spaces in their habitat.*

- **Effects of High Concentrations**
  - Increased variability in body condition and sperm production.
  - It changed 'pace of life syndromes'.
  - Larger reproductive organs are associated with lower sperm quality.

## Guppy Fish

- **Scientific name-** Poecilia reticulata.
- They are named for **Robert John Lechmere Guppy** who collected these fish on the island of Trinidad in 1866.
- **Native-** They are native to tropical regions of South America and the Caribbean, particularly found in **freshwater streams and pools**.
- **Lifespan-** They generally live for 2 to 3 years.
- **Diet-** Omnivorous.
- **Appearance** - Guppies come in nearly every color of the rainbow. Many types have silvery scales marked with dark dots, splotches of color, or complex patterns.
- **Size** - A guppy's body is little only about 1 to 2 inches long. **Males are smaller** and more brightly colored than females.
- **Social Behavior-** These fish are peaceful and thrive in groups, making them ideal for community tanks.
- **Breeding-** Guppies are livebearers, meaning they give birth to live young rather than laying eggs.



## Reference

[Down to Earth | Fluoxetine \(Prozac\) & its effects on guppy fish](#)

## Tourism & Hospitality Skill Council

*The Tourism and Hospitality Skill Council recently signed a Memorandum of Understanding with Visa to train youth for the growing tourism industry.*

- It is a **Not-for-Profit Organization**, registered under the Societies Registration Act, 1860, promoted by the Confederation of Indian Industry (CII).
- **Aim** - It is formed by the Industry and for the industry to tackle the skilling of large manpower to fulfil the industry requirements, playing a crucial role in bridging this gap.

- **Nodal ministry-** Ministry of Skill Development & Entrepreneurship.
- THSC is now an approved awarding body under **National Council for Vocational Education and Training (NCVET)**.
- **Vision-** To promote skill development in the Hospitality and Tourism sector to build a strong industry-aligned ecosystem, creating respectable employment opportunities in India.
- **Mission-** To contribute to a skilled workforce by setting
  - National occupational standards,
  - Establishing a labour market information system,
  - Affiliating training partners,
  - Certifying trainers, and
  - Facilitating learner assessments and certifications.

### **The recent Memorandum of Understanding (MoU)**

- The initiative aims to support India's ambitions of becoming a global tourism hub by ensuring a skilled workforce.
- **Objective-** To up skill at least **20,000 Indian youth** in tourism-relevant skills.

*In 2023, tourism accounted for over \$231 billion in GDP and employed more than 42 million people in India.*

- **Duration-** 3-year partnership.
- **Funding-** Partnership valued at up to \$1 million USD.
- **States covered-** Assam, Gujarat, Himachal Pradesh, and West Bengal, among others (10 States in total).
- **Key Areas of Training-** Tour guides, customer service executives, naturalists, and paragliding tandem pilots.
- **Agency-** The partnership involved Tourism & Hospitality Skill Council (THSC) under the Ministry of Skill Development and Entrepreneurship (MSDE), Visa (a global leader in digital payments).
- **Significance-** This partnership aims to equip Indian youth with skills for the growing tourism sector, boosting economic development and enriching the tourist experience in India.

### **References**

1. [PIB | Visa partners with Skill India](#)
2. [THSC | Vision & Mission](#)

### **Navaratna status**

*The Solar Energy Corporation of India Ltd (SECI), a Central Public Sector Enterprise (CPSE) under Ministry of New and Renewable Energy, has recently been granted Navratna status by the Ministry of Finance.*

- The main aim of assigning the "Ratna" statuses to various CPSEs was to give **operational freedom** and **decision-making power** to the state-run entities.

Criteria	Miniratna	Navratna	Maharatna
<b>Introduced in</b>	1997	1997	2010
<b>Eligibility</b>	<p><b>Miniratna Category-I:</b> Profit over Rs. 30 crores in at least one of the last 3 years</p> <p><b>Miniratna Category-II:</b> Continuous profitability over last 3 years Positive net worth and no defaults on loan repayments or government guarantees. Continuous profitability and positive net worth.</p>	<p>Must be Miniratna I or Schedule 'A' CPSE.</p> <p>'Excellent' or 'Very Good' MOU rating in 3 of the last 5 years.</p> <p>Composite score of 60 or above across 6 performance indicators.</p>	<p>Must have Navratna status.</p> <p>Listed on Indian stock exchange with minimum prescribed public shareholding.</p> <p>Annual turnover &gt; Rs. 25,000 crores</p> <p>Net worth &gt; Rs. 15,000 crores</p> <p>Net profit &gt; Rs. 5,000 crore (average of last 3 years)</p>
<b>Profit requirement</b>	<p>Category-I- Pre-tax profit of Rs. 30 crore in at least one of the last three years</p> <p>Category-II- Profit for the last 3 consecutive years</p>	Must be a Miniratna-I with a score of 60 or above in 6 performance parameters	Must have an average annual profit of over Rs.5,000 crore for the last 3 years
<b>Investment Powers</b>	Can make investments up to Rs. 500 crore or equal to their net worth, whichever is lower	Can invest up to Rs. 1,000 crore or 15% of their net worth, whichever is lower	Can invest up to Rs. 5,000 crore or 15% of their net worth, whichever is lower
<b>Delegated Powers</b>	Limited operational autonomy	Enhanced powers in capital expenditure, investments, mergers, etc.	Greater autonomy in investments and HR management
<b>Current Count</b>	57 companies	17 companies	13 companies
<b>Examples</b>	<p>Hindustan Aeronautics Limited (HAL)</p> <p>Bharat Electronics Limited (BEL)</p>	<p>Oil and Natural Gas Corporation (ONGC)</p> <p>National Thermal Power Corporation (NTPC)</p>	<p>Coal India Limited</p> <p>Indian Oil Corporation Limited (IOCL)</p>

## Reference

1. [PIB | Navaratna status](#)
2. [CNBC | Miniratna, Navratna and Maharatna companies](#)



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