## PRELIMS MANTRA – 33 (27/03/2025)

# U.S. Commission on International Religious Freedom (USCIRF):

- The 2025 Annual Report of USCIRF has recommended again that U.S. government designate India, along with 15 other countries, a "Country of Particular Concern" (CPC).
- USCIRF, a congressional body that does not represent U.S. government but is mandated to make recommendations to it, accused Indian government of misusing laws such as UAPA, FCRA, and CAA to "crack down" on religious minorities and civil society organisations.
- It also sought application of Transnational Repression Act on India and review of sale of MQ-9B Predator drones for their potential use in "religious freedom violations" by Indian authorities.

## Bedmap3:

- In a new attempt to understand geography of icy Antarctica, scientists have prepared most comprehensive map yet of landscape below continent's ice sheet.
- Average thickness of Antarctic ice, including ice shelves, is
  1.9 km.

#### **Neutrinos:**

- They are second-most abundant subatomic particle in the universe, after photons, particles of light.
- They were produced in copious amounts during Big Bang event.
- They are produced in radioactive decay, when massive stars explode, and when cosmic rays strike earth's atmosphere.
- They are also made during nuclear fusion.
- These particles are extraordinarily hard to catch because they interact very weakly and very rarely with matter.

## **AMoRE** experiment in South Korea:

o It aims to search for neutrinoless double beta decay (0 $\nu$ ββ decay) of 100Mo nuclei using molybdate scintillating crystals (of molybdenum) operating at milli-Kelvin temperatures.

## Why Martian dust may pose health risks to astronauts?

- Martian dust is likely to cause respiratory issues and an elevated risk of disease among astronauts, according to a new study.
- It found that fine particles of dust (it is about 4% the width of a human hair) could penetrate deep into lungs and enter bloodstream.
- O Moreover, there could be several toxic elements which astronauts could be exposed to on planet. For instance, there is an abundance of silica dust and iron dust. Silica is known to cause silicosis, which is a type of lung disease, and is a common occupational hazard for coal miners.
- Martian dust also comprises toxic substances such as perchlorates and gypsum, and harmful metals like chromium and arsenic.
- Rresearchers in their study have described different ways to limit dust contamination. For example, they have suggested use of Vitamin C to prevent diseases from chromium exposure.
- Researchers have also said that iodine could help tackle thyroid diseases from perchlorate.

 Study highlighted that use of air filters; self-cleaning space suits and electrostatic repulsion devices (they remove dust particles) is essential to limit exposure to dust.

#### **Abel Prize:**

- Japanese mathematician Masaki Kashiwara was awarded this year's Abel Prize.
- First awarded in 2003, the Abel prize is often considered to be an equivalent of the Nobel prize, which does not have a category for mathematics.
- Abel Prize "recognises pioneering scientific achievements in mathematics".
- It is named after Norwegian mathematician Niels Henrik
  Abel (1802-29), who in his short life made pioneering contributions to multiple fields.
- Prize was established by the Norwegian Parliament in 2002, on Abel's 200th anniversary.
- Abel Prize is awarded and administered by the Norwegian Academy of Science and Letters on behalf of Norwegian government.
- o Recipients are chosen by an expert committee appointed by Academy under advice of International Mathematical Union (IMU) and European Mathematical Society (EMS).
- O Kashiwara was awarded "for his fundamental contributions to algebraic analysis and representation theory, in particular the development of the theory of D-modules and the discovery of crystal bases,"

## Zomi community (or Zo people):

- Violent clashes broke out in Churachandpur in March 2025 between individuals belonging to Zomi community on one side, and those belonging to Hmar and Kuki communities on the other.
- $\circ$  All three communities fall under the larger Zo umbrella.
- The Zo people are an ethnolinguistic group who speak the Kuki-Chin languages, a group of related Sino-Tibetan languages.
- Oconstant feuds among various tribal clans drove many westward to modern-day Mizoram and parts of Manipur in the 17th century. There they settled in new villages, but remained socially and emotionally enmeshed with the Chin tribes of Myanmar.
- Today, most of the Zo population lives in "Manipur and Mizoram in Northeast India, Bangladesh, and Chin State of Myanmar".
- o Zo people comprise **various sub-tribes and clans** such as the Chin, Kuki, Mizo, Lushei, Zomi, Paitei, Hmar, Ralte, Pawi, Lai, Mara, Gangte, Thadou, etc.
- Traditionally, Zo people were animists and practiced ancestral worship. Due to proselytisation by British missionaries from the 19th century onwards, most Zo people today are Protestant Christians.

### **Artemis Accords:**

- O Based on Outer Space Treaty of 1967 (OST), Artemis Accords were established by U.S. State Department and NASA with seven other founding members — Australia, Canada, Italy, Japan, Luxembourg, United Arab Emirates, and United Kingdom— in 2020 for setting common principles to govern civil exploration and use of outer space, the moon, Mars, comets, and asteroids, for peaceful purposes.
- o Artemis, named after Greek Moon goddess.

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- India has signed Artemis Accord on June 21, 2023, becoming the 27<sup>th</sup> signatory.
- However, India is not a participant in the NASA led Artemis Programme, which is a mission-driven initiative led by NASA to return humans to the Moon and beyond.

# Prime Minister's Wi-Fi Access Network Interface (PM-WANI):

- olt aims to accelerate proliferation of internet services by setting up public Wi-Fi Hotspots in country with objective of building digital India and consequential benefits thereon.
- Public Data Offices (PDOs) establish, operate and maintain WANI compliant Wi-Fi Hotspots based on their techno-commercial considerations and deliver internet services to subscribers.
- PDOs need to partner with a Public Data Office
  Aggregator (PDOA) to deliver internet services.
- PM-WANI compliant Wi-Fi hardware is also supplied by C-DOT through its transfer of technology (ToT) partners.

Pradhan Mantri Virasat Ka Samvardhan (PM VIKAS):

olt is a **Central Sector Scheme of Ministry of <mark>Minority</mark> Affairs which converges five erstwhile schemes viz.**  'Seekho Aur Kamao', 'Nai Manzil', 'Nai Roshni' and 'USTTAD' & 'Hamari Dharohar'.

- olt focuses on upliftment of six notified minority communities through skill development; entrepreneurship and leadership of minority women; and education support for school dropouts.
- olt also provisions to facilitate credit linkages by connecting beneficiaries with loan programs offered by National Minorities Development & Finance Corporation (NMDFC).
- OUnder scheme, skills and education support would be provided to youth of minority communities that could earn them suitable employment or make them suitably skilled to take up self-employment.

ears of its establishment

## PRACTICE MCQs

- Q1. Consider the following statements about the PM-VIKAS Scheme:
  - 1. It is a Centrally Sponsored Scheme of the Ministry of Minority Affairs.
  - 2. It converges five erstwhile schemes viz. 'Seekho Aur Kamao', 'Nai Manzil', 'Nai Roshni' and 'USTTAD' & 'Hamari Dharohar'.
  - 3. It focuses on upliftment of six notified minority communities through skill development.

Which of the statements given above is/are correct?

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

### Answer: C

- Q2. Consider the following statements about Artemis Accords:
  - 1. It is established by U.S. State Department and NASA with seven other founding members.
  - 2. It seeks to set up common principles to govern civil exploration and use of outer space for peaceful purposes.
  - 3. India has not yet signed the Accords.

Which of the statements given above is/are correct?

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

### Answer: B

- Q3. Which of the following statements is incorrect about neutrinos?
  - a) They are the most abundant subatomic particle in the universe.
  - b) They are produced in radioactive decay and when massive stars explode.
  - c) They are also made during nuclear fusion.
  - d) These particles are hard to detect because they interact very weakly and very rarely with matter.

### Answer: A

- Q4. Consider the following statements about Abel Prize:
  - 1. Japanese mathematician Masaki Kashiwara was awarded 2025 Abel Prize.
  - 2. It recognises pioneering scientific achievements in mathematics.
- 3. It is awarded and administered by the Norwegian Academy of Science and Letters on behalf of Norwegian government. Which of the statements given above are correct?
  - a) 1 and 2 only
  - b) 2 and 3 only
  - c) 2 only
  - d) 1, 2 and 3

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Answer: D

Q5. Consider the following tribal communities of North-east India:

- Kuk
- 2. Mizo
- 3. Lushei
- 4. Hmar
- 5. Thadou

How many of the above communities are part of broader Zo community?

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

Answer: D



...Celebrating 13 years of its establishment