

Gaganyaan Astronauts Selected for Axiom-4 Mission

Source: IE

Why in News?

The <u>Indian Space Research Organisation (ISRO)</u> has shortlisted two of its four trained **Gaganyaan** astronauts for the **Axiom-4 mission** to the <u>International Space Station (ISS)</u> in collaboration with the United States' <u>National Aeronautics and Space Administration (NASA)</u>.

What is the Axiom-4 Mission?

- NASA and Axiom Space, an american privately funded space infrastructure developer signed an order for the fourth private astronaut mission to the ISS, aiming to launch in August 2024 from Kennedy Space Center in Florida.
- The mission aims to dock with the ISS for a fourteen-day duration.
- Indian astronauts will receive training from NASA, international partners, and SpaceX, focusing on spacecraft systems and emergency preparedness, as part of India-US space cooperation goals.

Note

The joint statement by India and the United States during Prime Minister's visit in 2023 said **NASA would provide 'advanced training' to Indian astronauts** at one of its facilities, as part of the **Artemis Accords.**

Status of India's Gaganyaan Program

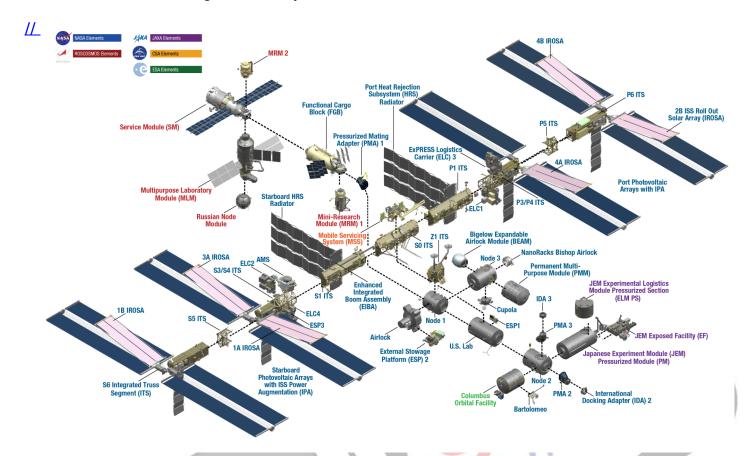
- India's Gaganyaan human spaceflight is expected post-2025, with unmanned flights as precursors.
- The launch of manned flights follows two successful unmanned missions.

What is the International Space Station (ISS)?

- The ISS is a large, permanently crewed laboratory that orbits Earth, 400 kilometres above its surface. It is **home to astronauts and cosmonauts**, and serves as a unique science laboratory.
 - Its research is expected to lead to advancements in many areas, including medicine, technology, science, and understanding the Earth and universe.
- It's a collaboration between 15 countries and five space agencies namely NASA (United States), Roscosmos (Russia), ESA (European Space Agency), JAXA (Japan Aerospace Exploration Agency), and CSA (Canadian Space Agency).
- An international crew of seven people live and work while travelling at a speed of 7.66 km/sec, orbiting Earth about every 90 minutes. In 24 hours, the space station makes 16 orbits of Earth, travelling through 16 sunrises and sunsets.
 - **Peggy Whitson** set the US record for spending the most total time living and working in

space for 665 days.

■ The first parts of the ISS were sent and assembled in orbit in 1998. Since the year 2000, the ISS has had crews living continuously on board.



Note:

- India is gearing up to strengthen its space presence, the <u>ISRO aims to establish the country's</u> <u>first space station</u> by 2035.
- ISRO aims to **build a 20-ton space station** within a decade to support microgravity experiments.

Read more: India Joins Artemis Accords

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims:

Q. What is the purpose of the US Space Agency's Themis Mission, which was recently in the news? (2008)

- (a) To study the possibility of life on Mars
- (b) To study the satellites of Saturn
- (c) To study the colourful display of high latitude skies
- (d) To build a space laboratory to study the stellar explosions

Ans: (c)

Q. Consider the following statements: (2016)

The Mangalyaan launched by ISRO

- 1. is also called the Mars Orbiter Mission
- 2. made India the second country to have a spacecraft orbit the Mars after USA
- 3. made India the only country to be successful in making its spacecraft orbit the Mars in its very first attempt

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Ans: (c)

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