# Shenzhou-16 Mission [UPSC Notes]

In May 2023, China achieved another milestone in its space exploration endeavours as it successfully launched the Shenzhou-16 manned spacecraft, carrying three astronauts, including the first civilian, to its space station. This mission marks a significant step in China's space program, which aims to land astronauts on the moon before 2030. In this article, we discuss the Shenzhou-16 Mission, its details and China's future programs in this regard. This topic is relevant for the IAS exam science and technology segment.

## Shenzhou-16 Mission

Shenzhou-16, atop a Long March-2F carrier rocket, took off from the Jiuquan Satellite Launch Centre in northwest China.

- The launch was declared a complete success by the China Manned Space Agency (CMSA).
- About 10 minutes after launch, the spacecraft separated from the rocket and entered its designated orbit.

### Inclusion of a Civilian Astronaut:

- For the first time, China included a civilian, Gui Haichao, a professor at Beihang University, among the three astronauts.
- Gui is regarded as a payload specialist and will participate in scientific experiments at the space station.

## Shenzhou-16 Astronauts and Mission Details

The mission's commander is Jing Haipeng, who is making history as the first Chinese astronaut to go into space for a record fourth time.

- The astronaut flight engineer is Zhu Yangzhu, making his first journey into space.
- The crew is expected to dock with the space station's Tianhe core module, located approximately 400 km above the ground, after a journey of less than seven hours.
- They will stay in orbit for approximately five months and conduct various tests and experiments.

### China's Unique Space Station and Future Plans

- China aims to become the only country with its own space station as the International Space Station (ISS) is set to be decommissioned by 2030.
- China's space station features two robotic arms, including a long one capable of grabbing objects from space, such as satellites.

- The station will continue to expand, with plans for additional modules to create a cross-shaped structure.
- China also has plans to launch a large space telescope called Xuntian by the end of 2023, which will have a field of view 350 times wider than the Hubble Space Telescope.

**Conclusion:**

- China's successful launch of the Shenzhou-16 manned spacecraft, carrying three astronauts to its space station, signifies its progress in space exploration.
- The inclusion of a civilian astronaut and the country's ambitious plans for a permanent space outpost and advanced telescopes highlight its commitment to pushing the boundaries of space research and technology.