

What is Vyommitra?

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About Vyommitra

- Vyommitra is a combination of two Sanskrit words Vyoma (Space) and Mitra (Friend).
- It is a female robot designed and developed by the ISRO to fly aboard unmanned test missions ahead of the Gaganyaan human spaceflight mission.
- It is referred to as a half-humanoid robot as she doesn't have legs. However, she can bend forward and sideways.
- Besides going on uncrewed Gaganyaan missions, she will accompany astronauts on manned missions too.
- Features:
 - The AI-enabled robot, which can withstand vibrations and shock during the flight, has been designed to resemble a human with facial expressions, speech, and sight capabilities.
 - It is equipped with the capability to monitor module parameters, issue alerts, and execute life support operations.

- It can perform tasks such as operating switch panels, and serving as a companion to astronauts, engaging in conversations, recognising them, and responding to their inquiries.

What is the Gaganyaan mission?

- Under the Gaganyaan Mission, ISRO will be sending three humans to an orbit of 400 km for a 3-day mission and bringing them back safely to Earth.
 - Launch Vehicle: The Mark-3 (LVM3/GSLV Mk3) rocket, the well-proven and reliable heavy lift launcher of ISRO, is identified as the launch vehicle for the Gaganyaan mission.
 - The Astronaut Training Facility established in Bengaluru provides a comprehensive training program for astronauts preparing for the Gaganyaan mission.
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Q1) What is GSLV Mk3?

It is the new heavy lift launch vehicle of ISRO for achieving a 4000 kg spacecraft launching capability to GTO (Geosynchronous Transfer Orbit) in a cost effective manner. GSLV MKIII (43.5 m height and a gross lift-off weight of 640 tonnes) is configured as a three-stage vehicle with two solid strap-on motors (S200), one liquid core stage (L110) and a high thrust CUS (configured with the fully indigenous cryogenic engine – CE20).

Source: [India to launch female robot astronaut 'Vyommitra' ahead of manned mission](#)

Source: <https://vajiramandravi.com/current-affairs/vyommitra-upsc/>

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