

# SAKHI App

written by iasexam.com | 20/03/2024



## Context

Vikram Sarabhai Space Centre (VSSC), the Indian Space Research Organisation (ISRO) facility, has recently developed the multi-purpose **SAKHI app** to help astronauts on the Gaganyaan mission.

## About

- SAKHI will display the health of the astronauts, help them stay related with Earth and alert them about their nutritional schedules.
- It will maintain the crew related to the onboard computer and ground-based stations, guaranteeing a seamless communication link.

## Long-Term Challenges to Human Space Exploration

- Outside of Earth's protective magnetosphere, astronauts are exposed to higher levels of cosmic radiation that can damage DNA and increase the threat of cancer and other health problems.
- Access to medical care is limited during space missions, and emergencies such as injuries or acute illnesses require prompt and effective intervention.
- Sleep disturbances are the major challenge in space because of factors along with environmental noise, adjustments in mild-darkish cycles, and pain from snoozing in microgravity.

## Gaganyaan mission

- The mission aims to demonstrate the capability to launch human beings (three crew members) to low earth orbit and produce them again accurately to earth by landing.
  - The **Launch Vehicle Mark-3 (LVM3)** is the launch vehicle for the Gaganyaan assignment.
- **Crew Escape System (CES):** HLVM3 consists of CES powered via a fixed of brief appearing, high burn rate solid motors which ensures that Crew Module along with the crew is taken to a safe distance in case of any emergency either at launch pad or during ascent phase.
- **Orbital Module:** The Orbiter Module will orbit the Earth, and it consists of **Crew Module (CM)** and **Service Module (SM)**. It is designed to maintain the crew safe in the course of ascent, orbital phase, and re-access.
  - The **Crew Module (CM)** is the habitable space with the Earth-like environment in space for the crew.
  - **Service Module (SM):** It will be used to provide the essential aid to CM whilst in orbit. It is an unpressurized shape containing a thermal system, propulsion system, power systems, avionics structures and deployment mechanisms.
- This manned mission might be the first of ISRO's human spaceflight missions. The US, Russia and China are the only three countries to have performed human spaceflights yet.

**Source:** [The Hindu](#)

### **UPSC Mains Practice Question**

**Q. India's Gaganyaan mission soars to new heights as it brings dreams of space exploration closer to reality. In light of the recently launched SAKHI app, highlight the significance and challenges involved in the Gaganyaan Mission. (150 words)**