



HAKUTO-R Moon Mission: Japan

Why in News?

Recently, a **Japanese space startup ispace Inc** has launched its own private **lander M1** to the Moon under its **HAKUTO-R mission**, from the **SpaceX** Falcon 9 rocket.

- It is Japan's **first-ever lunar mission** and the first of its kind by a private company.



What are the Key Points of the Mission?

- **About:**
 - The name HAKUTO-R refers to the **white rabbit that Japanese folklore suggests lives on the Moon.**
 - The M1 lander will deploy **two robotic rovers, two-wheeled, orange-sized devices from Japan's JAXA space agency** and a four-wheeled Rover made by the UAE known as the Explorer Rashid, after the Dubai royal family patriarch.
 - If the rover Rashid lands successfully, it will be the **Arab world's first Moon mission.**
 - So far **only the Us, Russia and China** have managed to put a **robot on the lunar surface.**
 - It will also be carrying an **experimental solid-state battery** made by NGK Spark Plug Co, a Japanese-based spark plug company
- **Features:**
 - It is designed in such a way that it will use **minimal fuel to save money and leave more room** for cargo.
 - It is taking a **slow, low-energy path to the Moon**, flying 1.6 million km (one million miles) from Earth before looping back and making a planned landing by the end of April.
- **Objective:**
 - It is aimed to search for **water deposits before touching down in the Atlas Crater,**

which lies in the northeastern section of the Moon's near side and measures more than 87km (54 miles) across and just over 2km (1.2 miles) deep.

- Mission success would also represent a milestone in space cooperation between **Japan and the US at a time when China is becoming increasingly competitive** and rides on Russian rockets are no longer available in the wake of [Russia's invasion of Ukraine](#).
- Japan has a contract with NASA to ferry payloads to the Moon from 2025 and is aiming to build **a permanently staffed lunar colony by 2040**.

What are other Lunar Missions?

- **Indian:**
 - [Chandrayaan 1](#)
 - [Chandrayaan-2](#)
 - [Chandrayaan-3](#)
- **Other Countries:**
 - [UAE's Moon Mission](#)
 - [NASA's Artemis Mission \(USA\)](#)
 - [Lunar Evacuation System Assembly \(USA\)](#)
 - [Chang'e-5 Mission \(China\)](#)

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. Selene-1, the lunar orbiter mission belongs to which one of the following? (2008)

- (a) China
- (b) European Union
- (c) Japan
- (d) USA

Ans: (c)

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