

## **5. PSLV-C48/RISAT-2BR1**

**Prelims Level: Space Technology**

**Mains Level: GS-III Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-Technology and Issues Relating to Intellectual Property Rights.**

### **Why in News?**

- PSLV-C48 successfully launched RISAT-2BR1 and nine commercial satellites from Satish Dhawan Space Centre (SHAR), Sriharikota.

### **About the Launch:**

- India's Polar Satellite Launch Vehicle, in its 50th flight (PSLV-C48), successfully launched RISAT-2BR1, an earth observation satellite, along with nine commercial satellites of Israel, Italy, Japan and USA from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota.
- These satellites were launched under commercial arrangement with New Space India Limited (NSIL), the commercial arm of Indian Space Research Organisation (ISRO).
- It was PSLV's 50th flight and 48th successful flight since its first successful launch in 1994.
- It was the 75th launch from Sriharikota.
- This was the 2nd flight of PSLV in 'QL' configuration (with 4 solid strap-on motors).
- With this, ISRO has launched a total of 319 foreign satellites from 33 countries since the first launch in 1999 when PSLV-C2 carried satellites from Germany and South Korea.

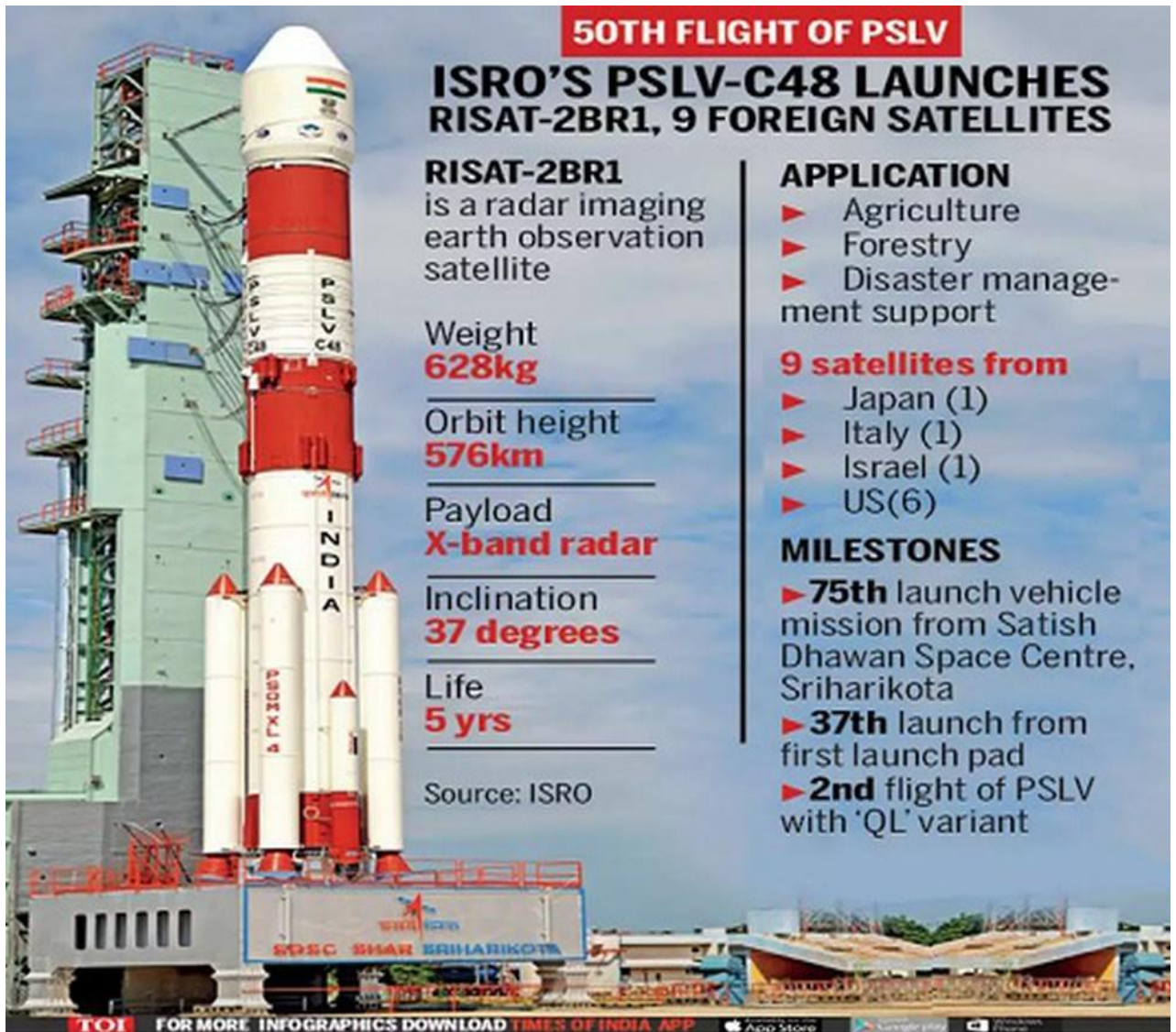
### **About PSLV:**

- PSLV is an expendable medium-lift launch vehicle designed and operated by ISRO.
- The PSLV, which has a history of successful launches of payloads that include Chandrayaan-1, Mars Orbiter Mission and the space recovery mission.
- The PSLV had helped take payloads into almost all the orbits in space including Geo-Stationary Transfer Orbit (GTO), the Moon, Mars and would soon be launching a mission to the Sun. Initially, the PSLV had a carrying capacity of 850 kg, and over the years it has been enhanced to 1.9 tonnes. The PSLV has failed only twice in its history – the maiden flight of the PSLV D1 in September 1993 and the PSLV C-39 in August 2017.

### **About RISAT-2BR1:**

- RISAT-2BR1 is radar imaging earth observation satellite carrying X-band synthetic aperture radar, an Indian version of Israel's TecSAR satellite, with radial rib reflector 3.6 metre mesh antenna.

- The satellite weighs about 628 kg. The mission life of RISAT-2BR1 is 5 years.
- The satellite will provide services in the field of Agriculture, Forestry and Disaster Management.
- It is believed that RISAT-2BR1 along with Cartosat-3, a remote sensing satellite which was launched on November 27, 2019, will also be used for Military Reconnaissance.



**50TH FLIGHT OF PSLV**

**ISRO'S PSLV-C48 LAUNCHES RISAT-2BR1, 9 FOREIGN SATELLITES**

**RISAT-2BR1** is a radar imaging earth observation satellite

Weight **628kg**

Orbit height **576km**

Payload **X-band radar**

Inclination **37 degrees**

Life **5 yrs**

Source: ISRO

**APPLICATION**

- ▶ Agriculture
- ▶ Forestry
- ▶ Disaster management support

**9 satellites from**

- ▶ Japan (1)
- ▶ Italy (1)
- ▶ Israel (1)
- ▶ US(6)

**MILESTONES**

- ▶ **75th** launch vehicle mission from Satish Dhawan Space Centre, Sriharikota
- ▶ **37th** launch from first launch pad
- ▶ **2nd** flight of PSLV with 'QL' variant

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