

01 April 2019: UPSC Exam PIB Summary & Analysis

1. PSLV-C45 successfully launched EMISAT and 28 customer satellites :

Context :

- India's Polar Satellite Launch Vehicle (PSLV-C45) successfully launched EMISAT and 28 international customer satellites from Satish Dhawan Space Centre (SDSC) SHAR in Sriharikota.
- This flight marked the first mission of PSLV-QL, a new variant of PSLV with four strap-on motors.

Details :

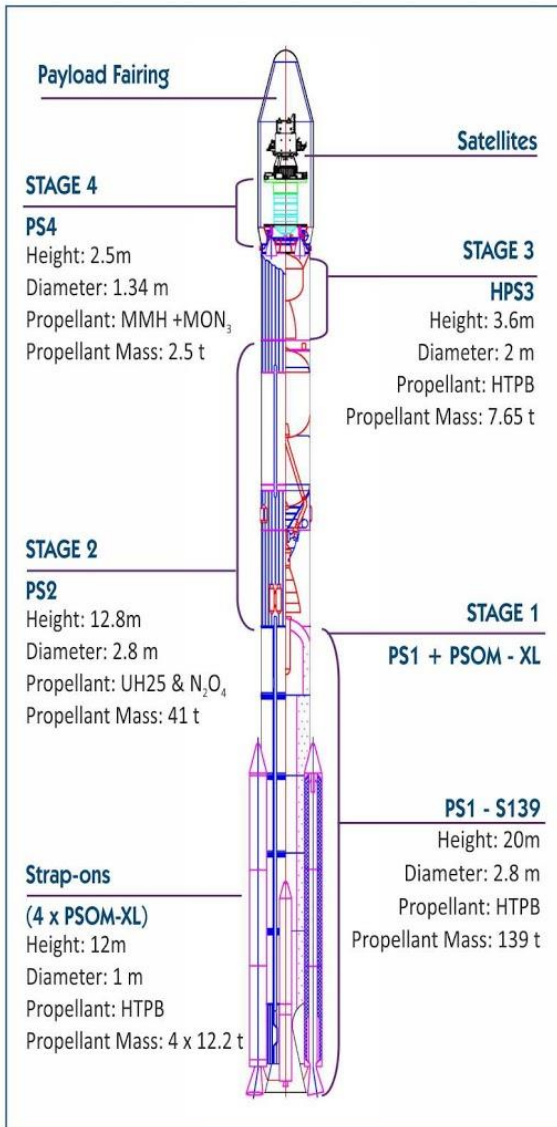
- PSLV-C45 lifted off from the Second Launch Pad and injected India's EMISAT into a **748 km sun-synchronous polar orbit**.
- After separation, the two solar arrays of EMISAT were deployed automatically and the ISRO Telemetry Tracking and Command Network at Bengaluru assumed control of the satellite.
- In the coming days, the satellite will be brought to its final operational configuration.
- Following the separation of EMISAT, the vehicle's fourth stage engines were restarted twice to place the 28 international customer satellites precisely into a sun-synchronous **orbit of 504 km height**.
- About 3 hours after lift-off, the fourth stage (PS4) of the vehicle was moved to a lower circular orbit of 485 km after two restarts to establish it as an orbital platform for carrying out experiments with its three payloads.

EMISAT :

- EMISAT is a satellite built around ISRO's Mini **Satellite-2 bus** weighing about 436 kg. The satellite is intended for **electromagnetic spectrum measurement**.

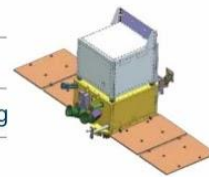
PSLV-C45 successfully launches EMISAT and 28 customer satellites

- PSLV-C45 is the 47th flight of the Polar Satellite Launch Vehicle (PSLV)
- 1st flight of its QL variant (with 4 strap-ons)



EMISAT

- Lift-off weight : 436 kg
- Altitude : 748 km
- Inclination : 98.376 deg
- Power : 800 W



28 International Customer Satellites

Country	Satellite Name	No. of Satellites
Lithuania	BlueWalker1	1
	M6P	1
Spain	Aistechsats-3	1
Switzerland	Astrocast-2	1
USA	Flock-4A	20
	LEMUR	4

PS4 as an Orbital Platform

PS4 hosts three payloads:

1. Automatic Identification System from ISRO
2. Automatic Packet Repeating System from AMSAT India
3. Advanced Retarding Potential Analyzer for Ionospheric Studies from Indian Institute of Space Science and Technology

2. Index of Eight Core Industries :

Context :

- The summary of the Index of Eight Core Industries (**Base: 2011-12=100**) **February, 2019**) has been released by the **Ministry of Commerce & Industry**.
- The Eight Core Industries comprise 40.27 percent of the weight of items included in the Index of Industrial Production (IIP). The combined Index of Eight Core Industries stood at 125.8 in February, 2019, which was 2.1 percent higher as compared to the index of February, 2018. Its cumulative growth during April to February, 2018-19 was 4.3 percent.

Coal :

- Coal production (weight: 10.33per cent) **increased by 7.3 percent** in February, 2019 over February, 2018. Its cumulative index **increased by 7.1 percent** during April to February, 2018-19 over corresponding period of the previous year.

Crude Oil :

- Crude Oil production (weight: 8.98per cent) **declined by 6.1 percent** in February, 2019 over February, 2018. Its cumulative index **declined by 4.0 percent** during April to February, 2018-19 over the corresponding period of the previous year.

Natural Gas :

- The Natural Gas production (weight: 6.88per cent) **increased by 3.8 percent** in February, 2019 over February, 2018. Its cumulative index **increased by 0.8 percent** during April to February, 2018-19 over the corresponding period of the previous year.

Refinery Products :

- Petroleum Refinery production (weight: 28.04per cent) declined by 0.8 per cent in February, 2019 over February, 2018. Its cumulative index **increased by 3.0 percent** during April to February, 2018-19 over the corresponding period of the previous year.

Fertilizers :

- Fertilizer production (weight: 2.63 per cent) **increased by 2.5 per cent** in February, 2019 over February, 2018. Its cumulative index **declined by 0.02 percent** during April to February, 2018-19 over the corresponding period of the previous year.

Steel :

- Steel production (weight: 17.92per cent) **increased by 4.9 percent** in February, 2019 over February, 2018. Its cumulative index **increased by 4.7 percent** during April to February, 2018-19 over the corresponding period of the previous year.

Cement :

- Cement production (weight: 5.37per cent) **increased by 8.0 percent** in February, 2019 over February, 2018. Its cumulative index **increased by 13.0 percent** during April to February, 2018-19 over the corresponding period of the previous year.

Electricity :

- Electricity generation (weight: 19.85 percent) **increased by 0.7 percent** in February, 2019 over

February, 2018. Its cumulative index **increased by 5.4 percent** during April to February, 2018-19 over the corresponding period of the previous year.

