

Prelim Bits 22-07-2019

GSLV Mk-III

- The launch of Chandrayaan-2 was aborted after a technical glitch detected in the launch vehicle system.
- The mission vehicle was a GSLV Mk-III rocket, which can launch heavier commercial satellites.
- GSLV Mk-III is set to use for all deep space exploration missions, including Gaganyaan, India's first human mission.
- However, Chandrayaan-1 and Mangalyaan were launched by PSLV.
- PSLV has its limitations as it does not have enough power to carry heavier satellites, or to go deeper into space.
- GSLV rockets use a different fuel, and have a thrust that is far greater than PSLV's.
- They can, therefore, carry heavier payloads and travel deeper into space.
- It is also known as "Bahubali", "Fat Boy", the Launch Vehicle Mark-3 (LMV-3).
- It is the heaviest rocket built by the ISRO till date.
- It is a three-stage heavy lift launch vehicle.
- It is powered by a core liquid engine, has two solid boosters and a cryogenic engine in the upper stage.
- This is India's first fully functional rocket to be tested with a cryogenic engine.
- It is designed to carry 4 ton satellites into Geosynchronous Transfer Orbit or about 10 tons to Low Earth Orbit.

PSLV was developed for Low Earth Orbit satellites into Polar and Sun Synchronous Orbits, and GSLV for heavier INSAT class of Geosynchronous satellites into orbit.

	SLV-3	ASLV	PSLV-XL	GSLV MK-II	GSLV MK-III
Height	22.7 m	23.5 m	44 m	49 m	43.43 m
Liftoff weight	17 t	39 t	320 t	414 t	640 t
Propulsion	All solid	All solid	Solid and liquid	Solid, liquid, and cryogenic	Solid, liquid, and cryogenic
Payload mass	40 kg	150 kg	1860 kg	2200 kg	4000 kg
Orbit	Low Earth Orbit	Low Earth Orbit	475 km Sun Synchronous Polar Orbit*	Geosynchronous Transfer Orbit	Geosynchronous Transfer Orbit

*1300 kg in Geosynchronous Transfer Orbit
All information and images: ISRO

Ujh and Basantar Bridge

- The Ujh and Basantar are two strategically important bridges inaugurated near International Border in J&K.
- The bridges have been built under Project Sampark, by Border Roads Organisation (**BRO**).
- The 1 Km long 'Ujh bridge in Kathua, over Ujh river is the longest bridge constructed by **BRO**.
- The 617 m Basantar bridge in Samba has been constructed over Basantar river.
- These bridges will provide smooth connectivity and are vital for the army for deployment on border areas.
- The **BRO** develops and maintains road networks in India's border areas and friendly neighboring countries.
- It functions under 'Ministry of Defense'.

Electronically Transmitted Postal Ballot System (ETPBS)

- **ETPBS** is a type of Postal voting whereby Ballot Papers are distributed electronically to voters and returned by them in post.
- It recorded 60.14% turnout in 2019 Lok Sabha elections.
- It is also known as **e-postal ballots** and these registered people are known as **Service Voters**.
- According to the provisions of **Section 20 of Representation of People Act 1950**, 'Service voters' can be from,
 1. Central Forces under Arms Act.
 2. Government officials deployed in Embassies outside the country.
 3. A member of an state police force, serving outside the state.
- For the first time it is enabled through the dedicated portal for online registration of Service Voters.
- It is a fully secured system, having two security layers.
- Secrecy of voting is maintained through the use of OTP and PIN.
- It has a unique QR Code in the portal which prevents duplication of casted ETPB.
- With the motto of "No voter to be left behind", ETPBS empowered all eligible service voters to perform their right.

Source: PIB, The Indian Express



SHANKAR
IAS PARLIAMENT
Information is Empowering