

## Prelim Bits 02-09-2023 | UPSC Daily Current Affairs

### PSLV-XL variant

*Aditya-L1 will be launched with the PSLV-XL Variant (PSLV-C57) Launch Vehicle.*

### Polar Satellite Launch Vehicle (PSLV)

- **About** - Polar Satellite Launch Vehicle (PSLV) is the 3<sup>rd</sup> generation launch vehicle of India.
- It is the *first Indian launch vehicle* to be equipped with liquid stages.
- PSLV earned its title '*the workhorse of ISRO*' through consistently delivering various satellites into low earth orbits, particularly the IRS Series of satellites.
- **Features** - PSLV is a 4-stage/engine expendable rocket powered by solid and liquid fuels alternately, with 6 booster motors strapped onto the first stage to provide higher thrust during the initial flight moments.
- **Types** - ISRO has 5 types of PSLV rockets - Standard, Core Alone (no strap-on motors used), XL, DL, and QL.
- The major difference between them lies in the use of strap-on boosters, which in turn largely depends on the weight of the satellites to be orbited.
- The strap-ons are powered by the solid rocket propellant Hydroxyl-terminated polybutadiene (HTPB).
- **PSLV-XL** - The PSLV-XL is the 'full configuration' PSLV, fitted with 6 strap-on motors, the maximum for this expendable launch vehicle.

*Aditya-L1 mission aims to study the Sun's Corona, Chromosphere, and Photosphere and marks 25th flight of PSLV-XL.*

### Various important missions of PSLV XL Variants

Mission	Launch Vehicle (XL)	Location	Year
Chandrayaan-1	PSLV C-11	First mission to moon	2008
Mangalyaan	PSLV- C25	First mission to Mars	2013
AstroSat	PSLV-C30	India's first dedicated Space Astronomy Observatory	2015
EOS-06 satellite, and 8 nano-satellites	PSLV-C54	To orbit around the earth.	2022

TeLEOS-2	PSLV-C55	To observe Earth	2023
DS-SAR	PSLV-C56	To observe Earth	2023
Aditya L1 mission	PSLV-C57	First mission to Sun	2023

## References

1. [The Hindu | Flight of PSLV-XL variant in Aditya-L1 mission](#)
2. [Economic Times | PSLV-XL rocket](#)
3. [India Today | PSLV-C57 to space](#)

## Void & Voidable Marriages

The Supreme Court on its recent verdict says that a child born of a void or voidable marriage can inherit the parent's share in a joint Hindu family property governed by the Mitakshara law.

Voidable Marriage	Void Marriage
A voidable marriage is one that is made invalid by the husband or wife through a decree.	A void marriage is invalid at the very inception.
A wife has the right to claim maintenance in the voidable marriage.	A wife does not have the right to claim maintenance in the void marriage.
Husband and wife have the status in the voidable marriage.	In a void marriage, the parties do not have the status of husband and wife.
In a voidable marriage decree of nullity is required.	In a void marriage, no decree of nullity is required.
A void marriage is to be declared void by a competent court.	A void marriage is none in the eyes of law.
The children in a voidable marriage are treated as illegitimate but this distinction is deleted by the Supreme Court and said a child cannot be said termed as illegitimate.	The children in a void marriage are treated as legitimate.

*Endogamy and Exogamy are illegal in the view of Hindu Marriage Act, 1955.*

## Provision of Void and Voidable Marriages under Hindu Marriage Act, 1955

### Void Marriages (Section 11)

- A marriage is considered void under the Hindu Marriage Act if it doesn't fulfil the following conditions of *Section 5 of the Hindu Marriage Act*:
- **Bigamy** - If any of the parties have another spouse living at the time of marriage. It shall be considered as null and void.
- **Prohibited Degree** - If the parties are within a prohibited relationship unless the customs allows it.
- **Sapindas** - A marriage between the parties who are sapindas or in other words a

marriage between the parties who are of his or her relations or of the same family.

## Voidable Marriages (Section 12)

- A marriage is voidable on either side of the party is known as voidable marriage.
- The grounds where marriage can be termed as voidable:
- The party to the marriage is not capable of giving consent due to the unsoundness of mind.
- The party is suffering from mental disorder which makes her unfit for reproduction of children.
- If the party has been suffering from repeated attacks of insanity.
- The consent of marriage by either of the parties is done by force or by fraud. If either of the parties are under-aged, bridegroom under 21 years of age and bride under 18 years of age.
- If the respondent is pregnant with a child of someone other than the bridegroom while marrying.

## References

1. [The Hindu | void, voidable marriages](#)
2. [Legal Service India | Void Marriages Under Hindu Law](#)
3. [I Pleadings | Void and Voidable Marriages under Hindu Marriage Act](#)

## Mahendra giri & Project 17A

*The 7<sup>th</sup> and last stealth frigate of Project 17A, Mahendragiri, was launched into water at Mazagon Dock Shipbuilders Limited (MDL) in Mumbai recently.*

## Mahendragiri

- It is named after a mountain peak in Eastern Ghats located in the state of Odisha.
- **Aim** - To enhance India's naval capabilities in security in the Indian Ocean Region and the Indo-Pacific Region.
- **Developed by** - Mazagon Dock Shipbuilders, Mumbai.
- It is a technologically advanced warship and 7<sup>th</sup> ship of the Project 17A 'Shivalik Class' Frigates.
- **Features** - These warships are improved with stealth features, advanced weapons and sensors, and platform management systems.

## Project 17A

- Under Project 17A, a total of 7 ships were constructed, 4 at Mazagon Dock Shipbuilders, Mumbai and 3 at Garden Reach Ship Builders Limited (GRSE), Kolkata.

**7 Ships** - INS Nilgiri, INS Himgiri, INS Udaygiri, INS Dunagiri, INS Taragiri, INS Vindhyagiri and INS Mahendragiri. The ships will be named after the names of hill ranges in India.

- **Designed by** - It is designed as an in-house project by the Indian Navy's Warship Design Bureau (the organisation in charge of all warship design activities).

- The project is Align with the country's '*Aatma Nirbharata*' or *self-reliance campaign*, 75% of the orders for equipment and systems of Project 17A ships have been ordered from indigenous firms, including MSMEs.
- The previous 5 warships under Project 17A were launched during 2019-22.

## References

1. [The Hindu | Mahendragiri of Project 17A](#)
2. [The Hindustan Times | India's Mahendragiri launched in Mumbai](#)
3. [Live Mint | Indian Navy's warship Mahendragiri](#)

## Status of NCERT

*National Council of Educational Research and Training (NCERT) has been granted the deemed-to-be-university status by the Ministry of Higher Education recently.*

- The National Council of Educational Research and Training (NCERT) is an autonomous organization.
- **Origin** - It was set up in 1961 by the Government of India.
- **Aim** - To assist and advise the Central and State Governments on policies and programs for qualitative improvement in school education.
- **Objectives of NCERT**
  - To undertake, promote and coordinate research in areas related to school education;
  - Prepare and publish model textbooks, supplementary material, newsletters, journals and develops educational kits, multimedia digital materials, etc.
  - Organise pre-service and in-service training of teachers;
  - Develop and disseminate innovative educational techniques and practices;
  - Collaborate and network with state educational departments, universities, NGOs and other educational institutions;
  - Act as a clearing house for ideas and information in matters related to school education; and
  - Act as a nodal agency for achieving the goals of universalisation of elementary education.
- NCERT is an implementation agency for ***bilateral cultural exchange programmes*** with other countries in the field of school education.
- The NCERT also interacts and works in collaboration with the international organisations, visiting foreign delegations and offers various training facilities to educational personnel from developing countries.
- **Deemed-to-be-university Status** - It is a recognition to higher education institutions that excel in specific areas of study.
- **Advantages** - It will now be able to award its own graduate, postgraduate and doctoral degrees.
- It also can decide their own fees structure for their courses instead of following the structure or approach given by the Government.
- It has established a formidable presence in research, actively shaped school education, teacher training and adult literacy.
- **Initiatives - Jadui Pitara** - It is a play-based learning-teaching material tailored for

children between the age group of 3 and 8 years.

- NCERT will be developing educational material in all 22 languages with the help of software like Anuvadini and Bhashini.

## References

1. [The Hindu | NCERT gets Deemed-to-be-University status](#)
2. [NCERT | About](#)

## Climate Change effect in Polar Bears

*Scientists for the first time are able to directly quantify the impact of human-caused greenhouse gas emissions from specific sources on polar bear cub survival.*

- **Recent Findings** - Researchers estimated the relationship between how long bears fasted and each gigaton of cumulative emissions.
- It allowed them to calculate the impact of emissions from specific projects on future polar bear cub survival.
- The study makes a case for rescinding the 2008 opinion barring climate considerations because the Endangered Species Act requires federal agencies to use the best available scientific data.

## Polar bears

- **Habitat** - They occur in 19 subpopulations throughout the Arctic
  - 1 subpopulation - Increasing,
  - 5 - Stable
  - 4 - Decline,
  - 9 - Data deficient.
- **Food** - Ringed seals and Bearded seals and also scavenge carcasses or settle for small mammals, birds, eggs and vegetation.
- They are the ***only bear species*** to be considered ***marine mammals***.
- Polar bears can swim for long distances and steadily for many hours to get from one piece of ice to another.
- **Threats** - The oil and gas industry in arctic comes with the potential risks of habitat destruction of polar bears from oil exploration work.
- Polar bears can also be exposed to toxic chemicals such as pesticides through their prey, which can affect a bear's biological functioning and ability to reproduce.

*An innovative new technique developed by WWF and DNA specialist firm SPYGEN allows scientists to isolate DNA from a polar bear's footprint in the snow.*



## References

1. [The Hindu | greenhouse gases and polar bear survival](#)
2. [WWF | Polar bears](#)



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