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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 3rd 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 7th 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 7th 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 Vindhyaagiri and INS Mahendragiri. The ships will be named after the names of hill ranges in India.
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- **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](#)