

NATIONAL AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM (NAFIS)?

Union Home Minister recently congratulated the team of the NAFIS of NCRB for winning the Gold Award under the Excellence in Government Process Reengineering for Digital Transformation from the of Department of Administrative Reforms and Public Grievances.



About National Automated Fingerprint Identification System (NAFIS):

- The NAFIS is a pan-India searchable database of crime and criminal-related fingerprints. It is managed by the National Crime Records Bureau (NCRB) at the Central fingerprint bureau, based in New Delhi.
- The main objective of the web-based application is to collect fingerprint data of all the criminals from all the states and the Union Territories.
- It will enable law enforcement agencies to upload, trace and retrieve information from the database 24x7 in real-time.

The Working Process of NAFIS:

- NCRB enables law enforcement agencies to upload, trace, and retrieve data from the database.
- Within 24 hours, NAFIS provides a unique 10-digit National Fingerprint Number (NFN) to each criminal who is arrested for the crime.
- The unique ID will be used for a lifetime of an offender. Different crimes registered under different FIRs will be logged as incidents belonging to the same NFN.
- The first two digits of the ID will be the state code of the state where the criminal is registered, followed by a sequence number. The state partition will have IDs belonging to a state.
- Apart from this, a digital record will be added as storage to match the fingerprints in the future.

- With NAFIS, it is possible to locate a person of interest in a matter of minutes and connect that individual's name to any active warrants, warnings, or information about related criminal conduct stored in other police information reference systems.
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THE NATIONAL MANUSCRIPTS BILL 2023

Why in News?

- According to the sources in the Ministry of Culture, the government is planning to introduce the National Manuscripts Bill 2023, possibly in the Winter Session of Parliament.
- According to the National Mission for Manuscripts (NMM), India possesses an estimated 10 million manuscripts in 80 ancient scripts like Brahmi, Kushan, Gaudi, Lepcha, and Maithili.

What is Manuscript?

- A **manuscript is a handwritten composition** on paper, bark, cloth, metal, palm leaf or any other material dating back **at least 75 years** and has significant scientific, historical or aesthetic value.
- **Lithographs and printed volumes are not manuscripts.**
- Manuscripts are found in hundreds of different languages and scripts. Often, one language is written in a number of different scripts.
- **For example**, Sanskrit is written in Oriya script, Grantha script, Devanagari script and many other scripts.
- **Manuscripts are distinct from historical records** such as epigraphs on rocks, firmans, revenue records which provide direct information on events or processes in history.
- **Manuscripts have knowledge content.** For example, the Bakhshali manuscript is an ancient Indian mathematical text written on birch bark, and is considered to be the earliest recorded example of the use of zero.

What is the National Mission for Manuscripts (NMM)?

- An autonomous body under the Culture Ministry, NMM was launched in **2003** with the mandate of identifying, documenting, conserving and making accessible the manuscript heritage of India.
 - These cover a variety of themes, textures and aesthetics, scripts, languages, calligraphies, illuminations and illustrations.
- The NMM is a **national level comprehensive initiative** which works towards fulfilling its motto, '**conserving the past for the future**'.
- According to the NMM, **while 75% of the existing manuscripts are in Sanskrit**, 25% are in regional languages.
- **The NMM has digitised 3.3 lakh manuscripts, containing about 3.1 crore folios.** Even though more than 1.18 lakh manuscripts have been uploaded, only about 70,000 have been made available online for public access.

About the National Manuscripts Bill 2023:

- **The primary aim of the Bill is to -**
 - Document and catalogue Indian heritage texts wherever they may be, in India or abroad,
 - Maintain accurate and up-to-date information about them, and
 - Detail the conditions under which they may be consulted.
- The Bill envisages setting up a 10-member **National Manuscripts Authority (NMA)**, with the Union Minister of Culture would be the Chairperson of this body.
 - **The NMA would be the apex policy making body** with regard to digitisation, conservation, preservation, editing, and publication work of manuscripts.
 - **The NMA would have the powers of a civil court** to regulate the allocation of access to manuscripts and would also have an investigation wing for the purpose of conducting an inquiry into thefts and desecration of texts.
 - It would also ensure that the manuscripts are not lost by damage or theft.
 - **It can collaborate with universities** and other educational institutions or agencies to provide fellowships and scholarships for study of manuscripts.
 - **The NMA will also prepare a dedicated digital portal for indexing**, cataloguing, uploading, and downloading copies of manuscripts.

Significance of the National Manuscripts Bill 2023:

- There is a need to link studying and interpreting of manuscripts with livelihood.
 - Only then the importance of ancient manuscripts into the socio-cultural milieu can be brought back.
 - The Bill tries to achieve this objective. **For example**, the survey and documentation of Indian manuscripts abroad will definitely give a boost to an increased global interest in Indian manuscripts.
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RUSSIA'S LUNA 25

Why in news?

- Recently, Russia launched its first moon-landing spacecraft in 47 years in a bid to be the first nation to make a soft landing on the lunar south pole.
- The Russian lunar mission, Luna-25, the first since 1976, is racing against India, which launched its Chandrayaan-3 lunar lander last month.

Luna-25

- A Soyuz 2.1v rocket carrying the Luna-25 craft blasted off from the Vostochny cosmodrome, 5,550 kilometers east of Moscow, on August 11.
- As per Russia's Space chief, the lander is expected to touch down on the moon on August 21.
- India's mission to the moon cannot land before August 23, when it will be lunar dawn at the landing site.
- Luna-25, roughly the size of a small car, will aim to operate for a year on the moon's south pole.

Why is Russia reaching the moon earlier than India?

- Luna-25 was launched aboard its Soyuz rocket almost a month after the launch of Chandrayaan-3 (on July 14). However, it will cover the 3.84-lakh-km journey within days.
- This is because **the Russian mission was able to follow a more direct trajectory** towards the moon, owing to its lighter payload and more fuel storage.

- The lift-off mass for **Luna 25** is just **1,750 kg** as compared with the **3,900 kg** of **Chandrayaan-3**.
- To make up for the lower fuel reserve available on the LVM3 vehicle that launched India's mission, a more circuitous route was taken.
- After being launched around the Earth, the orbit of the spacecraft was increased in a series of manoeuvres to help it gain velocity.
- The spacecraft was then slingshot towards the moon, reaching the lunar orbit nearly 22 days after it was launched.
- Another reason Luna-25 can land a couple of days before India is because **lunar dawn at its landing site will happen earlier**.
- One lunar day is equal to 14 Earth days. With the payloads being powered by solar panels, landing at the beginning of a lunar day ensures that the experiments get the full 14 earth days.

How do the two missions differ?



Chandrayaan-3	Luna-25
Jul 14 9:05 UTC	Aug 10 23:10 UTC
LVM3 M4	Soyuz-2.1b/Fregat
Satish Dhawan Space Centre, India	Vostochny Cosmodrome, Russia
3,900 kg	1,750 kg
1,752 kg + 26 kg (Rover)	31 kg
South Pole	Boguslavsky
10 days + 5 days + 18 days	5 days + 7 days
Aug 23	Aug 22
14 Days	1 Year

- **Rover**
- Apart from being lighter than the Indian mission, Luna-25 does not carry a rover. Chandrayaan-3 has a rover capable of moving around 500 metres.
- **Scientific study**
- The Russian lander has eight payloads mainly to study the soil composition, dust particles in the polar exosphere, and most importantly, detect surface water.
- The Indian mission also has scientific instruments to study the lunar soil as well as water-ice.
 - The location near the southern pole was chosen because of the presence of craters that remain in permanent shadow, increasing the likelihood of finding water-ice.
- **Mission duration**
- The India mission is built to last only one lunar day or 14 earth days.
- This is because it does not have a heating mechanism to keep the electronics safe from the extreme cold temperatures during the lunar night.

- The Russian mission, on the other hand, will work for a year, meaning it has heating mechanism as well as a power source other than just solar panels.

Is India also in the race to land humans on moon?

- It was the discovery of water molecules by India's Chandrayaan-1 mission in 2008 that has propelled another race to the moon.
- The United States and China now have plans to take humans to moon again; a first after the cold war era.
- To date, only 12 men aboard US' Apollo Missions have set foot on the lunar surface.
- India with its limited resources has been able to catch up with countries with more advanced and older space agencies.
- However, there is still a long way to go before humans can be sent to the moon.
- India is yet to announce a **sample return mission**, although planning for a fourth mission to moon with Japan as a partner is underway.
- A sample return mission refers to a space mission that is designed to land on the Moon, collect samples of lunar material and then return those samples to Earth for scientific analysis.
- India needs to first achieve human spaceflight before sending astronauts to the moon.
- There is a need for the space agency to develop heavier launch vehicles.
- Currently, our heaviest launch vehicle has the capability of carrying only 4 tonnes of satellites to the geostationary Transfer Orbit.”
- In comparison, SpaceX' Falcon 9 can carry over 26 tonnes.

How have India and Russia collaborated on moon missions and other space activities?

- India and Russia have been long-time collaborators, especially when it comes to space activities.
- Russia was initially supposed to design the lander-rover for India's Chandrayaan-2 mission. However, it withdrew after the failure of its Fobos Grunt mission to one of Mars' moons.
- This then prompted India to develop the lander-rover independently.
- This is the reason there is a gap of 11 years between the Chandrayaan-1 and Chandrayaan-2 missions.

- Also, the predecessors of the LVM3 that launched Chandrayaan-3 were based on cryogenic engines sold to India by Russia.
- India later developed the technology on its own.

HYDROPONICS FARMING

Recently, the Union Minister of Agriculture and Farmers' Welfare informed the Lok Sabha that ICAR-Indian Institute of Horticulture Research, Bengaluru (IIHR) has developed a variant of hydroponics.



About Hydroponics Farming:

- Hydroponics is a viable alternative to traditional farming methods for **soil less cultivation** for enhancing productivity and water use efficiency.
- Hydroponics is a new concept in India and gaining popularity among entrepreneurs and innovative farmers, who are looking for sustainable and efficient ways to grow crops.
- At present, this technology is mostly confined to urban farming, rooftop gardening and commercial farming.
- **Cocoponics” or the Soilless production of vegetables**, using **cocopeat as a substrate**, which has been found to be comparatively more successful in many vegetable crops.

PRADHAN MANTRI BHARATIYA JAN AUSHADHI KENDRAS

Railways Ministry will establish Pradhan Mantri Bharatiya Janaushadhi Kendras at railway stations across the country.



About Pradhan Mantri Bhartiya Jan Aushadhi Kendras

- These are set up under **Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana**, which was launched by the Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers in November 2008.
- **Objective:** To provide quality medicines at affordable prices for all, particularly the poor, so as to reduce out-of-pocket expenses in healthcare.

- They **provide generic drugs**, which are available at lesser prices but are equivalent in quality and efficacy as expensive branded drugs. All therapeutic medicines are made available from Jan Aushadhi Stores.
- Jan Aushadhi stores also sell allied medical products commonly sold in chemist shops so as to improve the viability of running the Jan Aushadhi store.
- **Pharmaceutical & Medical Devices Bureau of India (PMBI)** has been established under the Department of Pharmaceuticals, Govt. of India, with the support of all the CPSUs for co-ordinating procurement, supply, and marketing of generic drugs through the PMBKs.

Who can open a Jan Aushadhi Kendra?

- **State Governments** or any organization / reputed NGOs / Trusts / Private hospitals / charitable institutions / Doctors / Unemployed pharmacists/ individual entrepreneurs are eligible to apply for the new Jan Aushadhi Kendra.
- The applicants shall have to employ one B Pharma / D Pharma degree holder as Pharmacist in their proposed store.

WHAT IS UNFPA?

A project of the **United Nations Population Fund (UNFPA)** for gender sensitivity in Rajasthan has received support from the experts working for the elimination of customs promoting patriarchy.



About United Nations Population Fund:

- It is an international development agency created in 1968 to **support the execution of projects and programmes in the area of population and sexual and reproductive health.**
- Its mission is to deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled.
- In 1987, it was officially renamed as the United Nations Population Fund but the original abbreviation UNFPA (United Nations Fund for Population Activities) was retained.



CROSS & CLIMB ROHTAK



- **Headquarters:** New York
 - It is **not directly responsible for the collection of primary statistics**; it plays an important role in the technical and financial support of statistical activities in countries, such as population censuses and thematic surveys etc.
 - UNFPA funds assistance, research, and advocacy programs in three major areas:
 - **Reproductive health**, including family planning, safe motherhood, and the prevention and treatment of sexually transmitted diseases,
 - The population problems of developed and developing countries and possible strategies for addressing them.
 - Issues related to the status of women, including the gender gap in education.
 - UNFPA assistance programs are undertaken only in response to government requests.
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