

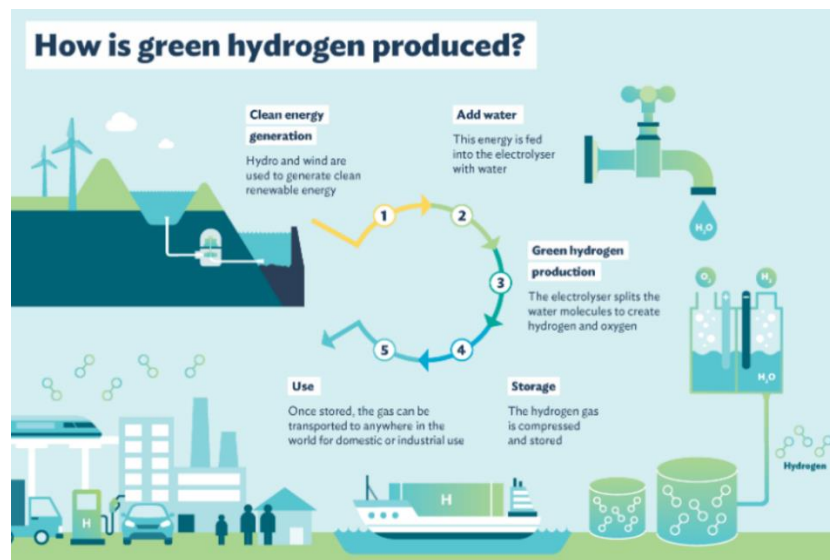
September - 17

TNPSC BITS

- ❖ Ian Wilmut of United Kingdom, the cloning pioneer whose work was critical to the creation of Dolly the Sheep in 1996, has passed away.

TAMIL NADU

IIT-M green hydrogen initiative



- ❖ IIT Madras will work with industries on R&D and developing testing/validation standards in 'Green Hydrogen'.
- ❖ This is part of the 'Hydrogen Valley Innovation Cluster in Tamil Nadu' (HVIC-TN) initiative.
- ❖ This will comprise nearly 30 companies working in the hydrogen sector.
- ❖ It will be including IIT-M Research Park and Tamil Nadu Industrial Development Corporation.
- ❖ 'Green Hydrogen is the hydrogen which derived from renewable energy sources, either via electrolysis or biomass conversion.

NATIONAL

Project Samudra Yaan

- ❖ The Samudrayaan project is expected to be realized by 2026.

- ❖ It is being designed and developed by the National Institute of Ocean Technology (NIOT) in Chennai.
- ❖ The submersible vehicle is named 'MATSYA 6000'.
- ❖ This has an endurance of 12 hours under normal operation and 96 hours in case of emergency for human safety.
- ❖ This project is aimed at exploring the deep ocean and its resources.
- ❖ It is set to send three personnel to a depth of 6000 meters in a submersible vehicle.
- ❖ This India's first manned ocean mission is designed to study deep-sea resources and conduct biodiversity assessments.
- ❖ The project is part of the larger Deep Ocean Mission, which supports the centre's Blue Economy policy.



Unique terracotta figurines at Moodbidri

- ❖ Ancient terracotta figurines were found in Karnataka dating back to 800-700 BCE.
- ❖ They are in different stages of preservation, with bone and iron pieces.
- ❖ They were found inside the surface of dolmens, which was disturbed by treasure hunters.

- ❖ This megalithic dolmen site is located at Mudu Konaje near Moodbidri in Dakshina Kannada district of Karnataka.
- ❖ Megalithic culture is known by its different types of burials and use of iron in India.



ECONOMY

Inward & Outward FDI Trends 2023

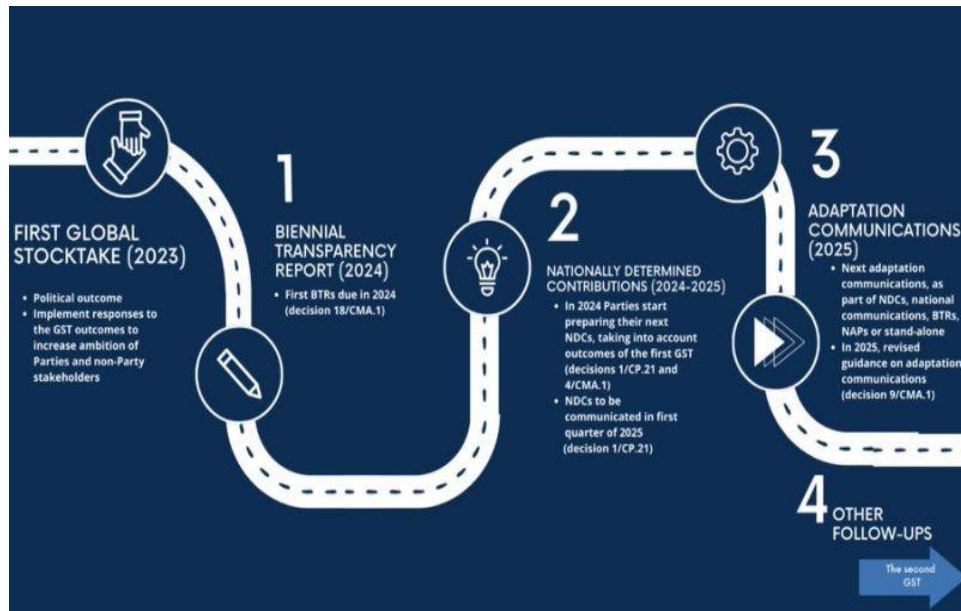
| OUTWARD DIRECT INVESTMENT FROM INDIA | | | |
|---|--------------|--------------|--------------|
| COUNTRY | 2022 | 2023 | SHARE |
| Singapore | ₹182,200 cr | ₹203,233 cr | 22.3% |
| USA | ₹102,078 cr | ₹124,123 cr | 13.6% |
| UK | ₹84,075 cr | ₹116,398 cr | 12.8% |
| Netherlands | ₹97,723 cr | ₹106,395 cr | 11.7% |
| UAE | ₹55,608 cr | ₹87,459 cr | 9.6% |
| Mauritius | ₹70,392 cr | ₹76,881 cr | 8.4% |
| Switzerland | ₹26,130 cr | ₹28,228 cr | 3.1% |
| Bermuda | ₹11,515 cr | ₹12,582 cr | 1.4% |
| Jersey | ₹13,198 cr | ₹11,661 cr | 1.3% |
| Cyprus | ₹10,142 cr | ₹9,985 cr | 1.1% |
| Other Countries | ₹1,09,591 cr | ₹1,34,124 cr | 14.7% |
| All Countries | ₹7,62,652 cr | ₹9,11,069 cr | 100.0% |

- ❖ The Reserve Bank of India report shows that Total outward direct investment by Indian firms rose by 19.46% in FY2023.
- ❖ Outward direct investment (ODI) is a business strategy in which a domestic firm expands its operations to a foreign country.
- ❖ It is different from the foreign portfolio investment.

- ❖ Singapore was the largest beneficiary of outward direct investment (ODI) by Indian firms.
- ❖ Bermuda, Jersey and Cyprus, known for their tax benefits are in the top 10 countries that received Indian ODI.

REPORTS AND INDICES

Global Stock take Report

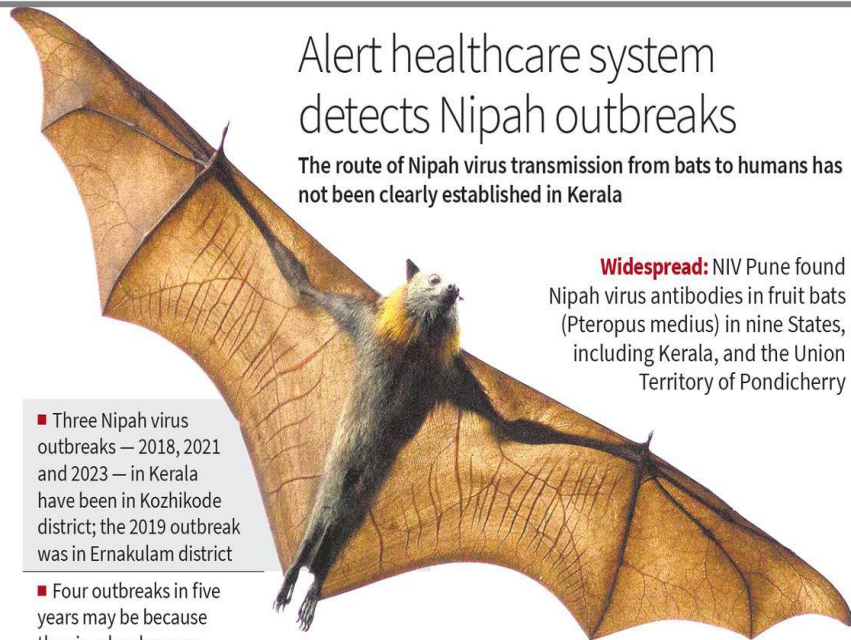


- ❖ The United Nations climate secretariat made public a ‘synthesis report’.
- ❖ The synthesis report ties into a larger exercise called the ‘global stocktake’.
- ❖ It is expected to take place once in five years.
- ❖ In 2015, global countries committed in Paris to keep global temperatures from rising beyond 2 degrees Celsius by the end of the century and “as far as possible” below 1.5 degrees Celsius.
- ❖ They also agreed to periodically review, or take stock of efforts, made by individual countries in containing greenhouse gases and transitioning their fossil-fuel dependent energy systems to renewable sources.
- ❖ The report suggests that the world is not on track to achieve Paris Agreement targets.
- ❖ The NDCs of 166 countries were analysed to conclude that they were inadequate to meet Paris-agreed targets.
- ❖ Much more ambition was needed to reduce global greenhouse gas emissions by 43% by 2030.

- ❖ It is also required further by 60% in 2035 and reach net zero CO2 emissions by 2050 globally.
- ❖ 5.8-5.9 trillion USD in the pre-2030 period is required for developing countries to achieve the result.
- ❖ Also, 4 trillion USD is needed per year for clean energy technologies by 2030 to reach net zero by 2050.

STATES

Nipah Virus in Kerala



Alert healthcare system detects Nipah outbreaks

The route of Nipah virus transmission from bats to humans has not been clearly established in Kerala

Widespread: NIV Pune found Nipah virus antibodies in fruit bats (*Pteropus medius*) in nine States, including Kerala, and the Union Territory of Pondicherry





- Three Nipah virus outbreaks — 2018, 2021 and 2023 — in Kerala have been in Kozhikode district; the 2019 outbreak was in Ernakulam district
- Four outbreaks in five years may be because the virus has become endemic in bats in Kerala, or due to thorough investigation of undiagnosed fever cases for possible Nipah virus infection or both
- Except in NIV Pune, there is no Nipah virus testing facility anywhere in India. Kerala screens for Nipah virus routinely in a molecular lab in Calicut Medical College
- Patients with unusual symptoms are tested for Nipah virus, the reason why Kerala might be detecting Nipah cases
- Patients who tested positive for Nipah virus in 2023 had only respiratory symptoms not reported anywhere in the world before. Nipah virus detection still became possible due to doctors' high index of suspicion
- In the latest outbreak, a combination — possible index case, clustering of cases, unusual symptoms, and proximity to the 2018 outbreak epicentre — led to testing for Nipah virus

- ❖ Nipah virus strain found in Kerala is the Bangladesh variant.
- ❖ It spreads from humans and is characterised by high mortality despite lower infectivity.
- ❖ There is no vaccine for the virus till date.

- ❖ It spreads through contact with the bodily fluids of infected bats, pigs, or humans.
- ❖ It has a mortality rate of up to 75% among those infected.

Mob Lynching Victim Compensation Scheme 2023

Stalled crackdown
A brief look at anti-lynching Bills passed by four States that are caught in a question of definition

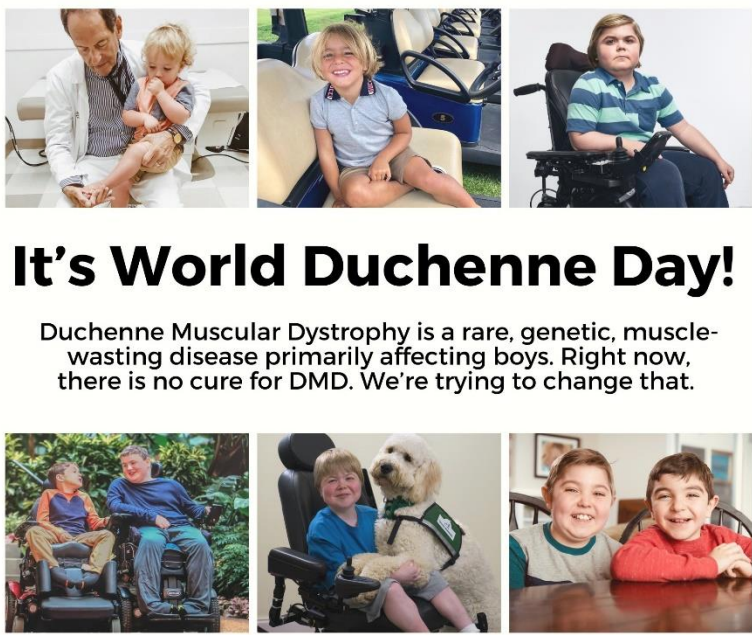
| | | | |
|---|---|--|--|
| JHARKHAND The Prevention of Mob Violence and Mob Lynching Bill, 2021, provides for punishment ranging from three years in prison to life imprisonment, in case of death of the victim. Those convicted may be fined between ₹3 lakh and ₹25 lakh depending on the severity of the crime |  | RAJASTHAN The Rajasthan Protection from Lynching Bill, 2019, provides for life imprisonment and a fine from ₹1 lakh to ₹5 lakh to those convicted in cases of mob lynching leading to the victim's death |  |
| MANIPUR The Manipur Protection from Mob Violence Bill, 2018, proposes rigorous life imprisonment for those involved in mob violence, if it results in the death of a victim |  | WEST BENGAL The West Bengal (Prevention of Lynching) Bill, 2019, has a provision for death sentence. It proposes a jail term from three years to life imprisonment for those involved in assaulting and injuring a person. The Bill, while defining terms such as "lynching" and "mob", says the West Bengal Lynching Compensation Scheme may be framed under it |  |

- ❖ Madhya Pradesh government will provide ₹10 lakh as compensation to the kin of any person killed in a mob lynching incident.
- ❖ There will be a provision of compensation of ₹4 to ₹6 lakh for the injured.
- ❖ This will also include all those incidents of mob lynching which occur due to religion, caste, language or any other reason.
- ❖ A provision has been made to provide compensation to the kin of the mob lynching victim

- ❖ Under the scheme, mob lynching will be considered in which five or more accused are involved.

IMPORTANT DAYS

World Duchenne Muscular Dystrophy Day 2023 - September 07



It's World Duchenne Day!

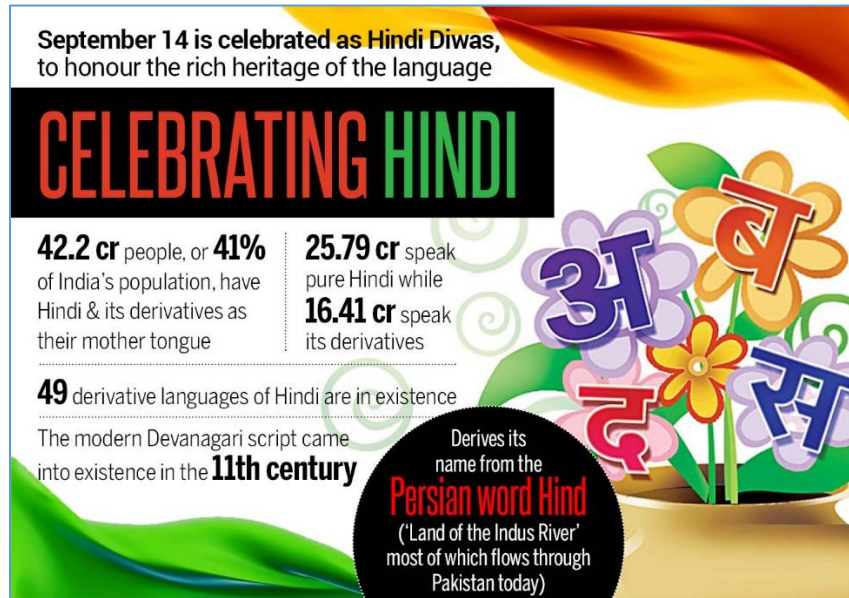
Duchenne Muscular Dystrophy is a rare, genetic, muscle-wasting disease primarily affecting boys. Right now, there is no cure for DMD. We're trying to change that.

- ❖ This Day is observed each year to raise awareness about Duchenne muscular dystrophy.
- ❖ The purpose of the day is to support efforts that will improve the quality of life for those who have dystrophinopathies through education, advocacy, and social inclusion.
- ❖ This rare degenerative illness makes muscles weaker over time until it affects the entire body.
- ❖ One in five thousand boys are born with the condition.
- ❖ It results from an X-chromosome mutation.

Hindi Diwas 2023 - September 14

- ❖ The Constituent Assembly of India accepted Hindi, written in Devanagari script, as the official language of India on September 14, 1949.
- ❖ On this day in 1916, Beohar Rajendra Singh was born, who played a key role in bringing Hindi to Devanagari script.

- ❖ The first Hindi Day was celebrated on September 14, 1953.



September 14 is celebrated as **Hindi Diwas**, to honour the rich heritage of the language

CELEBRATING HINDI

42.2 cr people, or **41%** of India's population, have Hindi & its derivatives as their mother tongue

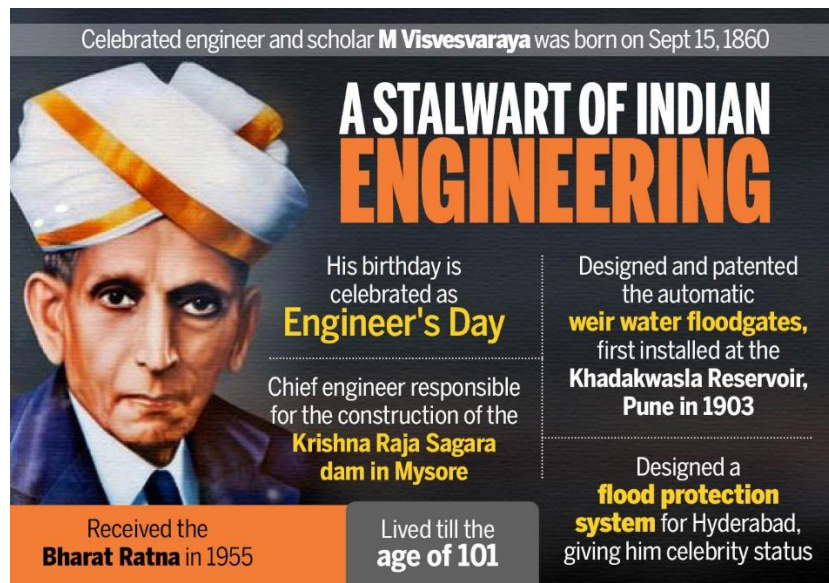
25.79 cr speak pure Hindi while **16.41 cr** speak its derivatives

49 derivative languages of Hindi are in existence

The modern Devanagari script came into existence in the **11th century**

Derives its name from the **Persian word Hind** ('Land of the Indus River' most of which flows through Pakistan today)

National Engineer's Day 2023 - September 15



Celebrated engineer and scholar **M Visvesvaraya** was born on Sept 15, 1860

A STALWART OF INDIAN ENGINEERING

His birthday is celebrated as **Engineer's Day**

Chief engineer responsible for the construction of the **Krishna Raja Sagara dam in Mysore**

Received the **Bharat Ratna** in 1955

Lived till the **age of 101**

Designed and patented the automatic **weir water floodgates**, first installed at the **Khadakwasla Reservoir, Pune in 1903**

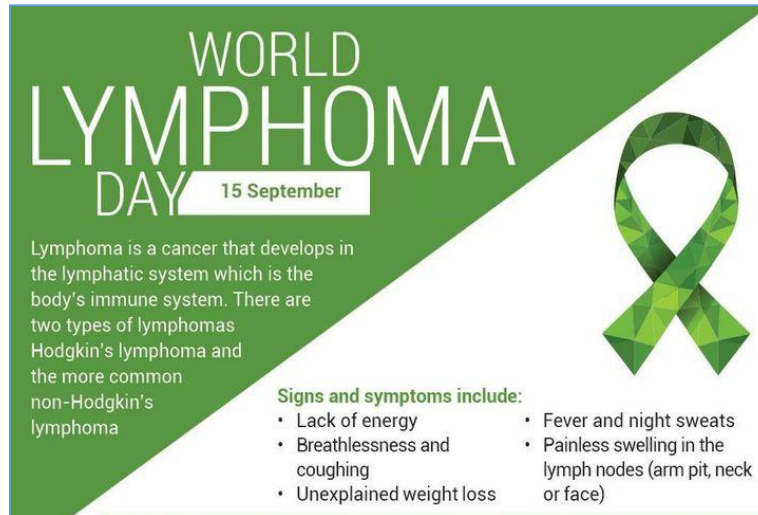
Designed a **flood protection system** for Hyderabad, giving him celebrity status

- ❖ This day serves as a tribute to Visvesvaraya's legacy and acknowledges the contributions made by engineers to India's growth and development.
- ❖ It commemorates the birth anniversary of Mokshagundam Visvesvaraya.
- ❖ Sir Visvesvaraya was a pioneer who significantly influenced the growth of India's infrastructure.
- ❖ He was instrumental in the development of dams, irrigation networks and other projects.



- ❖ He is also known as the Father of Engineering in India.
- ❖ He served as the 19th Diwan of Mysore from 1912 to 1918.
- ❖ He is known as the 'maker of modern Mysore'.
- ❖ The theme for 2023 is 'Engineering for a sustainable future'.

World Lymphoma Awareness Day 2023 - September 15



- ❖ This day aims to educate the public about lymphoma and seeks to provide support and information to lymphoma patients and their families.
- ❖ Lymphoma is a group of blood cancers that affect the lymphatic system, a part of the body's immune system.
- ❖ Lymphomas can occur in various forms, with the two main types being Hodgkin lymphoma and non-Hodgkin lymphoma.

