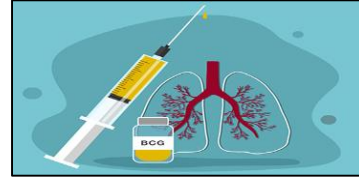


BCG Vaccine

❖ Context

- The BCG vaccine, typically administered to prevent tuberculosis, did not provide any significant protection against Covid-19 infection to healthcare workers, a new study said.



❖ Key Highlights

- The clinical trial to repurpose the BCG vaccine against Covid-19 started **during the early days of the pandemic** when there were fewer ways to treat Covid-19.
- The current study was supposed to have 10,000 participants from five countries and continue for 12 months, but was stopped once mRNA vaccines were developed.
- The paper reported the results of a trial where 4,000 adults were observed over six months.
- The BCG vaccine has existed for over 80 years and is part of India's Universal Immunisation Programme.
- The vaccine **contains weakened strains of Mycobacterium tuberculosis**.
- It is administered to fight against **tuberculosis, meningitis** and other respiratory tract infections.

❖ Meningitis

- **Meningitis is an infection and inflammation** of the fluid and membranes surrounding the brain and spinal cord.
- These membranes are called meninges.
- The inflammation from meningitis typically triggers symptoms such as headache, fever and a stiff neck.
- Most cases of meningitis in the United States are caused by a viral infection.
- But bacteria, parasites and fungi also can cause it.
- **Route of Transmission** - Most bacteria that cause meningitis such as **meningococcus, pneumococcus and Haemophilus influenzae** are carried in the human nose and throat.
- Some cases of meningitis improve without treatment in a few weeks. Others can cause death and require emergency antibiotic treatment.
- In 2021, **WHO** launched the first-ever global strategy to defeat meningitis - '**Global Roadmap to Defeat Meningitis by 2030**'.

❖ About Tuberculosis Disease

- TB is an **infectious disease** caused by the **bacillus Mycobacterium tuberculosis**.
- It typically **affects the lungs (pulmonary TB)** but can also affect other sites like the brain, eyes and spine.
- The disease is spread when people who are sick with pulmonary TB **expel bacteria into the air, for example by coughing**.
- **Directly observed treatment (DOTs)** :
 - **Short-course** (DOTS, also known as TB-DOTS) is the name given to tuberculosis (TB) control strategy recommended by the World Health Organization.
 - It was also deployed by India to curb the menace of TB.

❖ Govt Initiative: Dare2eraD TB

- The government announced the launch of **Data-Driven Research to Eradicate TB- "Dare2eraD TB"** by the Department of Biotechnology, M/o Science & Technology, on the occasion of World TB Day in 2022.
- Dare2eraD TB will be the **umbrella TB program of DBT** comprising of following key initiatives -
 - **InTGS** - Indian Tuberculosis Genomic Surveillance Consortium
 - **InTBK Hub**- Indian TB Knowledge Hub- Webinar Series
 - **Host Directed therapies against TB** and developing an evidence-based regimen for treating extra-pulmonary Tuberculosis.
- Indian Tuberculosis Genomic Surveillance Consortium (InTGS) is proposed on lines of the Indian SARS-CoV-2 Genomic Consortia (INSACOG) for Whole Genome Sequencing, (WSG) TB surveillance.

Bihan Mela

❖ Context

- Since 2019, members of the Kondh tribe in Odisha's Nayagarh district have added one more event, Bihan Mela to their calendar of festivals and celebrations.



❖ Key Highlights

- Bihan Mela means the **seed festival**.
- The event is participated by farmers from as many as 40 villages in Dasapalla block, surrounded by hills and forests.
- Preparations **begin as soon as farmers have harvested kharif crops**, which includes both hybrid and indigenous varieties of paddy, millets, maize and sorghum.
- **Women, who are at the helm of this festival**, carefully collect seeds of the indigenous varieties and store them in earthen pots.
- Then, on a designated day in December, they decorate the pots with red and white motifs.
- They place them in a bamboo basket and carry it on head to the village where the fair is being organised.

- Along the way, they are accompanied by men beating drums and other traditional instruments.
- **Significance** :
 - Farmers in the **Kondh Villages of Odisha** are mostly marginal and depend on the monsoon rains.
 - In recent years, they have seen repeated crop failures either due to erratic rainfall or pest attacks.
 - The seed festival was thus introduced to **help farmers return to their traditional ways of farming like mixed cropping**.

Face to Face Centres

Melanistic Tiger



❖ Context

- A rare melanistic tiger was found dead in the core area of Similipal Tiger Reserve (STR) area.

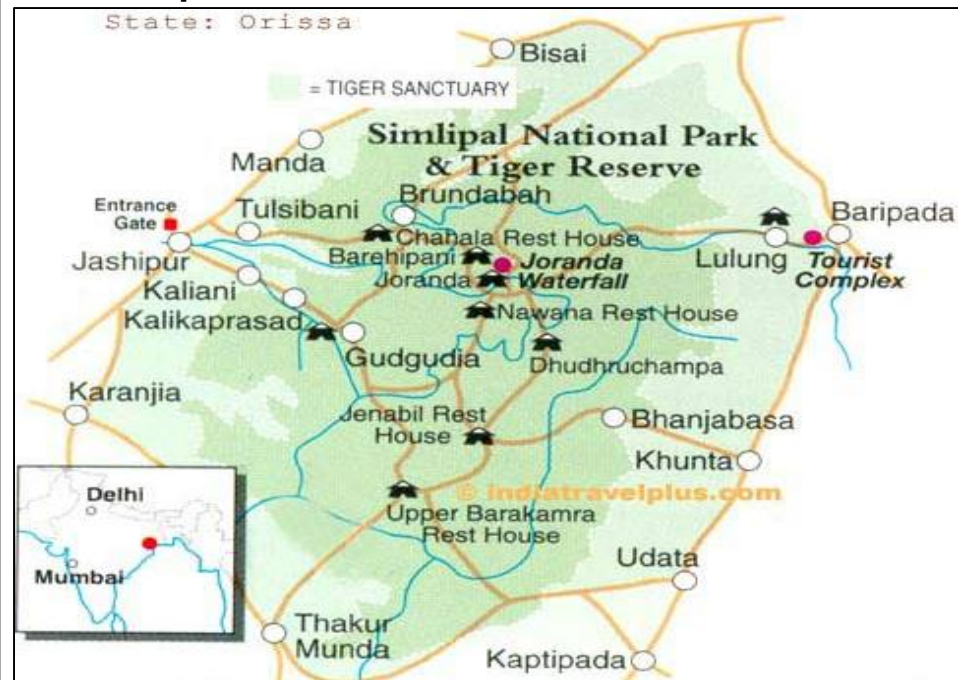
❖ About Melanistic Tiger:

- Melanistic tigers, also known as **black tigers**, are a rare color variant of the Bengal tiger and other tiger subspecies.
- The STR first reported the presence of melanistic tigers in 2007. The 2016 tiger census revealed **six such tigers in the reserve**.
- They have a genetic condition called **melanism**, which results in an excess of dark pigment in the **skin and fur, making the tiger appear black**.
- It is estimated that only about 1 in 10,000 tigers is melanistic.
- The tiger, *Panthera tigris*, is listed as '**Endangered**' on the IUCN Red List of Threatened Species.
- Despite their rarity, melanistic tigers have not been recognized as a separate subspecies, as their black coloration does not appear to affect their behavior or ecological role in the same way that other color variants, such as white tigers, do.

❖ Similipal Tiger Reserve:

- Similipal Tiger Reserve is a protected area and wildlife sanctuary located in the **Mayurbhanj district** of Odisha, India.
- It was established in 1956 and covers an area of **2,750 square kilometers**.
- The reserve is named after the Similipal hill range, which is situated in the center of the reserve.

- The reserve is home to a variety of flora and fauna, including tigers, elephants, leopards, wild boars, **barking deer, sambar deer, gaurs**, and many other species of mammals, birds, and reptiles.
- The park is also famous for its beautiful waterfalls, including the **Barehipani** and **Joranda waterfalls**, which are among the tallest waterfalls in India.
- Similipal Tiger Reserve is one of the largest tiger reserves in India and is also a designated **UNESCO Biosphere Reserve**.



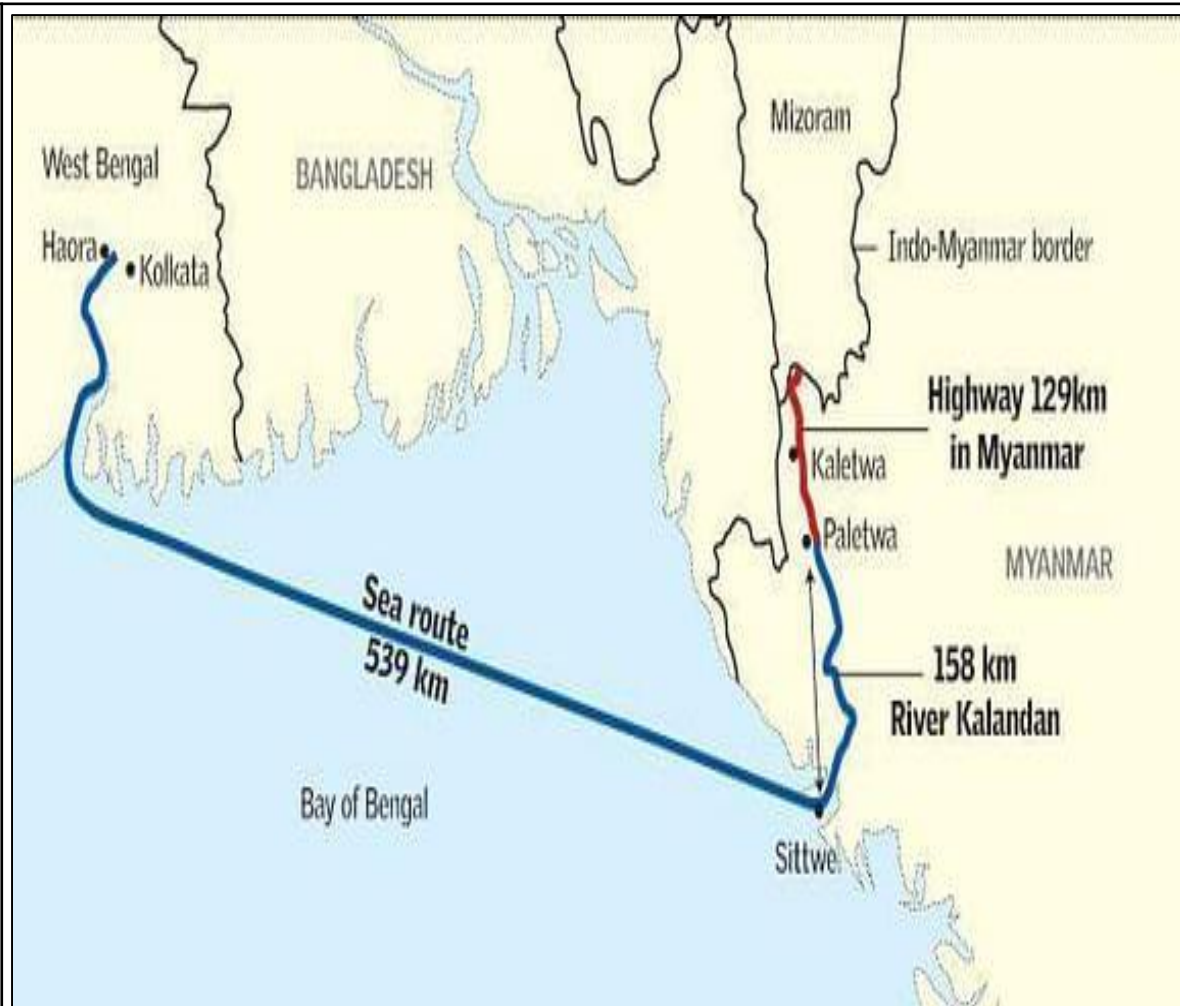
Kaladan Multimodal Transit Transport project (KMTTP)

❖ Context

- The waterway part of the Kaladan Multimodal Transit Transport project will become operational in May 2023, 15 years after it was approved.

❖ Key Highlights:

- The project is aimed at **boosting trade and commerce** between India and Myanmar and easing access to other South Asian countries.
- It will also provide a strategic alternate link connecting the landlocked northeastern states to the rest of India and easing the pressure on the **existing narrow Siliguri corridor**.
- The port will transport bulk cargo such as **cement, pulses, and food grains**.
- KMTTP connects Kolkata to Sittwe port, which is further linked to **Paletwa in Myanmar through a waterway route along the river Kaladan**.
- A 110 km road is being built from Paletwa to Zorinpui at Mizoram on the Indo-Myanmar border.
- Zorinpui is further connected to Lawngtlai through a **100 km road**, and an existing highway connects it to Aizawl, which in turn is linked to other **northeastern cities, including Guwahati**.



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Hate Speech

❖ Context

- Recently, the Supreme Court directed States to suo motu register FIRs on hate speech incidents and proceed against offenders without waiting for someone to lodge a complaint.



❖ Key Highlights

- There is **no specific legal definition** of 'hate speech'
- In general, hate speech is considered a **limitation on free speech** that seeks to prevent or bar speech that exposes a person or a group or section of society to hate, violence, ridicule or indignity.
- **Provisions in law criminalise speeches, writings, actions, signs and representations** that foment violence and spread disharmony between communities and groups and these are understood to refer to 'hate speech'.

❖ Indian Laws With Respect to Hate Speech

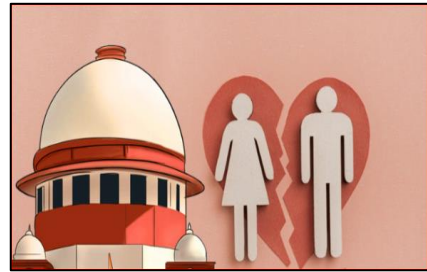
- In the **267th Report of the Law Commission of India**, hate speech is stated as an incitement to hatred primarily against a group of persons defined in terms of race, ethnicity, gender, sexual orientation, religious belief and the like.

- **Sections 153A and 153B of the IPC:** Punishes acts that cause enmity and hatred between two groups.
- **Section 295A of the IPC:** Deals with punishing acts which deliberately or with malicious intention outrage the religious feelings of a class of persons.
- **Sections 505(1) and 505(2):** Make the publication and circulation of content which may cause ill-will or hatred between different groups an offence.
- **Section 8 of RPA Act 1951:** Prevents a person convicted of the illegal use of the freedom of speech from contesting an election.
- **Sections 123(3A) and 125 of the RPA:** Bars the promotion of animosity on the grounds of race, religion, community, caste, or language in reference to elections and include it under corrupt electoral practices.

Irretrievable Breakdown of Marriage

❖ Context

- Recently, the Supreme Court of India ruled that it could use its discretionary powers under **Article 142 of the Constitution** to grant couples divorce by mutual consent, bypassing the mandatory six to 18-month cooling-off period.



❖ Key Highlights:

- The court also said it could use this power to quash pending criminal or legal proceedings between the couples, wiping the slate **clean for them to start afresh**. The judgment noted that the existing law of divorce, which is built predominantly on **assigning fault to one partner**, fails to serve broken marriages.
- The court held that the Supreme Court could grant divorce on the ground of "irretrievable breakdown of marriage" using **Article 142**, if the separation is inevitable and the damage is irreparable.
- However, the court clarified that this power was not a matter of right but a **discretion** to be exercised with great care and caution.

- Factors such as the **duration of the marriage**, the period of litigation, and attempts at reconciliation would be considered before invoking Article 142 in matrimonial cases.
- The court held that the cooling-off period of six to 18 months was meant for couples to introspect, but in cases **where divorce was inevitable**, it only caused misery and pain without any benefit.
- **Art 142:** Under **Article 142(1)**, the Supreme Court may pass decrees or orders "as is necessary for doing complete justice in any cause or matter pending before it."
- **Note:** A Constitution Bench comprising Justices **Sanjay Kishan Kaul, Sanjiv Khanna, A.S. Oka, Vikram Nath, and J.K. Maheshwari** pronounced the verdict.

Gangetic Dolphin

❖ Context

- Recently, thickly knitted fishing gill nets have caused the death of yet another river dolphin leaving the West Bengal fishery and the forest officials in jeopardy.



❖ Key Highlights

- Gill nets used indiscriminately in the **Bhagirathi** river by the fishermen communities have been killing the endangered Gangetic Dolphins over the years.
- **About Gangetic Dolphin**
- It is **one of five species of river dolphin found around the world**. It is found mainly in the Indian subcontinent, particularly in **Ganga-Brahmaputra-Meghna & Karnaphuli-Sangu river systems**. An adult dolphin could weigh between **70 kg and 90 kg**.
- The breeding season of the Gangetic dolphin extends from January to June.
- Ganges River Dolphin as the **National Aquatic Animal of India**.

- **Conservation Status :**
 - IUCN Red List- Endangered
 - WPA Act 1972- Schedule 1
 - CITES- Appendix I
 - CMS- Appendix 2

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News in Between the Lines

Command Cyber Operations and Support Wings



❖ Context

- The Indian Army has decided to establish **Command Cyber Operations and Support Wings (CCOSWs)** and nominate Lead Directorates and Test Bed formations to incorporate niche technologies and enhance fighting capabilities, including in cyberspace.

❖ Key Highlights:

- CCOSWs will aid the Indian Army in countering adversary cyber warfare capabilities and safeguarding networks.
- **Cyberspace** is now a crucial domain for conventional and grey zone operations, and CCOSWs will enhance readiness levels.
- The Indian Army is **rapidly transitioning** to net centricity, which relies on modern communication systems at all levels.
- To enhance fighting potential, the Army is incorporating a range of **tech-enabled equipment, including drones, loiter weapon systems, and anti-drone apparatus.**
- The Army Commanders Conference recognizes the importance of reviewing tech human resource capabilities to **maintain an effective and lethal fighting force.**
- The Army will modify the Technical Entry Scheme for BTech graduates to officers, shifting to the **3+1 TES model** from January 2024.
- The new four-year training model will ensure **availability of young officers** for an additional year, according to Army sources.

Shilabhatarika



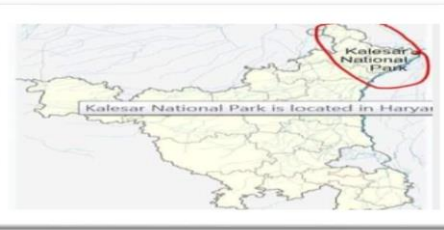
❖ Context

- Researchers at the **Bhandarkar Oriental Research Institute (BORI)** in Pune have recently decoded copper plate manuscripts belonging to the **Chalukyan dynasty.**

❖ Key Highlights:

- These **manuscripts** provide new information about the **7th century Sanskrit poetess, Shilabhatarika**, who was previously believed to be the wife of the **8th century Rashtrakuta ruler, Dhruva.** However, the newly discovered information reveals that Shilabhatarika was actually the daughter of "**Satyashraya**", a title associated with the **Chalukyan Emperor, Pulakeshin II of Badami.**
- Shilabhatarika's poetry follows the **Panchali style**, which emphasizes the balance between words and their meanings.

Kalesar National Park



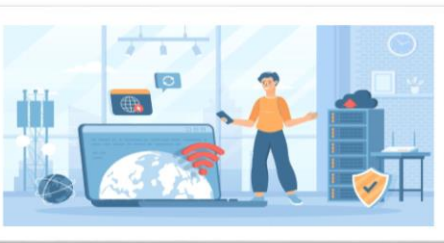
❖ Context

- The **Haryana forest department** has initiated a search for the pug marks of a tiger that was captured in a camera trap in **Kalesar National Park (KNP).**

❖ Key Highlights:

- Kalesar National Park is a protected area located in the **Yamunanagar district** of the Indian state of **Haryana.**
- The park covers an area of approximately **50 square kilometers** and is home to a diverse range of **flora and fauna**, including **tigers, leopards, elephants, and various species of deer.**

Bluebugging



❖ Context

- Concerned over an increase in instances of cybercrime, Andhra Pradesh police recently asked the people to be wary of "bluebugging."

❖ Bluebugging:

- Bluebugging is a technique that **allows skilled hackers to access mobile commands on Bluetooth-enabled devices** that are in discoverable mode.
- Once a device or phone is bluebugged, a hacker can listen to the calls, read and send messages and steal and modify contacts.
- Initially, bluebugging focused on eavesdropping or bugging a computer with Bluetooth capability. With the increasing use of smartphones, cybercriminals shifted to hacking mobile phones.
- This attack is often limited due to the range of Bluetooth connections, which goes up to only 10 meters. Some attackers use booster antennas to widen their attack range.

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