



TATHASTU
Institute of Civil Services

DAILY CURRENT AFFAIRS



28th & 29th January, 2024

53/1, Upper Ground Floor, Bada Bazar Road, Old Rajinder Nagar, New Delhi -110060

www.tathastuics.com

9560300770, 9560300554

enquiry@tathastuics.com



S.NO.	TOPIC
1.	WHAT ARE THE RBI'S GUIDELINES ON STATE 'GUARANTEES'?
2.	SAPINDA MARRIAGES IN INDIA
3.	PRELIMS POINTERS

WHAT ARE THE RBI'S GUIDELINES ON STATE 'GUARANTEES'?

SOURCE: THE HINDU

TAG: GS Paper I – *Mobilisation of Resources, Public Borrowing & Management of Public Debt, Challenges in Mobilising Resources for Development*

PRACTICE QUESTIONS

Mains

Examine the key recommendations of the RBI working group on State government guarantees, focusing on the proposed definition, risk determination framework, and the suggested ceiling on guarantee issuance. Evaluate the potential impact of these recommendations on fiscal management and financial institutions. (250 Words)

WHY IN NEWS?

- ❖ As of January 16, 2023 a working group appointed by the Reserve Bank of India (RBI) has proposed specific recommendations to tackle concerns regarding guarantees provided by State governments.
- ❖ One notable suggestion by the Working Group is the adoption of a standardized reporting framework for these guarantees, along with an expansion of the definition of what qualifies as a 'guarantee.'

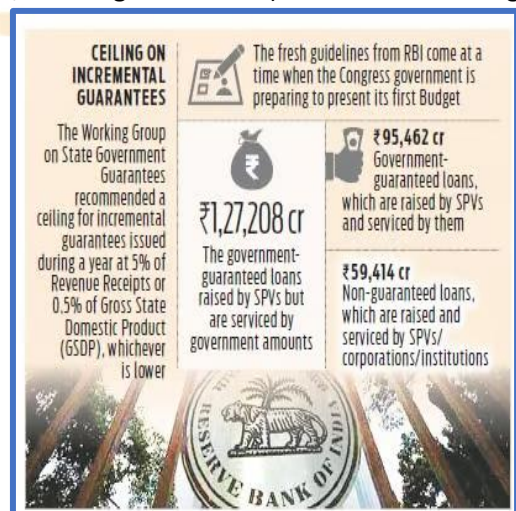
WHAT CONSTITUTES A 'GUARANTEE'?

❖ Definition of 'Guarantee':

- A 'guarantee' refers to the **contingent liability of a State**, established through an **accessory contract**.
- It serves as a **safeguard for lenders or investors against the potential default of a borrower**.
- The entity providing the guarantee (in this context, State governments) commits to being responsible for the debt, default, or failure of the principal debtor.
 - Guarantees, while **serving as financial safeguards**, can pose **fiscal challenges** and increase debt for State governments.
 - State governments issue **guarantees on behalf of various entities**, such as **State-owned enterprises and urban local bodies**, to secure loans from lenders.
 - Guarantee fees are **paid by the entities receiving guarantees to the State governments** providing them.

❖ Key Terms:

- **Creditor:** The entity receiving the guarantee.
- **Principal Debtor:** The entity on **whose behalf the guarantee is given**, and who defaults.
- **Surety:** The entity providing the **guarantee (State governments)**.
- **Illustrative Example:** If A provides **goods or services to B**, and B fails to make the agreed-upon payment, B is in default and may face legal action for the debt. **At this point, C intervenes and pledges to pay for B's default.** This scenario exemplifies a guarantee.





❖ **Fiscal Risks and Burden:**

- The RBI working group's report highlights that while guarantees seem harmless in favourable circumstances, they can **pose substantial fiscal risks and burden the State** during challenging times.
- This may lead to **unexpected cash outflows and increased debt**.

❖ **Issuing Guarantees by State Governments:**

- State governments often have to authorize and **issue guarantees on behalf of State-owned enterprises, cooperative institutions, urban local bodies, or other State-governed entities**, directed towards various lenders.
- These lenders may include **commercial banks or other financial institutions**.

❖ **Guarantee Fees:**

- In return for these guarantees, the entities **receiving them are required to pay guarantee fees to the respective State governments**.

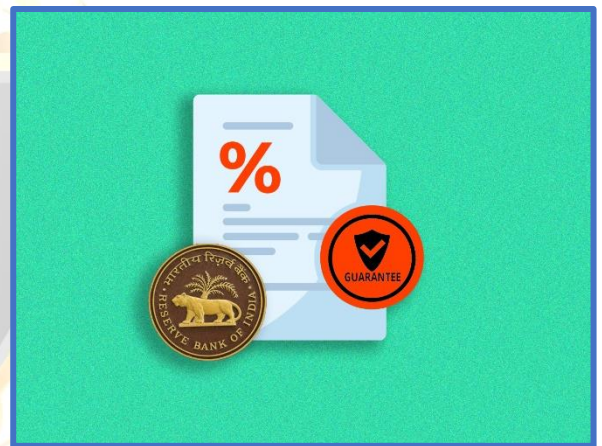
RECOMMENDATIONS BY THE WORKING GROUPS

❖ **Risk Determination:**

- The Group proposes that States should assign appropriate risk **weights (indicative of the holding the lender should ideally have to adjust the associated risk)** before extending guarantees.
- Risk categorization should consider **high, medium, or low risk**, taking into account the past record of defaults.
- The report emphasizes the importance of factoring in **historical default patterns when determining risk weights**.

❖ **Ceiling on Issuance of Guarantees:**

- The Group deems a ceiling on **the issuance of guarantees as "desirable" to mitigate potential fiscal stress on State governments** in case a guarantee needs to be invoked.
- For incremental guarantees issued during a year, the **proposed ceiling is set at 5% of Revenue Receipts or 0.5% of GSDP — whichever is less**.



❖ **Disclosures:**

- The Working Group recommends that the **apex banking regulator may advise banks/NBFCs to disclose the credit extended** to State-owned entities, backed by **State-government guarantees**.
- Availability of data from both the issuer and the lender is considered crucial to enhance the credibility of reported data by the State government.
- The report advocates for the establishment of a comprehensive database capturing all extended guarantees to facilitate better monitoring and transparency in the system.

RESTRICTIONS ON ACCORDING GUARANTEES

The Working Group proposes certain restrictions and guidelines regarding according guarantees:

❖ **No Substitution of Budgetary Resources:**

- Government guarantees should not be utilized to secure finance through **State-owned entities** if it results in **substituting budgetary resources** of the State Government.

❖ **Prevention of Direct Liability:**

- Guarantees should **not be allowed to create direct or de facto liability on the State**.
- This implies that the State should **not be held directly accountable** for the guaranteed amount.

❖ **Adherence to Government of India Guidelines:**

- The **report recommends strict adherence to Government of India guidelines**, specifying that guarantees should only cover the **principal amount and the normal interest component of the underlying loan**.

❖ **Restrictions on External Commercial Borrowings:**



- Guarantees **should not be extended for external commercial borrowings**, implying that the State should not provide guarantees for loans obtained from foreign commercial sources.
- ❖ **Limitation on Project Loan Coverage:**
 - Guarantees **should not be extended for more than 80% of the project loan**, ensuring that the State's liability is capped at a specified percentage of the total project loan amount.
- ❖ **Exclusion of Private Sector Entities:**
 - Guarantees should not be provided to private sector companies or institutions, limiting the scope of government guarantees to public or government-owned entities.

CONCLUSION

*These recommendations are **aimed at ensuring responsible and prudent use of government guarantees, preventing misuse or overextension that could potentially burden the State's financial resources.***





SAPINDA MARRIAGES IN INDIA

SOURCE: [THE INDIAN EXPRESS](#)

TAG: GS Paper – I *Salient features of Indian Society, Issues related to Women in Indian Society, Effects of Globalization on Indian society.*

PRACTICE QUESTIONS

Mains

Q. Do you think marriage as a sacrament is losing its value in modern India?

- 150 words (2023)

Q. Discuss the evolving perspectives on marriage, considering individualism, cohabitation trends, and legal endorsements of progressive values

- 150 words

WHY IN NEWS?

- ❖ In a recent verdict, **Neetu Grover v. Union of India & Ors.**, the Delhi High Court reaffirms the ban on **sapinda marriages** under **Section 5(v) of the Hindu Marriage Act**, citing the need for regulation to prevent incestuous relationships.

NEETU GROVER V. UNION OF INDIA & ORS.

- ❖ Delhi High Court affirmed the **constitutional validity of Section 5(V) of the Hindu Marriage Act**, addressing **marriages between sapindas**.
- ❖ A woman challenged the provision after her **marriage is declared null** for **violating sapinda restrictions**.
- ❖ The division bench stressed the necessity of regulating partner choice in marriage to prevent legitimization of incestuous relationships and maintain societal norms.
- ❖ The petitioner argued **Article 14 violation**, claiming discrimination in exceptions for marriages based on customs.
- ❖ The court rejected the petitioner's contentions, stating insufficient legal grounds were presented to challenge sapinda restrictions.
- ❖ **Section 5(V) allows marriages between sapindas if sanctioned by a valid custom with the force of law, subject to judicial scrutiny.**
- ❖ Emphasis on stringent proof of the custom's existence, clarifying that **parental consent cannot substitute a valid custom**.
- ❖ The court affirms that **sapinda restrictions do not violate the constitutional right to equality**, and exceptions require rigorous scrutiny and proof.
- ❖ **International Perspective:**
 - ☛ **European countries, including France, Belgium, Portugal, and Italy**, have less stringent laws on incestuous relationships.
 - ☛ In the **United States**, incestuous marriages are generally banned, but some states allow consensual relationships between adults.

WHAT IS 'SAPINDA'?

- ❖ According to **old Hindu Law**, when two persons offer **Pinda (rice ball) to same ancestors**, then it is said that they are in a **sapinda relationship**.
- ❖ There are two theories propounded for this kind of relationship - Jimutavahana's oblation theory and Vijnaneswara's body theory.
- ❖ **Jimutavahana's Oblation Theory:**



- Under this theory, sapinda relationships are established through connections formed by the ritualistic offering of Pinda.
- Instances include individuals offering Pindas to each other, to a shared ancestor, or receiving Pindas from the same source.
- ❖ **Vijnaneswara's Body Theory:**
 - According to this perspective, sapinda relationships are defined by a shared ancestry, with the **body being the fundamental basis**.
 - This theory imposes limitations, **restricting sapinda relationships to the fifth generation on the father's side and the seventh on the mother's side**.
- ❖ **Modification in Hindu Marriage Act, 1955:**
 - The Hindu Marriage Act discarded the oblation theory and **incorporated Vijnaneswara's body theory with certain adjustments**.
 - Section 3(f)(i) of the Act** precisely defines sapinda relationships, extending up to the third generation through the mother and the fifth generation through the father.
- ❖ **Inclusivity of Relationships:**
 - The Act encompasses various **blood relationships, including full blood, half-blood, and uterine blood relationships**.
 - It extends its coverage to **both legitimate and illegitimate blood relationships**, as well as relationships formed through adoption.
- ❖ **Determining Sapinda Relationship:**
 - The determination involves tracing the line upward from the person concerned, with that person being counted as the first generation.
 - Any shared ancestor establishes sapinda relationship between two individuals.

HINDU MARRIAGE ACT OF 1955

Section 3(g) and Section 5 of the Hindu Marriage Act defines "**Degree of Prohibited Relationships**" and prohibits marital relationships within certain degrees.

SECTION 3 OF HINDU MARRIAGE ACT, 1955:

- ❖ **Section 3 of the Hindu Marriage Act, 1955, outlines key definitions:**
 - "**Customs**" and "**usage**" pertain to rules long recognized as equal rights for Hindus within a local area, tribe, and community. These **rules are fixed** and cannot be opposed on grounds of public policy.
 - The term "**District Court**" denotes the Civil Court of the City or any other Civil Court within its jurisdiction.
- ❖ **Blood Relations:**
 - "**Full blood**" signifies individuals related as descendants of the same ancestor with the same wives.
 - "**Half blood**" indicates a relationship where individuals are descendants of the same ancestor but with different wives.
 - "**Uterine blood**" refers to descendants sharing the same ancestor but from different husbands.
- ❖ **Clauses (c) and (d) of the section 3 of the Hindu Marriage Act**, clarify that "**ancestors**" encompass both **father and mother**.
- ❖ The term "**prescribed**" within the context of the Act means regulations established by rules under the Act.

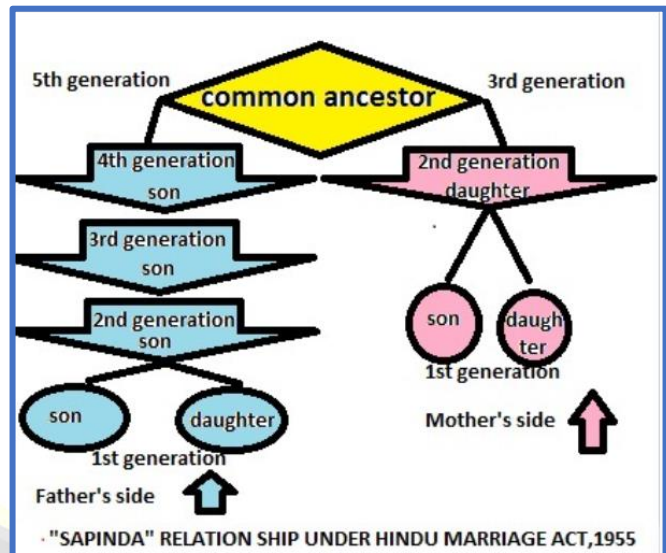




- ❖ **Sapinda Relationship:** "Sapinda" relation progresses from the mother's line to the third generation and the father's ascent to the fifth generation. When people are called each other's "Sapinda," it indicates **one is the descendant of the other**.
- ❖ **Degree of Restricted Relationship:**
 - The "**degree of restricted relationship**" refers to two persons in relationships such as lineal ascendant or descendant, husband or wife of lineal ascendant or descendant, and relationships like brother and sister, uncle and niece, etc.

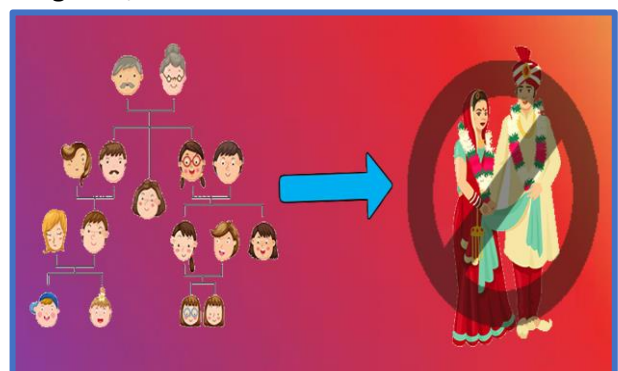
SECTION - 5 OF THE HINDU MARRIAGE ACT

- ❖ Section 5 of the Hindu Marriage Act of 1955 outlines the **prerequisites for a Hindu marriage**.
- ❖ A **marriage between two Hindus** can be solemnized only if the following conditions are met:
 - (1) Neither party has a living spouse at the time of the marriage.
 - (2) Neither party is deemed an idiot or a lunatic during the marriage ceremony.
 - (3) The bridegroom has attained the age of **twenty-one years**, and the bride has attained the age of **eighteen years** at the time of the marriage.
 - (4) The parties are **not within the prohibited degrees of relationship**, unless their respective customs or usages permit such a marriage.
 - (5) The parties are **not Sapindas of each other**, unless their customs or usages allow a marriage between them.
- ❖ This article specifically **focuses on condition (5)**, which stipulates that if the **Hindu bride and groom are "Sapindas"** of each other, the marriage is considered legally void under the law.



UNDERSTANDING PROHIBITED MARRIAGES UNDER THE SPECIAL MARRIAGE ACT, 1954

- ❖ The **Special Marriage of 1954** is an Act to provide a special form of marriage in certain cases, for the registration of such and certain other marriages and for divorce.
- ❖ In examining the issue of **intra-gotra marriages** and the stance usually taken by **Khap Panchayats**, it's crucial to consider the guidelines set by the **Special Marriage Act, 1954**.
- ❖ This act defines **prohibited degrees of relationship**, and it's noteworthy that valid marriages under this act **don't necessitate parental or Panchayat consent**.
- ❖ Delving into the historical background of the **Hindu Marriage Act**, it becomes apparent that its drafting aimed to **break away from endogamous practices, particularly within gotras**.
- ❖ The primary objective was to foster **freedom of choice in marriage**. **Dr. Ambedkar**, a significant contributor to the Hindu Marriage Act, believed that disrupting caste and endogamy practices was vital for societal progress.





- ❖ Despite this, **Khap Panchayats**, traditional community assemblies, are advocating for amendments to enforce bans on intra-gotra marriages under the guise of customs and traditions.
- ❖ One of the primary arguments put forward by Khap Panchayats is that bans on intra-gotra marriages serve to **protect against genetic diseases**.
- ❖ However, the scientific community doesn't universally support these restrictions.
- ❖ Laws safeguarding the right to choose one's partner have been underscored by the **Supreme Court**, emphasizing the **principles of freedom of conscience and expression**.

INCESTUOUS RELATIONSHIPS IN INDIA

- ❖ **Incest** refers to sexual intercourse between close relatives or members of the same family. The term "**incestuous**" is derived from the Latin word "incestuous," meaning "unchaste or impure."
- ❖ Incest is considered morally and culturally wrong. So, the term "incestuous" implies a practice contrary to nature or societal norms.
- ❖ **Moral Stigma and Cultural Perceptions:**
 - ☛ Incest carries moral stigma due to societal norms and cultural beliefs.
 - ☛ Considered morally wrong to prevent inbreeding within the same genealogy.
 - ☛ Historical fear of deformities in children born out of incestuous relationships.
 - ☛ Advances in technology and contraceptives challenge traditional moral arguments.
- ❖ **Changing Moral Landscape with Technological Advancements:**
 - ☛ Questioning the continued moral prohibition with advancements in medical technology.
 - ☛ Debate on whether moral codes should adapt to technological progress.
- ❖ **Legal Framework**
 - ☛ **Section 3(g) and Section 5 of the Hindu Marriage Act** defines "**Degree of Prohibited Relationships**" and prohibits marital relationships within certain degrees.
 - ☛ Incestuous relationships, particularly those involving minors, are strictly prohibited due to ethical and legal considerations.
 - ☛ The **Protection of Children from Sexual Offences POCSO Act, implemented in 2012**, introduced explicit legal provisions to combat sexual relationships involving minors. It recognizes minors as incapable of comprehending the consequences and emphasizes the necessity for their protection.
 - ☛ The **absence of legal provisions controlling consensual incestuous relationships among adults** raises questions.

CONCLUSION:

*In conclusion, In summary, recent legal developments in India, exemplified by the Neetu Grover case and provisions in the Hindu Marriage Act, underscore the **nuanced interplay between tradition, law, and evolving societal norms**. The Hindu Marriage Act, Section 3, encapsulates India's approach, striking a balance between legal definitions and cultural nuances amidst global influences, changing perspectives on marriage emerge, emphasizing personal freedom, cohabitation trends, and legal endorsements of progressive values.*



TOPIC	DISCRIPTION
<p>NAVY'S P-75I PROCUREMENT PROGRAMME</p>	<p>WHY IN NEWS? <i>In a significant development, Germany has formally proposed the sale of six advanced conventional submarines to India under the Navy's P-75I procurement program, with the deal's race primarily between Germany and Spain, expected to cost around ₹45,000 crore.</i></p> <p>ABOUT THE RECENT DEAL:</p> <ul style="list-style-type: none"> ❖ Germany proposes selling six submarines to India under P-75I. ❖ Deal contested by Germany and Spain, valued over ₹45,000 crore. ❖ MDL and L&T shortlisted for submarine construction in India. ❖ TKMS partners with MDL, L&T teams with Navantia for bids. ❖ Bids submitted by TKMS-MDL and L&T-Navantia, under evaluation. ❖ India seeks relaxation of export requirements from Germany. ❖ Submarine deal progresses under the strategic partnership framework.  <p>ABOUT PROJECT 75 (INDIA) AND PROJECT 75(I):</p> <ul style="list-style-type: none"> ❖ Project-75 (India) Overview: <ul style="list-style-type: none"> ☛ Initiation: Launched in 1997 for the Indian Navy's submarine fleet. ☛ Objective: To develop indigenous submarine-building capabilities. ☛ Construction Type: Diesel-electric attack submarines with fuel cells and Air-Independent Propulsion System (AIP). ❖ Difference Between Project 75 and Project 75(I): <ul style="list-style-type: none"> ☛ Stealth Features: Project 75 includes Scorpene submarines with improved stealth features. ☛ AIP Technology: Project 75(I) enhances with AIP technology, allowing submarines to stay submerged for up to two weeks. ☛ Budget: Project 75 budgeted at Rs 23,000 crore; Project 75(I) at Rs 43,000 crore. <p>SHIPYARDS' BIDDING FOR P-75(I):</p> <ul style="list-style-type: none"> ❖ MDL Agreement: <ul style="list-style-type: none"> ☛ MDL signed an agreement with ThyssenKrupp Marine Systems (TKMS) for bidding. ❖ L&T and Navantia: <ul style="list-style-type: none"> ☛ Larson & Toubro signed a teaming agreement with Spain's Navantia for techno-commercial bid submission. ❖ International Interest: <ul style="list-style-type: none"> ☛ Renewed international interest in India's submarine ambitions with Project 75(I). <p>CURRENT STATUS</p>



**IRAN LAUNCHES
3 SATELLITES
SIMULTANEOUSLY
INTO ORBIT
AMID TENSIONS
WITH WEST**

❖ **Sea Trials:**

- Five Scorpene submarines built; INS Vaghsheer set for sea trials.

WHY IN NEWS?

Iran successfully launches three indigenous satellites (Mahda, Keyhan 2, and Hatef 1) into orbit using the Simorgh carrier rocket. It marks Iran's first simultaneous launch of three satellites.

ABOUT IRAN'S THREE SATELLITE LAUNCH:

❖ **Launch Details:**

- Iran successfully launches **three indigenous satellites** using the Simorgh carrier rocket.
- **Mahda (32 kg), Keyhan 2, and Hatef 1 (nano-satellites)** sent into orbit.
- The Simorgh carrier developed by Iran's Defense Ministry.



MAHDA SATELLITE

- Described as a **research satellite**.
- Tests the **Simorgh carrier's accuracy** in delivering **multiple cargoes**.
- Evaluates the performance of **new designs and the reliability of indigenous space technologies**.

KEYHAN 2 AND HATEF 1

- **Nano-satellites** developed by Iran Electronics Industries.
- Aim to **test Iran's space technology capabilities**.

EUROPEAN CRITICISM

- UK, France, and Germany criticize Iran's previous **satellite launch of Sorayya**.
- Concerns raised over the **use of Space Launch Vehicle 9SLV technology**.

BACKGROUND:

- ❖ Iran's satellite launches frequently **criticized by the US**, linking them with the ballistic missile program.
- ❖ Iran **maintains that satellite launches are for scientific research and agricultural activities**.

ABOUT IRAN

- ❖ Iran's **northern boundaries** are with **Azerbaijan, Armenia, Turkmenistan, and the Caspian Sea**.
- ❖ It shares its eastern **borders with Pakistan and Afghanistan**.
- ❖ To the **south**, Iran is bordered by the **Persian Gulf and the Gulf of Oman**.
- ❖ The **western borders** are with **Turkey and Iraq**.





PLACES IN NEWS —‘BURKINA FASO’

- ❖ Iran controls approximately **twelve islands in the Persian Gulf**.
- ❖ The total length of **Iran's boundaries is about 4,770 miles (7,680 km)**.
- ❖ Approximately **one-third of Iran's boundary is seacoast**.

WHY IN NEWS?

The military regimes of Burkina Faso, Mali, and Niger have declared their immediate withdrawal from the Economic Community of West African States (ECOWAS), citing it as a "sovereign decision." Struggling with issues like jihadist violence and poverty, the three Sahel nations have had strained relations with ECOWAS since coups occurred in Niger, Burkina Faso, and Mali.

BURKINA FASO OVERVIEW:

❖ Geography:

- ☞ **Landlocked country** in western Africa.
- ☞ Occupies an extensive plateau, characterized by a grassy savanna in the north and sparse forests in the south.
- ☞ Bounded by Mali to the north and west, Niger to the northeast, **Benin to the southeast**, and **Côte d'Ivoire, Ghana, and Togo to the south**.

❖ History and Independence:

- ☞ Former French colony, gained independence as **Upper Volta in 1960**.
- ☞ Adopted the name Burkina Faso, meaning "**Land of Incorruptible People**," in **1984**.
- ☞ Capital: **Ouagadougou**.

❖ Physical Features:

- ☞ Situated on an extensive plateau, slightly **inclined toward the south**.
- ☞ **Principal rivers: Black Volta (Mouhoun), Red Volta (Nazinon), White Volta (Nakambé)**.
- ☞ Sandstone plateaus in the southwest **bordered by the Banfora Escarpment**.

❖ Plant and Animal Life:

- ☞ Savanna in the north with shrubs and stunted trees; **scattered forests in the south**.
- ☞ Endemic trees include **karite (shea tree) and baobab**.
- ☞ **Diverse animal life:** buffalo, antelope, lions, hippopotamuses, elephants, crocodiles, monkeys.
- ☞ Rich bird and insect life; various **fish species in rivers**.
- ☞ **National parks: Po, Arly, and "W."**



ABOUT ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS)

❖ ECOWAS:

- ☞ **Regional intergovernmental organization established in 1975.**



- Created through the **Lagos Treaty**.
- Aims to foster **economic integration, cooperation**, and development among West African nations.
- Also known as **CEDEAO in French**.
- **Headquarters: Abuja, Nigeria**.

❖ **Member States:**

- 15 member states, including **Benin, Burkina Faso, Cape Verde, Cote d' Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal, and Togo**.



**ECOWAS
CEDEAO**

AIM AND OBJECTIVES

❖ **Aim:**

- Promote **cooperation and integration for an economic union in West Africa**.

❖ **Objectives:**

- **Harmonization of national policies, protection of the environment, creation of a common market, and establishment of an economic union**.

**INSAT-3DS
SATELLITE**

WHY IN NEWS?

- *The Indian Space Research Organisation (ISRO) has announced that the **INSAT-3DS satellite** is ready for launch, having been flagged off to the **launch port at the Satish Dhawan Space Centre in Sriharikota**. The satellite is set to be launched on the **GSLV F14** next month.*

ABOUT INSAT-3DS:

❖ **Objective:**

- INSAT-3DS is a **dedicated meteorological satellite** aimed at providing continuous services and enhancing capabilities in the INSAT system.

❖ **Launch Information:**

- Flagged off to SDSC-SHAR launch port on **January 25, 2024**, for a **GSLV F14** launch, following successful assembly and testing in Bengaluru.

❖ **Configuration:**





- Utilizes ISRO's established **I-2k bus platform**, with a **lift-off mass of 2275 kg**.

❖ **Payloads:**

- 6-channel **Imager**
- 19-channel **Sounder** meteorology payloads
- Communication payloads, including the **Data Relay Transponder (DRT) and Satellite-aided Search and Rescue (SAS&R) transponder**.

❖ **Data Relay Transponder (DRT):**

- Receives meteorological, **hydrological, and oceanographic data** from automatic Data Collection Platforms and **Automatic Weather Stations**, augmenting weather forecasting capabilities.

❖ **Satellite-aided Search and Rescue (SAS&R) Transponder:**

- Incorporated for relaying **distress signals/alerts** from **beacon transmitters globally**, supporting search and rescue services.

ABOUT NISAR:

❖ **NASA's Perspective:**

- NISAR will study Earth vital signs, focusing on **ice sheets, glaciers, and sea ice**.

❖ **Cryosphere Monitoring:**

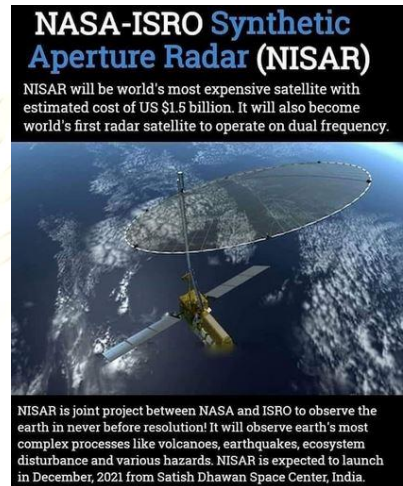
- It provides a detailed view of **Earth's cryosphere, aiding in understanding climate change impacts**.

❖ **Small-Scale Process Understanding:**

- Crucial for **deciphering small-scale processes** leading to significant cryosphere changes.

❖ **Comprehensive Earth Monitoring:**

- NISAR offers a **comprehensive picture of motion and deformation** in Earth's ice-covered regions.



INVASIVE SPECIES- 'BIG-HEADED ANTS'

WHY IN NEWS?

*The presence of **invasive big-headed ants** in a **Kenyan conservancy** has garnered attention due to **their disruptive impact on the ecosystem**.*

ABOUT INVASIVE BIG-HEADED ANTS

❖ **Origin:**

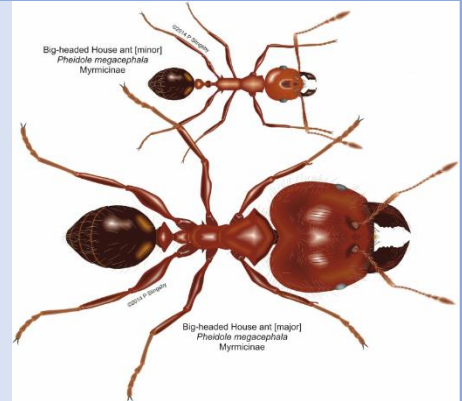
- Originated in the **Indian Ocean Island of Mauritius** and are now **distributed in Australia and the US**.
- The nickname comes from the disproportionately **large heads of the species' worker ants, used for prey cutting and defence against other ants**.

❖ **Behaviour:**

- Big-headed ants are **aggressive and territorial**, impacting ecosystems significantly.



- They may **bite humans when disturbed, leaving well-defined trails**, and are attracted to sweet nectar and other foods.
- Rapid reproduction, **multiple queens, and cooperative nests** contribute to their threatening nature.
- Unlike many species, they **create multiple nests cooperating for food, defence, and reproduction**.
- Thriving in warm climates, they **prefer disturbed soil**, common in **fields and gardens, with size adapting to the environment**
- Ants in Australia are three times larger than those in Hawaii.



IDENTIFICATION METHODS:

- ❖ **Head Size:**
 - **Major worker ants or soldiers have heads constituting half their body size**, making it a key identifier.
- ❖ **Minor Workers:**
 - More commonly sighted, minor worker ants share body features with majors but have proportional heads.
- ❖ **Colour and Size:**
 - **Yellowish to light/dark brown, measuring 1/16 to 1/8 inch.**
- ❖ **Waist Spines:**
 - Workers have **two spines on the waist facing almost vertically**.
- ❖ **Antenna and Nodes:**
 - **Short first antenna segment**, two nodes with a swollen posterior.
- ❖ **Smell and Defensive Behaviour:**
 - No noticeable smell when crushed, **non-aggressive behaviour unless threatened**.

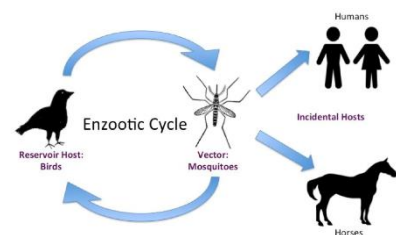
WESTERN EQUINE ENCEPHALITIS OUTBREAK IN ARGENTINA

WHY IN NEWS?

- ❖ *The **Western Equine Encephalitis (WEE) outbreak in Argentina**, reported after a **two-decade hiatus**, has raised concerns. The virus, transmitted by mosquitoes, has **resulted in 21 confirmed human cases, with one fatality**.*

WEE OVERVIEW:

- ❖ WEE is a rare **mosquito-borne viral disease** affecting equines and humans, often linked to bird or horse epidemics.
- ❖ Belongs to the **Alphavirus** genus of the **Togaviridae** family.
- ❖ Human transmission occurs through **mosquito vectors**, leading to **asymptomatic or, in rare cases, severe neurological symptoms**.





VIRUS SPREAD AND RESERVOIR:

- ❖ Potential for **spread through infected birds' migration** or movement of **infected people and animals**.
- ❖ **Passerine birds** serve as the main **reservoir hosts for the WEE virus**.

ALERT AND OUTBREAK:

- ❖ On December 20, 2023, Argentina's International **Health Regulations National Focal Point alerted PAHO/WHO** about a human case of **Western Equine Encephalitis Virus (WEEV)**.
- ❖ The outbreak has grown to **21 confirmed cases in Argentina**, marking the **first human infections in over two decades**.

END TO END ENCRYPTION

WHY IN NEWS?

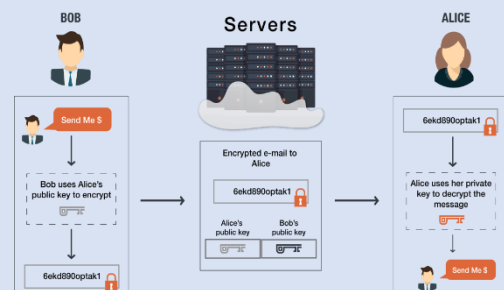
- ❖ *Encryption, especially **End-to-End (E2E)**, transforms human rights, law enforcement, and tech perspectives. It safeguards **digital information**, but challenges like **MITM attacks** exist*

ENCRYPTION:

- ❖ **Encryption** is the process of **changing consumable information** into an **inconsumable form** based on certain rules.
- ❖ **Example:** Data Encryption Standard (DES) encrypts the words **"ice cream" to AdNgzrrtxcpeUzzAdN7dwA== with the key "kite."**
- ❖ The **key** is essential for decryption; it is the data that, when applied, unlocks encrypted text.

END-TO-END (E2E) ENCRYPTION:

- ❖ End to End encryption **focuses on securing information** during its movement between specific locations.
- ❖ In a **messaging app, E2E encryption ensures that the message is encrypted both in transit (server to user or vice versa) and at rest (inside the server)**, only decrypted when the recipient receives it.



TYPES OF ENCRYPTION:

- ❖ **Symmetric Encryption:** The same key is **used for both encryption and decryption**. For example: **Advanced Encryption Standard (AES)**.
- ❖ **Asymmetric Encryption:** Different keys for encryption and decryption. Public and private keys are used. For **Example: Curve25519 algorithm** in messaging app WhatsApp.

POTENTIAL RISKS AND MITIGATIONS:

Security Concerns	Risk	Mitigation
Man-in-the-Middle (MITM) Attack	Intercepting keys to decrypt messages	Use and compare fingerprints for key verification
User Complacency	Believing messages are secure from all access	Users need to be aware of potential risks, including malware and hacking



Backdoors and Exceptions	Companies installing backdoors for legal/illegal purposes	Regular scrutiny, transparency, and legal restrictions to prevent abuse
Metadata Surveillance	Surveillance through accessing message metadata	Awareness and protection of metadata to avoid privacy breaches
Legal and Illegal Use	Companies compelled by law or engaging in illegal activities	Legal safeguards, transparency, and accountability measures

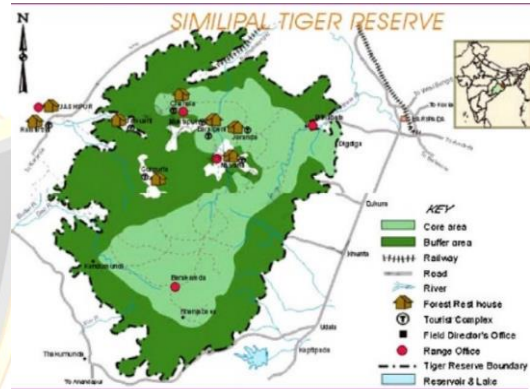
SIMILIPAL TIGER RESERVE

WHY IN NEWS?

- ❖ *Odisha will start a melanistic BLACK tiger safari near Similipal Tiger Reserve (STR), Chief Minister Naveen Patnaik has announced.*

ABOUT –

- ❖ Similipal gets its name from the silk cotton tree, known as 'Simul'.
- ❖ Established as a tiger reserve in 1956 and incorporated into Project Tiger in 1973, biosphere reserve in June 1994.
- ❖ Became part of the UNESCO World Network of Biosphere Reserves in 2009.
- ❖ A component of the Similipal-Kuldiha-Hadgarh Elephant Reserve, also known as the Mayurbhanj Elephant Reserve.
- ❖ The elephant reserve comprises Similipal Tiger Reserve, Hadagarh Wildlife Sanctuary, and Kuldiha Wildlife Sanctuary.



LOCATION:

- ❖ Similipal is situated in the northern part of Odisha's Mayurbhanj district.
- ❖ Geographically, it is located in the eastern end of the Eastern Ghats, spans over 4,374 sq. km.

VEGETATION:

- ❖ Similipal showcases a diverse range of vegetation with 1,076 flowering species and 96 orchid species.
- ❖ The reserve features tropical semi-evergreen forests, tropical moist deciduous forests, dry deciduous hill forests, high-level sal forests, and expansive meadows.

TRIBES:

- ❖ The Erenga Kharias and the Mankirdias, two tribes, inhabit the reserve's forests.
- ❖ They engage in traditional agricultural activities such as seed and timber collection.

What are black tigers or melanistic tigers?



Joint Military Exercise 'SADA TANSEEQ'

- ❖ **Melanism is a genetic condition** in which **increased production of melanin**, a substance in the skin that **produces hair, eye, and skin pigmentation**, results in **black (or nearly black) skin, feathers, or hair** in an animal.
- ❖ Many **royal Bengal tigers of Similipal tigers are not entirely black**, and are therefore more accurately described as being pseudo-melanistic.

What makes tigers (pseudo) melanistic?

- ❖ A **single mutation in the gene Transmembrane Aminopeptidase Q (Taqpep)** causes black tigers to **develop stripes**.
- ❖ It seems to have **broadened spread** into the **tawny background**.
- ❖ The STR cats live isolated from other **tigers**, because of which they **breed among themselves**.

WHY IN NEWS?

- ❖ *The commencement of the India-Saudi Arabia joint military exercise, 'SADA TANSEEQ,' in Rajasthan is a notable development highlighting the growing defense cooperation and strategic partnership between the two countries.*

ABOUT THE MILITARY EXERCISE 'SADA TANSEEQ'

❖ Commencement and Duration:

- ☛ The exercise is set to start in Rajasthan from January 29 to February 10, 2024.
- ☛ It is the first of its kind between India and Saudi Arabia.



❖ Purpose and Objectives:

- ☛ Aims to share military activities and experiences, promoting cooperation and interoperability.
- ☛ Enhances synergy and joint skills through the exchange of best practices.
- ☛ Focuses on counter-terrorism operations under the UN mandate.
- ☛ Includes joint planning, operations, and tactical exercises.

❖ Participation:

- ☛ Involves armies of both countries, facilitating interaction between field commanders and soldiers.

❖ Other Exercises:

- ☛ Mention of Exercise Al-Mohad Al-Hindi, the first naval joint exercise between India and Saudi Arabia.
- ☛ Exercise Al-Hindi focuses on tactical manoeuvres, search and rescue operations, and electronic warfare exercises.

INDIA-SAUDI ARABIA RELATIONS:

- ❖ **Trade:**



- Highlights India's heavy reliance on Saudi Arabia as a major source of crude oil.
- Reference to the proposed world's largest greenfield refinery in Maharashtra.
- Saudi Arabia ranks as India's fourth top trading partner, with bilateral trade worth US \$8 billion in the financial year 2021-22.
- ❖ **Indian Expatriates in Saudi Arabia:**
 - Approximately 6 million Indians reside and work in Saudi Arabia, forming the largest group of foreigners.
 - Appreciation for the skilled, rule-following, peaceful, and disciplined nature of Indian expatriates.
- ❖ **Haj Pilgrimage and Bilateral Agreement:**
 - The significance of the Haj pilgrimage in fostering friendship.
 - Mention of the bilateral agreement signed in January 2024, allocating a quota of 175,025 pilgrims for the annual Haj pilgrimage in 2024.

