

# UPSC

# CURRENT AFFAIRS

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# 1. Law on ‘suspension of sentence’



- Kuldeep Singh Sengar, a former four-time MLA, was accused of raping a minor girl in June 2017 at his residence.

## Allegations included:

- Police inaction and intimidation of the survivor and her family
- Abuse of political power to obstruct justice

## Due to the seriousness of the allegations:

- The CBI took over the probe in April 2018
- The Supreme Court transferred the trial from Uttar Pradesh to Delhi

## Trial Court Verdict

- December 16, 2019: Delhi trial court convicted Sengar.
- December 20, 2019: He was sentenced to imprisonment for the remainder of his natural life.

## The conviction included offences under:

- IPC (rape and related offences)
- POCSO Act, treating the offence as aggravated due to abuse of authority

## Delhi High Court’s Controversial Order (December 23, 2025)

### Suspension of Sentence and Bail

- The Delhi High Court:
  - Suspended Sengar’s life sentence under Section 389 CrPC
  - Granted him regular bail pending appeal
  - This order triggered intense public outrage and debate

### Key Reasoning by the High Court

- The HC held, *prima facie*, that:
  - An MLA does not qualify as a “public servant” under the POCSO Act

- **Basis of this finding:**
  - The POCSO Act does not define “public servant”
  - It borrows definitions from other statutes like the IPC
  - Section 21 IPC does not include elected legislators
- **The HC relied on:**
  - R.S. Nayak vs. A.R. Antulay (1984), where the SC held that MLAs are not “public servants” under IPC
- **Consequently:**
  - Section 5(c) of POCSO (aggravated assault by a public servant) was held *prima facie* inapplicable

## Other Factors Considered

- Sengar had already undergone over seven years of imprisonment
- The HC cited Kashmira Singh vs. State of Punjab (1977) on prolonged incarceration

## Regarding survivor's safety concerns:

- HC noted she already had CRPF protection
- Held that bail cannot be denied merely due to fear of failure of security forces

## Supreme Court's Intervention (December 29, 2025)

### Vacation Bench Order

- A three-judge vacation bench comprising:
  - CJI Surya Kant
  - Justice J.K. Maheshwari
  - Justice A.G. Masih
- Issued notice and stayed the Delhi HC judgment
- The stay came just six days after the HC order

## What is Suspension of Sentence?

### Under Section 389 CrPC (now Section 430 BNSS, 2023):

- Appellate courts may suspend execution of sentence
- Conviction remains intact; only punishment is paused
- It is a discretionary power, not a right
- Supreme Court's Consistent Position
- Fixed-term sentences: Suspension is generally granted

### Life imprisonment or grave offences:

- Suspension is an exception, not the rule

### Requires:

- Assessment of gravity of offence
- Chances of acquittal on appeal
- Impact on victims and society

## Why the HC Order Raised Serious Concerns

### 1. Narrow Interpretation of “Public Servant”

- The HC adopted a strictly literal interpretation

### Resulting anomaly:

- A police constable or village accountant is a “public servant”
- An elected MLA exercising enormous power is not

### This interpretation:

- Weakens the protective purpose of the POCSO Act
- Undermines the intent to punish abuse of authority against children

### Supreme Court's Prior Warnings Ignored

#### Independent Thought vs. Union of India (2017):

- SC read down IPC provisions to protect minors

#### Attorney General for India vs. Satish (2021):

- SC rejected narrow, technical interpretations that dilute child protection

### These cases stress:

- Purposive interpretation when child safety is at stake

## 2. Failure to Apply Correct Test for Life Sentence Suspension

#### In Chhotelal Yadav vs. State of Jharkhand (2025):

- **SC held suspension of life sentence is justified only if:**
  - There is a palpable or gross error in the conviction
  - The appeal shows a real chance of acquittal
- **In Sengar's case:**
  - Even if Section 5(c) is excluded, conviction for rape remains
  - HC did not examine whether this would lead to acquittal

## 3. Long Incarceration Is Not Sufficient

#### Shivani Tyagi vs. State of UP (2024):

- Long imprisonment alone cannot justify suspension in life sentence cases

#### Jamna Lal vs. State of Rajasthan (2025):

- Findings like victim's minority cannot be unsettled at the suspension stage
- Ignored Context: History of Intimidation and Violence

### The case has an extraordinary background of coercion:

- Custodial death of survivor's father (Sengar convicted)
- Alleged witness intimidation
- 2019 accident killing survivor's aunts and injuring her and her lawyer
- The survivor required exceptional security arrangements during trial
- These factors demanded greater judicial caution

## What Lies Ahead

### Broader Legal and Social Implications

- **The case exposes:**
  - Gaps in statutory definitions that fail to capture real-world power
  - The limits of literal interpretation in victim-centric laws

- **It raises urgent questions about:**
  - Equality before law under Article 14
  - Access to justice for survivors of sexual violence
  - Supreme Court's Role
- **The SC's stay signals:**
  - Reassertion of strict standards for suspending life sentences
  - Renewed focus on the protective purpose of POCSO
- **The final outcome may:**
  - Clarify the scope of “public servant” under child protection laws
  - Shape future jurisprudence on bail and sentence suspension in grave offences

## POCSO Act

### What is the POCSO Act?

- It is a special law to protect children (below 18 years) from sexual abuse, sexual harassment, and exploitation.

### Who is considered a child?

- Anyone under 18 years of age, regardless of gender.

### Main objectives

- Protect children from sexual crimes
- Provide child-friendly legal procedures
- Ensure speedy trial and strict punishment
- Safeguard the privacy and dignity of the child

### Types of offences covered

- Sexual assault
- Aggravated sexual assault (by people in authority like teachers, police, relatives)
- Sexual harassment
- Using children for pornography
- Online sexual exploitation

### Gender-neutral law (protects both boys and girls)

- **Mandatory reporting:** Adults must report suspected offences
- Special POCSO courts for fast trials
- Child's identity cannot be revealed
- Statements recorded in a child-friendly manner

### Punishments

- Vary based on seriousness
- Can include imprisonment, life sentence, and fines
- Stricter punishment after 2019 amendment

# LEGAL SAFEGUARDS UNDER THE POCSO ACT FOR CHILD SEXUAL ABUSE



## Why is it important?

- Recognizes that children need extra legal protection
- Helps reduce fear of reporting abuse
- Ensures justice without re-traumatizing the child

## QUESTIONS

- With reference to the Delhi High Court's order of December 23, 2025, concerning suspension of sentence under the POCSO Act, consider the following statements:
  - The High Court held, *prima facie*, that an elected MLA qualifies as a “public servant” for the purpose of aggravated offences under the POCSO Act.
  - The High Court relied on the Supreme Court's judgment in *R.S. Nayak vs. A.R. Antulay (1984)* to interpret the term “public servant”.

Which of the statements given above are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

2. With reference to the Protection of Children from Sexual Offences (POCSO) Act, 2012, consider the following statements:

1. The POCSO Act defines a child as a person below the age of 16 years.
2. The Act is gender-neutral and recognises that both boys and girls can be victims of sexual offences.
3. The POCSO Act was enacted in consequence of India's ratification of the UN Convention on the Rights of the Child.

Which of the statements given above are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

3. With reference to the POCSO Act, 2012 and the POCSO Rules, 2020, consider the following statements:

1. Non-reporting of sexual offences against children is punishable under the POCSO Act.
2. The storage of child pornography material has been explicitly criminalised under the Act.
3. Interim compensation to the child victim can be ordered only after the completion of trial.

Which of the statements given above are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

## 2. Bulgaria joins Eurozone

- Bulgaria became the 21<sup>st</sup> member of the eurozone on January 1, marking a major step toward deeper European integration.
- The move comes amid political instability, corruption concerns, and strong domestic opposition, particularly from pro-Russian parties.
- Bulgaria is retiring the lev, its national currency since 1881, which has been pegged to the Deutschmark and later the euro since 1997.

### What Is the Eurozone?

- The eurozone (euro area) consists of EU member states that have adopted the euro as their official currency.
- It emerged from the Maastricht Treaty (1992), which laid the foundation for:
  - A common Economic and Monetary Union (EMU)
  - Adoption of the euro as the sole legal tender
  - Creation of a unified central banking system led by the European Central Bank (ECB)
  - A common economic region with integrated markets



### Membership Status

#### With Bulgaria's entry:

- 21 out of 27 EU countries now use the euro
- Six EU members still retain their national currencies

#### Non-EU users of the euro:

- **With EU agreements:** Andorra, Monaco, Vatican City, San Marino
- **Without agreements:** Kosovo, Montenegro
- (These are not considered eurozone members)
- Croatia was the previous entrant in 2023
- Bulgaria's inclusion raises the euro-using population to about 350 million people

### Why Countries Join the Eurozone

#### Economic and Financial Benefits

- Easier price comparison across member states, boosting competition
- Lower transaction costs by eliminating currency exchange
- Improved trade and investment access within the EU market
- Protection from external economic shocks due to the eurozone's size

## Monetary Stability

- ECB targets around 2% inflation, ensuring price stability
- Lower interest rates through a unified monetary policy
- Bulgaria gains a seat on the ECB's Governing Council, influencing eurozone decisions

## Broader Advantages

- Euro is the world's second-largest reserve currency after the US dollar
- Strengthens European identity and integration
- Boost to tourism, allowing seamless travel without currency exchange

## Eligibility Criteria for Eurozone Membership

- All EU members (except Denmark, which has an opt-out) are required to join eventually
- Countries must meet "convergence criteria", including:
  - Economic stability
  - Legal alignment with EU treaties
  - Preparedness to operate within the EU's single market
  - National laws, especially those governing central banks and monetary policy, must comply with EU rules

## How the Transition Will Work in Bulgaria

- **From January 1:** Both the lev and euro can be used for transactions
- **From February 1:** The euro becomes the sole legal tender
- Reasons for Domestic Opposition

## Political Instability

- Seven parliamentary elections in four years
- Persistent corruption scandals
- **December 2025:** PM Rosen Zhelyazkov resigned after mass anti-corruption protests
- Euro adoption seen as lacking popular consensus

## Public Concerns

- Opinion polls show society remains divided
- Fear that retailers may artificially raise prices
- Government introduced consumer protection measures, including mandatory dual price displays since August 2025

## Pro-Russian Sentiment

- Bulgaria has strong cultural and historical ties with Russia
- Shared Orthodox Christian heritage
- Black Sea connections
- Despite EU and NATO membership, Russia views these institutions as hostile

## Fear of Economic Crisis

- The far-right, pro-Russia Revival Party warns of a Greek-style debt crisis
- Greece faced economic collapse and required three international bailouts, accompanied by harsh austerity measures

## Maastricht Treaty

- The Maastricht Treaty (1992)—officially the Treaty on European Union (TEU)—is a major agreement that laid the foundation for today’s European Union (EU).
  - **Signed:** 7 February 1992, in Maastricht (Netherlands)
  - **Came into force:** 1 November 1993
  - **Members at the time:** 12 European countries



## Created the European Union (EU)

- It transformed the earlier European Communities into a broader political and economic union.

## Introduced the “Three Pillars” structure

- European Communities (economic integration, single market)
- Common Foreign and Security Policy (CFSP)
- Justice and Home Affairs (police and judicial cooperation)

## Set the path to a single currency (the euro)

- It established Economic and Monetary Union (EMU) and the criteria countries had to meet to adopt the euro (later introduced in 1999/2002).

## Established EU citizenship

- Citizens of member states gained rights such as:
  - Freedom to live and work in other EU countries
  - Voting in local and European elections in their country of residence

## Expanded EU powers

- The EU gained more authority in areas like education, public health, consumer protection, and environmental policy.

## Why it's important

- Marked the shift from mainly economic cooperation to deeper political integration
- Directly led to the euro
- Strengthened the idea of a shared European identity

## QUESTIONS

4. With reference to the origins of the European Union, consider the following statements:

1. The European Coal and Steel Community (ECSC) was established by the Treaty of Paris in 1951.
2. The founding members of the ECSC were Belgium, France, West Germany, Italy, Luxembourg, and the Netherlands.
3. The Maastricht Treaty of 1993 created the European Economic Community (EEC).

Which of the statements given above are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

Which of the statements given above are correct?

- A. 1 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

7. Consider the following countries:

1. Czech Republic	4. Ireland
2. Slovenia	5. United Kingdom
3. Slovakia	6. Malta

How many of the above countries are members of European Union (EU)?

- A. Two countries only
- B. Four countries only
- C. Five countries only
- D. All the countries

8. The euro area, commonly called the eurozone (EZ), is a currency union of 21 member states of the European Union (EU) that have adopted the euro (€) as their primary currency and sole legal tender, and have thus fully implemented Economic and Monetary Union policies. Consider the following countries:

1. Bulgaria	4. Malta
2. Croatia	5. Hungary
3. Belgium	6. Czech Republic

Within the European Union (EU), how many of the above countries have not yet adopted the Euro and continue to use their own national currencies?

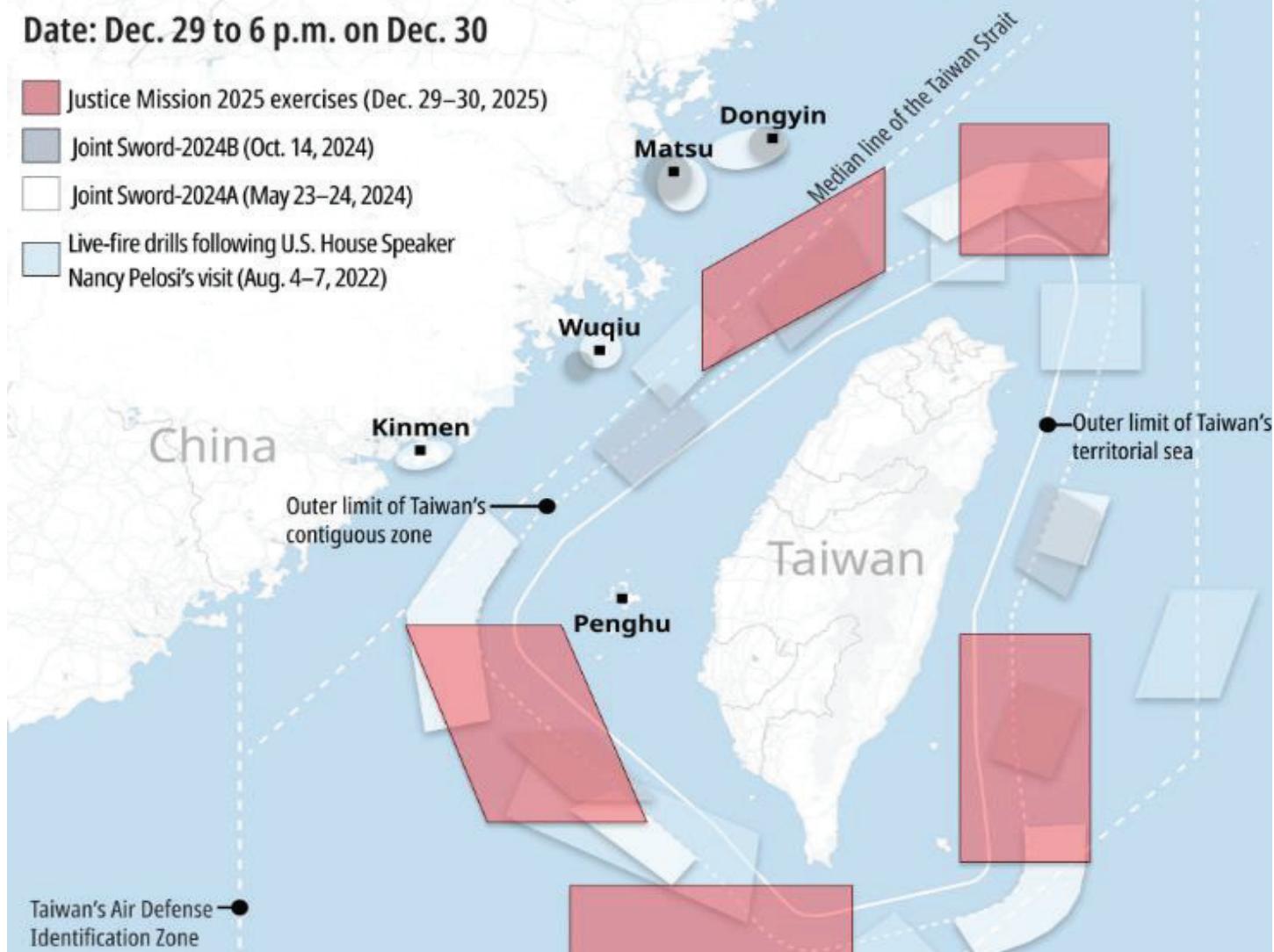
- A. Two countries only
- B. Four countries only
- C. Five countries only
- D. All the countries

### 3. China's 'Justice Mission 2025'

## PLA Justice Mission 2025 military exercises

Date: Dec. 29 to 6 p.m. on Dec. 30

- Justice Mission 2025 exercises (Dec. 29–30, 2025)
- Joint Sword-2024B (Oct. 14, 2024)
- Joint Sword-2024A (May 23–24, 2024)
- Live-fire drills following U.S. House Speaker Nancy Pelosi's visit (Aug. 4–7, 2022)



#### What Happened

- China's People's Liberation Army (PLA) conducted large-scale military drills near Taiwan.
- The exercises, named "Justice Mission 2025," included rocket launches and extensive naval and air operations.
- Taiwan condemned China, calling it "the biggest destroyer of peace."

#### Key International Reactions

##### United States:

- US President Donald Trump downplayed the drills, stating China has conducted naval exercises in the region for decades.
- He said he was not concerned about an imminent attack on Taiwan.

## **China:**

- Official messaging directly criticized US support for Taiwan, framing it as external interference.

## **What Happens During These Military Drills**

- Chinese military aircraft regularly enter Taiwan's Air Defence Identification Zone (ADIZ).
- ADIZs extend beyond a country's territorial airspace and are used for early threat detection.

## **The drills included:**

- Simulated strikes on maritime and aerial targets
- Anti-submarine warfare exercises
- Coordinated naval and air force operations encircling the island

## **Why Taiwan Is Central to China's Strategy**

- China considers Taiwan part of its territory and has not ruled out using force for reunification.
- Taiwan operates as a self-governed democracy with its own elected leadership.
- Under President Xi Jinping, China's stance has become more assertive since 2012.

## **Taiwan's ruling Democratic Progressive Party (DPP):**

- Has been in power for nearly a decade
- Argues Taiwan is already an independent nation
- China labels the DPP as "separatists."
- Rising Frequency of Chinese Military Pressure

## **A US Department of Defense report noted:**

- Significant increases in the scale and frequency of Chinese air and maritime activity near Taiwan (2020–2024).

## **Data highlights:**

- **2022:** 1,727 Chinese military aircraft entered Taiwan's ADIZ
- **2024:** More than 3,000 such incursions were recorded

## **Why China Conducted These Drills Now**

- The drills followed US approval of \$11 billion in arms sales to Taiwan.

## **Although the US does not officially recognize Taiwan:**

- It maintains unofficial ties under the One China policy
- Arms sales are permitted under the US–China Three Communiqués
- The US has long linked reductions in arms sales to China's commitment to peaceful resolution of Taiwan-related disputes.

## **Regional Tensions Add to the Pressure**

- Diplomatic strains have also risen between China and Japan.
- Japan's Prime Minister Sanae Takaichi recently suggested Japan could intervene militarily if China attacked Taiwan.

## **China's Official Message**

### **China's foreign ministry called the drills:**

- "Punitive and deterrent actions" against Taiwan independence forces
- Necessary to protect national sovereignty

## Taiwan

- **Official name:** Republic of China (ROC)
- **Common name:** Taiwan
- **Location:** East Asia, off the southeastern coast of China, across the Taiwan Strait
- **Capital city:** Taipei
- **Population:** About 23 million people

## Government & Politics

- **System:** Democratic republic
- **Type:** Semi-presidential system
- Taiwan operates independently with its own government, military, and constitution, though its political status is internationally sensitive.

## Language & People

- **Official language:** Mandarin Chinese
- **Other languages:** Taiwanese Hokkien, Hakka, and Indigenous languages
- **Ethnic groups:** Mostly Han Chinese, plus Indigenous peoples

## Economy

- **Currency:** New Taiwan Dollar (TWD)
- **Economy type:** Highly developed, export-driven

## Key industries:

- Semiconductors (Taiwan is a global leader)
- Electronics and technology
- Manufacturing and trade

## Geography & Climate

- **Landscape:** Mountains in the center, flat plains in the west
- **Climate:** Subtropical to tropical
- Hot, humid summers
- Mild winters
- Typhoons can occur in summer and early fall

## QUESTIONS

9. With reference to the “Justice Mission 2025” military exercise, consider the following statements:

1. Justice Mission 2025 was a high-intensity military drill conducted by the People’s Liberation Army (PLA) involving live-fire missile launches.
2. The exercise was designed to simulate amphibious landings inside Taiwan’s mainland territory.
3. Missile launches during the exercise were observed from Pingtan Island.

Which of the statements given above are correct?

A. 1 and 2 only	C. 2 and 3 only
B. 1 and 3 only	D. 1, 2 and 3

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

## 4. The urban future with cities as dynamic ecosystems

## Cities are built by people, not just plans

- Modern cities drive development, policy, science, and technology, yet often overlook the diverse populations that inhabit them.
- A growing disconnect exists between the cities we design, the cities we aspire to live in, and the cities people actually experience daily.



## The ‘invisible tax’ of linguistic and cultural exclusion

- Migrants are implicitly expected to assimilate, with language becoming a non-negotiable marker of belonging.
- Those who do not meet dominant linguistic norms pay a “linguistic tax” that limits access to jobs, housing, healthcare, and public services.
- Monolingual systems create bureaucratic barriers that translate directly into economic and social disadvantage.

## Economic and social consequences of exclusion

- Linguistic and cultural friction often pushes migrants into the informal economy, increasing vulnerability and exploitation.
- Cities benefit from migrant labour and taxes while structurally denying equal access to opportunity and services.
- This exclusion undermines long-term social cohesion and economic resilience.

## Flaws in current urban planning

- Urban infrastructure is often designed for a static, homogenous population, rendering new and diverse residents invisible.
- “Smart cities” frequently cater only to those who speak the dominant language and hold the right documents.
- Lack of culturally diverse representation in governance leads to planning that fails to meet the needs of heterogeneous populations.

## Rethinking cities as dynamic ecosystems

- Cities must be understood as fluid, evolving spaces rather than fixed blueprints.
- Inclusive urban design requires anticipating cultural friction and planning for diversity as a norm, not an exception.

## Pathways to inclusive urban design

- Invest in cultural sensitisation and multilingual capacity for public-facing staff to improve access and efficiency.
- Recognise inclusion as both a democratic responsibility and an operational necessity.
- Accept temporary disruption as part of meaningful, transformative change.

## The missing link: empathy

- Successful cities are those that ensure comfort, security, and a validated sense of belonging for all residents.
- Empathy—embedding lived experience into planning and governance—is the key measure of truly inclusive urban design.

## What is a Smart City?

- A smart city is an urban area that uses technology, data, and digital solutions to improve the quality of life for its residents.
- The goal is to make cities more efficient, sustainable, and livable.

## Key features of a smart city include:

- **Smart Infrastructure:** Better roads, buildings, and public utilities.
- **Efficient Governance:** E-governance and digital services.

- **Sustainable Environment:** Green energy, waste management, and pollution control.
- **Smart Mobility:** Public transport, traffic management, and reduced congestion.
- **Health & Education:** Digital healthcare, smart hospitals, and e-learning facilities.

## Smart Cities Mission in India

- India launched the Smart Cities Mission in June 2015, led by the Ministry of Housing and Urban Affairs (MoHUA).

### Objectives:

- Develop 100 smart cities across India.
- Promote citizen-friendly services.
- Improve urban planning and sustainability.
- Integrate technology in governance.

### The government uses a Area-Based Development (ABD) approach and Pan-City Development:

- **ABD:** Upgrading a specific area with smart solutions.
- **Pan-City:** Applying smart solutions across the entire city.
- **Examples of Smart Cities in India**
- **Some notable smart cities include:**
  - **Pune (Maharashtra)** – Smart traffic management, digital governance.
  - **Bhubaneswar (Odisha)** – Smart street lighting, intelligent transport system.
  - **Ahmedabad (Gujarat)** – E-governance, renewable energy initiatives.
  - **Jaipur (Rajasthan)** – Waste management and solar energy solutions.
  - **Indore (Madhya Pradesh)** – Cleanliness and solid waste management initiatives (often ranked the cleanest city).

### Key Technologies Used

- IoT (Internet of Things) for smart infrastructure
- GIS (Geographic Information Systems) for urban planning
- Big Data & AI for traffic and resource management
- Solar energy & smart grids for sustainability
- Mobile apps for citizen services

## QUESTIONS

13. With reference to the Smart Cities Mission, consider the following statements:

1. The Smart Cities Mission was launched in 2015 with the objective of improving the quality of life in selected cities through modern infrastructure and smart solutions.
2. The Mission aims to promote sustainable and inclusive urban development by developing compact areas that can serve as models for other cities.
3. The funding pattern of the Smart Cities Mission is entirely borne by the Central Government.

Which of the statements given above is/are correct?

A. 1 and 2 only	C. 1 only
B. 2 and 3 only	D. 1, 2 and 3

14. With reference to the Special Purpose Vehicle (SPV) under the Smart Cities Mission, consider the following statements:

1. The SPV is incorporated as a limited company under the Companies Act, 2013.
2. The equity in the SPV is jointly held by the State/UT Government and the Urban Local Body in equal proportion.
3. The SPV is responsible for policy formulation and legislative oversight of smart city governance.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

15. With reference to Integrated Control and Command Centres (ICCCs) under the Smart Cities Mission, consider the following statements:

1. ICCC act as operational nerve centres for urban service management.
2. ICCC have been established in all the cities selected under the Smart Cities Mission.
3. ICCC are primarily meant for rural-urban connectivity and agricultural market integration.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

16. Which of the following are key features of the Smart Cities Mission?

1. Provision of adequate water supply and 24×7 electricity.
2. Promotion of mixed land-use and walkable neighbourhoods.
3. Exclusive focus on high-income housing and commercial districts.

Select the correct answer using the code below:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

## 5. Ancient Board Games from Around the World

- An exhibit at the Serendipity Arts Festival, Goa celebrated ancient board games as living traditions of strategy, storytelling, and social interaction, not just relics.
- The exhibit showcased Indian classics like Chaupar, Nav-Kakdi, and Wagh Bakri, while also exploring ancient games worldwide.

## 1. Chaturanga (India)

- **Origin:** India, 6<sup>th</sup> century CE (Gupta Empire)
- **Meaning:** “Four limbs” – infantry, cavalry, chariots, elephants
- **Board & Pieces:** Square, uncheckered board with some marked squares; movements resembled modern chess
- **Gameplay:** White moved first; objective was to checkmate the opponent
- **Legacy:** Traders took it to Persia → evolved into Shatranj → spread to Europe as Chess



## 2. Hounds and Jackals (West Asia / Egypt)

- **Origin:** Around 2000 BCE
- **Players:** Two
- **Board:** Two sets of 29 holes; pieces shaped like dogs or jackals
- **Game play:** Likely involved starting at a point and reaching the end using knucklebones
- **Legacy:** Similar in concept to modern Snakes and Ladders



## 3. Mehen (Egypt)

- **Origin:** 3000–2300 BCE
- **Board:** Circular, shaped like a coiled snake surrounding Ra, the Sun God
- **Pieces:** Lion-shaped figurines and stone balls
- **Game play:** Likely involved moving balls to the center while blocking opponents
- **Significance:** Spiritual connotations; mentioned in Pyramid Texts related to the afterlife

## 4. The Royal Game of Ur (Central Asia / Mesopotamia)

- **Origin:** 2600–2400 BCE
- **Discovery:** Excavated by Sir Leonard Woolley in Ur (1922–1934)
- **Board:** Two rectangular sections connected by a narrow bridge; symbols marked safe and combat squares
- **Players:** Two, with 5–7 pieces each
- **Game play:** Move pieces using dice; reach the end while avoiding combat squares
- **Legacy:** Popular until the Middle Ages; introduced to India by Jewish migrants from Babylonia



## 5. Senet (Egypt)

- **Origin:** Earliest representation 2620 BCE; possibly originated in the Levant
- **Board:** 30 squares (3 rows × 10); decorated squares indicated direction of movement
- **Materials:** Wood, ivory, other materials
- **Game play:** Pawns moved based on throws of two-sided sticks
- **Significance:** Spiritual meaning; associated with the journey to the afterlife

## QUESTIONS

# 6. DRDO successfully tests 120-km strike range Pinaka rockets

- **Maiden Flight Test:** DRDO successfully tested the Pinaka Long Range Guided Rocket (LRGR-120) at the Integrated Test Range (ITR), Chandipur.
- **Range & Accuracy:** The rocket was tested for its maximum range of 120 km, performed all planned in-flight manoeuvres, and achieved a direct hit on the target.
- **Validation:** All range instruments tracked the rocket throughout its trajectory, validating performance parameters.



## Strategic Procurement & Defence Approval

- Defence Acquisition Council (DAC) chaired by Defence Minister Rajnath Singh cleared procurement proposals worth Rs. 79,000 crore.
- The clearance included Long Range Guided Rockets-120 as part of India's indigenous rocket artillery programme.

## Development & Collaboration

- **Primary Developers:** Armament Research and Development Establishment (ARDE) with support from HEMRL, DRDL, and RCI.
- **Flight Trial Coordination:** Managed by the Integrated Test Range (ITR) and Proof & Experimental Establishment (P&EE).

## System Versatility

- **Launcher Compatibility:** LRGR was fired from an in-service Pinaka launcher.
- Demonstrates the launcher's ability to fire multiple Pinaka rocket variants with different ranges.

## Long Range Guided Rockets-120

- LGR-120 is a laser-guided rocket in the 120-mm class.
- It's designed to improve accuracy compared to unguided rockets by homing in on a laser-designated target.
- Systems like this are typically developed for military use from platforms such as helicopters or ground launchers.

## Purpose

- Increase precision
- Reduce unintended damage compared to unguided rockets
- Engage targets at longer distances than traditional rockets of similar size

## Key characteristics

- Uses guidance rather than purely ballistic flight
- Smaller and lighter than large missiles
- Intended for professional military forces, not civilian use

## QUESTIONS

21. With reference to the **Pinaka Long Range Guided Rocket (LRGR 120)**, consider the following statements:

1. It is equipped with inertial navigation and terminal guidance to improve strike accuracy.
2. It requires a newly designed launcher system distinct from the existing Pinaka launch platform.
3. Its successful flight test enhances the precision-strike capability of the Indian Army's artillery.

Which of the statements given above are correct?

A. 1 and 3 only	C. 2 and 3 only
B. 1 and 2 only	D. 1, 2 and 3

22. With reference to the **Guided Pinaka Missile System**, consider the following statements:

1. The system is an indigenously developed multi-barrel rocket launcher by the Defence Research and Development Organisation.
2. Pinaka Mark II has a greater operational range than Pinaka Mark I.
3. The Pinaka system is capable of firing twelve rockets in a single salvo from upgraded launchers.

Which of the statements given above are correct?

A. 1 and 2 only	C. 1, 2 and 3
B. 2 and 3 only	D. 1 and 3 only

23. With reference to the **Agni-IV missile**, consider the following statements:

1. It is a surface-to-surface missile.
2. It is fuelled by liquid propellant alone.
3. It can deliver a one-tonne nuclear warhead to a distance of about 7500 kilometres.

Which of the statements given above is/are correct?

A. 1 only	C. 1 and 3 only
B. 2 and 3 only	D. 1, 2 and 3

## 7. Alaknanda: Indian astronomers spot implausibly old spiral galaxy

### Discovery of Alaknanda: The Second Farthest Spiral Galaxy

- Astronomers from India discovered the second farthest spiral galaxy, Alaknanda, using the James Webb Space Telescope (JWST).
- The galaxy was identified unexpectedly while studying galaxy shapes in the early universe.

## Key Features of Alknanda

### Morphology:

- Prominent disk with two clear spiral arms and a small central bulge.
- Spiral arms confirmed real after removing smooth light from disk and bulge.

### Star Formation:

- Produces stars at a rate equivalent to 60 solar masses per year.
- Indicates a fully developed spiral galaxy.

### Age:

- Formed 1.5 billion years after the Big Bang.
- Challenges current models predicting longer formation time for spiral structures.

### Naming:

- Named after the Alknanda River in Uttarakhand.
- Inspired by the Milky Way's Hindi name, Mandakini, also a spiral galaxy.

### Unexpected Formation:

- Spiral galaxies typically require billions of years to form.
- Alknanda's mature structure in a young universe ( $z \sim 4$ ) is surprising.

### Possible Formation Mechanisms:

- **Steady growth:** Accretion of cold gas leading to a stable rotating disk with density waves forming spiral arms.
- **Galaxy interaction:** Merging with a smaller companion triggering spiral arm formation.

### Research Methods:

- **Photometric Analysis:** Measured brightness across wavelengths to reconstruct energy distribution.
- Estimated redshift, stellar mass, and star-formation history from reconstructed spectrum.
- Three independent redshift measurements confirmed robustness.
- Future plans include spectroscopic observations with JWST's Integral Field Unit and ALMA.

### Broader Implications

#### Complexity of Galaxy Formation:

- Galaxy formation is a complex system problem, with many interacting factors.
- Discrepancy between simulations and observations helps refine theoretical models.

#### Indian Astronomy Milestone:

- Highlights India's contribution to major JWST discoveries.
- **Challenges:** smaller workforce, fewer training programs, lower funding, less participation in international collaborations.



## Strategy for advancement:

- Build domestic facilities (e.g., proposed 10-metre optical telescope in Hanle).
- Join global projects like Square Kilometer Array (SKA) and LIGO.

## Spiral Galaxy

- A spiral galaxy is a type of galaxy characterized by its flat, rotating disk of stars, gas, and dust, with a central bulge and spiral-shaped arms extending outward.
- These arms are often sites of active star formation, which makes them bright and visually striking.
  - **Central Bulge** – The dense, spherical area in the middle, mostly made of older stars.
  - **Disk** – The flat area surrounding the bulge, containing stars, gas, and dust.
  - **Spiral Arms** – Curved extensions of the disk where new stars are being born.
  - **Halo** – A roughly spherical region surrounding the galaxy, containing older stars and globular clusters.
- **Examples:**
  - **The Milky Way (our galaxy)**
  - **Andromeda Galaxy (M31)**
  - Spiral galaxies can be further classified into types like Sa, Sb, and Sc based on how tightly their arms are wound and the size of their central bulge.



## QUESTIONS

24. With reference to the recently discovered spiral galaxy **Alaknanda**, consider the following statements:

1. It was discovered by Indian astronomers using the James Webb Space Telescope.
2. It is the farthest spiral galaxy ever discovered so far.
3. Its spiral arms were confirmed only after removing the smooth light contribution from the disk and central bulge.

Which of the statements given above are correct?

A. 1 and 3 only	C. 2 and 3 only
B. 1 and 2 only	D. 1, 2 and 3

25. With reference to the physical and evolutionary characteristics of **Alaknanda**, consider the following statements:

1. It formed approximately 1.5 billion years after the Big Bang.
2. Its star-formation rate suggests it is an underdeveloped spiral galaxy.
3. Its existence challenges prevailing models of spiral galaxy formation.

Which of the statements given above are correct?

A. 1 only	C. 2 and 3 only
B. 1 and 3 only	D. 1, 2 and 3

26. With reference to the study and broader implications of the discovery of **Alaknanda**, consider the following statements:

1. Multiple independent redshift measurements were used to ensure the robustness of the findings.
2. Galaxy interaction and cold gas accretion are proposed mechanisms for its early spiral structure.
3. The discovery underscores the need for India to invest only in international astronomy collaborations rather than domestic facilities.

Which of the statements given above are correct?

A. 1 and 2 only	C. 1 and 3 only
B. 2 only	D. 1, 2 and 3

27. What is the difference between **asteroids** and **comets**?

1. Asteroids are small rocky planetoids, while comets are formed of frozen gases held together by rocky and metallic material.
2. Asteroids are found mostly between the orbits of Jupiter and Mars, while comets are found mostly between Venus and Mercury.
3. Comets show a perceptible glowing tail, while asteroids do not.

Which of the statements given above is/are correct?

A. 1 and 2 only	C. 3 only
B. 1 and 3 only	D. 1, 2 and 3

28. Consider the following statements:

**Statement–I:** Giant stars live much longer than dwarf stars.

**Statement–II:** Compared to dwarf stars, giant stars have a greater rate of nuclear reactions.

Which one of the following is correct in respect of the above statements?

- A. Both Statement–I and Statement–II are correct and Statement–II explains Statement–I
- B. Both Statement–I and Statement–II are correct, but Statement–II does not explain Statement–I
- C. Statement–I is correct, but Statement–II is incorrect
- D. Statement–I is incorrect, but Statement–II is correct

## 8. Amazon's stingless bees become the first insect to be granted legal rights

- Stingless bees became the first insects in the world to be granted legal rights.
- Two Peruvian municipalities — Satipo and Nauta — passed the ordinance.
- Builds on Peru's 2024 national law recognizing stingless bees as native species deserving protection.

## What Are Stingless Bees?

- Bees that lack stingers or have harmless ones.
- Found mainly in tropical regions; about 500 species worldwide.
- Nearly half live in the Amazon, with 170+ species in Peru.
- Existed for around 80 million years, since the dinosaur era.



**STINGLESS BEES BECOME  
FIRST INSECT TO BE  
GRANTED LEGAL RIGHTS**

## Why Are They Significant?

- Critical pollinators sustaining tropical forests.
- Pollinate over 80% of Amazonian flora, including crops like cacao, coffee, and avocados.
- Essential to the culture and traditions of Indigenous Asháninka and Kukama-Kukamiria peoples.
- Their honey is used as traditional medicine and has anti-inflammatory, antibacterial, and antiviral properties.
- Stingless bee honey is watery, sweet-sour, and different from commercial honey.

## Major Threats They Face

- Deforestation due to illegal logging, agriculture, and cattle grazing.
- Increasing wildfires destroying habitats.
- Climate change forcing bees to migrate to higher elevations.
- Communities report bees are becoming harder to find than before.

## What the New Law Provides

- Recognizes the inherent rights of stingless bees, including:
  - Right to exist and survive
  - Right to healthy populations
  - Right to habitat restoration
  - Right to a pollution-free environment
- Acknowledges that Indigenous rights and bee conservation are deeply interconnected.

## Future Outlook

- Currently applies only to two municipalities.
- Efforts are underway to expand the ordinance into a national law.
- Seen as a powerful step toward biodiversity conservation and Indigenous cultural preservation.

## Amazon Rainforest

### Where it is

- Located in South America
- Spans 9 countries, mostly Brazil, plus Peru, Colombia, and others
- Covers about 5.5 million km<sup>2</sup> (around the size of the continental U.S.)



### Why it's important

- Home to millions of species of plants, animals, and insects
- Produces a large amount of the world's oxygen and helps regulate climate
- Stores massive amounts of carbon, helping slow climate change
- Supports Indigenous peoples who have lived there for thousands of years

### Climate

- Hot and humid year-round
- Heavy rainfall (hence "rainforest")
- Has layered structure: emergent, canopy, understory, forest floor

### Threats

- Deforestation (logging, farming, cattle ranching)
- Fires (often human-caused)
- Climate change
- Loss of biodiversity and Indigenous lands

## Why protecting it matters

- If the Amazon is severely damaged, it could:
  - Speed up global warming
  - Cause massive species extinction
  - Disrupt rainfall patterns worldwide

## QUESTIONS

29. With reference to the recent legal recognition granted to **stingless bees** in the Amazon region, consider the following statements:

1. Stingless bees became the first insects in the world to be granted legal rights.
2. The legal ordinance recognizing their rights was passed by two municipalities in Peru.
3. The ordinance was enacted independently of any national-level legal recognition.

Which of the statements given above are correct?

A. 1 and 2 only	C. 1 only
B. 2 and 3 only	D. 1, 2 and 3

30. With reference to the ecological and cultural significance of **stingless bees**, consider the following statements:

1. They pollinate more than 80% of Amazonian flora, including important crops such as cacao and coffee.
2. Nearly half of the world's stingless bee species are found in the Amazon region.
3. Their honey is chemically identical to commercial honey and primarily valued for its shelf stability.

Which of the statements given above are correct?

A. 1 and 2 only	C. 2 and 3 only
B. 1 only	D. 1, 2 and 3

31. With reference to the conservation context of stingless bees and the Amazon Rainforest, consider the following statements:

1. The new legal framework recognizes the inherent rights of stingless bees, including the right to habitat restoration and a pollution-free environment.
2. Climate change is forcing stingless bees to migrate to higher elevations.
3. The Amazon Rainforest spans only three countries and covers less than 3 million square kilometres.

Which of the statements given above are correct?

A. 1 and 2 only	C. 1 and 3 only
B. 2 only	D. 1, 2 and 3

## 9. RBI Releases Its Report on Trend and Progress of Banking in India 2024-25



- The Reserve Bank of India released its Report on Trend and Progress of Banking in India 2024-25.
- The report highlighted the continued resilience of the banking sector, backed by strong balance sheet growth, improved asset quality and robust profitability.
- According to RBI, the banking sector remained resilient in FY25, supported by double-digit expansion in balance sheets, even as the pace of growth moderated compared with the previous financial year.
- Deposits and credit of scheduled commercial banks (SCBs) both grew in double digits during the year, though at a slower rate than in FY24.
- Asset quality continued to improve, with the gross non-performing assets (GNPA) ratio declining to a multi-decadal low of 2.2 per cent in end-March 2025, and further to 2.1 per cent by end-September 2025, reflecting sustained stress resolution and better credit underwriting.
- Profitability of banks remained robust during the year, with return on assets (RoA) at 1.4 per cent and return on equity (RoE) at 13.5 per cent in FY25, the RBI report said, underscoring the sector's improved earnings profile.
- The central bank also flagged steady improvement across other segments of the financial system.

### Report on Trend and Progress of Banking in India 2024-25

#### 1. Overview of the Banking Sector (2024-25)

- The Indian banking sector continued to display resilience and robust performance during 2024-25, backed by strong balance sheet growth, improved asset quality, and sustained profitability.
- Commercial banks, co-operative banks, and other financial institutions showed stability despite moderating economic conditions.

## 2. Balance Sheet and Growth Trends

### a. Deposits and Credit

- Double-digit growth was recorded in both deposits and credit for Scheduled Commercial Banks (SCBs).
- However, the pace of growth moderated compared to the previous year.
- Bank credit and deposit growth remained strong indicators of public confidence and economic activity.

### b. Capital Adequacy

- **Banks maintained strong capital buffers:**
  - Capital to Risk-Weighted Assets Ratio (CRAR) was around 17.4% at end-March 2025 and 17.2% by end-September 2025
  - Well above regulatory requirements (Basel III norms), indicating a robust shock-absorbing capacity.

## 3. Asset Quality and Credit Performance

### a. Gross Non-Performing Assets (GNPA)

- Asset quality strengthened significantly.
- GNPA levels declined to a multi-decadal low:
  - ~2.2% at end-March 2025
  - ~2.1% by end-September 2025
- This improvement highlights better risk assessment and recovery practices by banks.

### b. Sectoral Credit Trends

- Credit growth was broad-based across industry, services, MSMEs, and housing sectors.
- Some moderation in specific segments was noted, but overall lending remained robust.

## 4. Profitability and Financial Performance

- Scheduled Commercial Banks continued to be profitable.
- Return on Assets (RoA) remained healthy (around ~1.3–1.4%).
- Return on Equity (RoE) was also commendable, reflecting efficient utilization of capital.
- Profitability was supported by net interest income and fee-based earnings, despite some pressures from rising operational costs.

## 5. Technological and Structural Developments

### a. Digital Expansion

- Growth in digital banking and payments continued, enhancing customer reach and transaction efficiency.
- Initiatives like Unified Payments Interface (UPI) greatly boosted digital transactions (as per broader sector indicators).

### b. Financial Inclusion

- Digital and physical financial inclusion expanded, with more districts fully enabled for digital banking.
- Increased participation of underserved segments helped deepen financial penetration.

## 6. Regulatory and Systemic Trends

### a. Bank Frauds and Compliance Risks

- Although the number of fraud cases declined, the monetary value involved in frauds rose significantly, signaling emerging risks amid digital growth.

### b. NBFC Regulation

- RBI initiated a review of scale-based regulation for NBFCs to strengthen oversight and mitigate systemic vulnerabilities.

### c. Competition from Non-Bank Sources

- The report noted increasing competition from non-bank financial channels (like capital markets and fintech), which can influence credit flows and market share dynamics.

## 7. Challenges and Emerging Risks

### a. Cybersecurity and Digital Risk

- With expansion in digital services, cyber frauds and operational risks increased sharply, prompting the need for stronger cybersecurity frameworks.

### b. Credit-Deposit Dynamics

- Demand for credit sometimes outpaced deposit growth, creating a potential liquidity pressure scenario for banks in certain periods.

### c. NBFC Stress and External Pressures

- RBI cautioned about rising stress in NBFCs and insurance firms, requiring vigilant monitoring to safeguard financial stability.

## 8. Conclusion: Banking Sector Outlook

The Trend and Progress of Banking in India 2024-25 report highlights that:

- Indian banks remain strong, profitable, and well-capitalized.
- Asset quality has improved significantly, with GNPsAs at historic lows.
- Growing digital and inclusion metrics reflect a transforming, more accessible banking ecosystem.
- However, cyber risks, rising fraud values, and competitive pressures from non-bank entities present new challenges that require robust regulatory frameworks and innovation in risk management.

## QUESTIONS

32. With reference to the **Report on Trend and Progress of Banking in India 2024-25**, released by the Reserve Bank of India, consider the following statements:

1. The Indian banking sector recorded double-digit growth in both deposits and credit in FY25.
2. The pace of balance sheet expansion in FY25 was higher than that observed in FY24.
3. The banking sector's resilience in FY25 was supported by improved asset quality and robust profitability.

Which of the statements given above are correct?

A. 1 and 3 only	C. 2 and 3 only
B. 1 and 2 only	D. 1, 2 and 3

33. With reference to **asset quality and capital adequacy** of Indian banks in FY25, consider the following statements:

1. The Gross Non-Performing Assets (GNPA) ratio declined to a multi-decadal low by end-March 2025.

2. Capital to Risk-Weighted Assets Ratio (CRAR) of banks remained well above Basel III regulatory requirements.
3. Improvement in asset quality was primarily driven by a contraction in overall bank credit.

Which of the statements given above are correct?

A. 1 and 2 only	C. 1 only
B. 2 and 3 only	D. 1, 2 and 3

34. With reference to **emerging risks and structural trends** highlighted in the RBI report, consider the following statements:

1. The monetary value involved in bank frauds increased even though the number of fraud cases declined.
2. Cybersecurity risks have intensified with the expansion of digital banking and payments.
3. Competition from non-bank financial channels was found to have no impact on banks' credit growth and market share.

Which of the statements given above are correct?

A. 1 and 2 only	C. 1 and 3 only
B. 2 only	D. 1, 2 and 3

## ANSWER KEY AND EXPLANATION

### 1. C Both 1 and 2

- **Statement 1 is incorrect:** The High Court held, **prima facie**, that an MLA does NOT qualify as a “public servant” under the POCSO Act, as the Act borrows definitions from IPC and Section 21 IPC does not include legislators.
- **Statement 2 is correct:** The Court relied on **R.S. Nayak vs. A.R. Antulay (1984)**, where the Supreme Court held that MLAs are not “public servants” under the IPC.

### 2. B 2 and 3 only

- **Statement 1 is incorrect:** The POCSO Act defines a child as **any person below 18 years**, not 16 years.
- **Statement 2 is correct:** The Act is explicitly **gender-neutral**, recognising that **both boys and girls** can be victims of sexual abuse.
- **Statement 3 is correct:** The Act was enacted following India’s **ratification of the UN Convention on the Rights of the Child in 1992**.

### 3. A 1 and 2 only

- **Statement 1 is correct:** **Failure to report** sexual offences against children is itself made an **offence under the POCSO Act**, strengthening reporting mechanisms.
- **Statement 2 is correct:** The **storage of child pornography** has been introduced as a **specific offence**, addressing digital exploitation of children.
- **Statement 3 is incorrect:** Under **Rule 9 of the POCSO Rules, 2020**, **interim compensation can be ordered immediately after FIR registration**, not only after trial completion.

### 4. A 1 and 2 only

- **Statement 1 is correct:** The Treaty of Paris (1951) established the European Coal and Steel Community (ECSC).
- **Statement 2 is correct:** The six founding members—Belgium, France, West Germany, Italy, Luxembourg, and the Netherlands—are known as the “Inner Six.”
- **Statement 3 is incorrect:** The Maastricht Treaty (1993) formally created the European Union (EU), not the EEC. The EEC was created earlier by the Treaty of Rome (1957).

### 5. A 1 and 2 only

- **Statement 1 is correct:** Bulgaria became the **21<sup>st</sup> eurozone member on January 1**.
- **Statement 2 is correct:** The **lev**, in circulation since 1881, was **pegged to the Deutschmark and later the euro since 1997**.
- **Statement 3 is incorrect:** **Croatia joined the eurozone earlier in 2023**, making Bulgaria the next entrant, not the first after Croatia.

### 6. B 1 and 3 only

- **Statement 1 is correct:** The eurozone includes EU countries that use the euro as legal tender.
- **Statement 2 is incorrect:** Kosovo and Montenegro use the euro without formal EU agreements and are not eurozone members.
- **Statement 3 is correct:** All EU members except Denmark (opt-out) are obligated to adopt the euro after meeting convergence criteria.

7. C Five countries only

- “The European Union (EU) consists of 27 countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden”

8. A Two countries only

- The euro area, commonly called the eurozone (EZ), is a currency union of 21 member states of the European Union (EU) that have adopted the euro (€) as their primary currency and sole legal tender, and have thus fully implemented Economic and Monetary Union policies. The 21 eurozone members are: Austria, Belgium, Bulgaria, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. Within the European Union (EU), six member states have not yet adopted the euro and continue to use their own national currencies: the Czech Republic, Denmark, Hungary, Poland, Romania, and Sweden.

9. B 1 and 3 only

- **Statement 1 is correct:** Justice Mission 2025 was a **large-scale, live-fire PLA exercise** involving missile launches, fighter aircraft sorties, and naval manoeuvres.
- **Statement 2 is incorrect:** The drills were meant to **simulate blockade operations and precision strikes on ports and maritime targets**, not amphibious landings inside Taiwan.
- **Statement 3 is correct:** Missile launches were observed from **Pingtan Island**, the closest Chinese territory to Taiwan.

10. C Both 1 and 2

- **Statement 1 is correct:** Taiwan lies in **East Asia**, across the **Taiwan Strait**, off China's southeastern coast.
- **Statement 2 is correct:** Taiwan's **global dominance in semiconductors** adds to its strategic and geopolitical importance.
- **Statement 3 is incorrect:** The drills were conducted **around Taiwan**, including **waters north and south of the island**, not exclusively on mainland China.

11. A Taiwan Strait

- The Taiwan Strait, also known as the Formosa Strait, separates Taiwan from mainland China's Fujian Province, connecting the East China Sea to the north and the South China Sea to the south, serving as a vital waterway and a point of geopolitical tension.

12. A 1 and 2 only

- **Statement 1 is correct.** The **LAC emerged after the 1962 war** and remains **undemarcated and disputed in several stretches**, with no mutually agreed alignment.
- **Statement 2 is correct.** **India considers the LAC to be 3,488 km long**, while **China claims it is only about 2,000 km**, reflecting differing perceptions of alignment. Indian states and Union Territories sharing a border with China are Ladakh (UT), Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh, forming the 3,488 km Line of Actual Control (LAC) across Western, Middle, and Eastern sectors.
- **Statement 3 is incorrect.** The Western sector dispute involves **Johnson Line (Indian claim)** and **McDonald Line (Chinese claim)** over **Aksai Chin**, not the McMahon Line, which applies to the **Eastern sector**.

13. A 1 and 2 only

- **Statement 1 is correct.** The Smart Cities Mission was launched on **25 June 2015** to improve urban quality of life through efficient services, modern infrastructure, and smart solutions.
- **Statement 2 is correct.** The Mission promotes **sustainable and inclusive development** by creating **compact, replicable urban models**.
- **Statement 3 is incorrect.** The Mission follows a **50:50 cost-sharing model** between the **Central Government and State Governments**, not full central funding.

14. A 1 and 2 only

- **Statements 1 and 2 are correct.** Each Smart City has an SPV registered under the **Companies Act, 2013**, with **50:50 equity** held by the State/UT and the ULB.
- **Statement 3 is incorrect.** The SPV is an **implementation and execution body**, not a legislative or policy-making authority.

15. A 1 and 2 only

- **Statements 1 and 2 are correct.** ICCCs function as **centralised command centres** and have been established in **all 100 Smart Cities**.
- **Statement 3 is incorrect.** ICCCs focus on **urban governance**, not agricultural or rural connectivity.

16. A 1 and 2 only

- **Statements 1 and 2 are correct.** The Mission emphasises **core infrastructure, mixed land-use, sustainability, and inclusivity**.
- **Statement 3 is incorrect.** The Smart Cities Mission explicitly promotes **affordable housing and social inclusion**, not exclusivity.

17. A 1 only

- **Statement 1 is correct.** Chaturanga originated in India in the **6<sup>th</sup> century CE** during the **Gupta Empire** and later evolved into Shatranj in Persia and eventually into modern chess in Europe.
- **Statement 2 is incorrect.** The Royal Game of Ur was discovered in **Mesopotamia (Ur)** by **Sir Leonard Woolley**, not Egypt. Spiritual associations with the afterlife are linked to **Mehen** and **Senet**, not the Royal Game of Ur.

18. A 1 only

- **Statement 1 is correct.** Mehen was a **circular, snake-shaped board game** from ancient Egypt with strong **spiritual and religious associations**, mentioned in Pyramid Texts.
- **Statement 2 is incorrect.** Hounds and Jackals used **two sets of 29 holes** and knucklebones, whereas the **30-square, three-row board** and stick-based movement belong to **Senet**.

19. A 1 only

**Statement 1 is correct:** The first **Kho-Kho World Cup** was hosted in **Delhi, India**, marking a significant milestone for the traditional Indian sport at the global level.

**Statement 2 is correct:** In the women's final, India defeated Nepal by a score of 78–40, securing the men's world championship title.

**Statement 3 is correct:** In the men's final, **India beat Nepal 54–36**, becoming the **women's world champions** in the inaugural edition.

20. B 2 only.

- **Statement 1 is incorrect:** The Chess Olympiad is a team event; it does not have “finals” in the sense of a World Championship match. Gukesh did not become the “world’s youngest winner” by defeating Ian Nepomniachtchi in a Chess Olympiad final. In 2024, Gukesh’s major “youngest world champion” milestone is associated with the World Chess Championship match, where he became the youngest World Chess Champion by defeating Ding Liren (not Ian Nepomniachtchi).
- **Statement 2 is correct:** Abhimanyu Mishra (USA) holds the record for being the youngest person ever to become a Grandmaster, achieving the title at 12 years, 4 months, and 25 days, surpassing the earlier record held by Sergey Karjakin.

21. A 1 and 3 only

- **Statement 1 is correct** because the LRGR 120 is described as a guided rocket with inertial navigation, mid-course updates, and terminal guidance, which together enhance accuracy.
- **Statement 2 is incorrect** because the rocket is explicitly stated to be launched from the existing Pinaka launcher, making it a cost-effective upgrade rather than a system requiring an entirely new launcher.
- **Statement 3 is correct** as the successful flight test is noted to enhance the precision-strike capability of the Indian Army’s artillery.

22. C 1, 2 and 3

- **Statement 1 is correct** because the Pinaka Missile System has been developed indigenously by DRDO’s Armament Research and Development Establishment (ARDE).
- **Statement 2 is correct** since Pinaka Mark I has a range of about 40 km, whereas Pinaka Mark II extends this range to 70–80 km, with future expansion plans.
- **Statement 3 is correct** as the system has been successfully tested from upgraded launchers capable of firing twelve rockets in a single salvo, highlighting its high-intensity fire capability.

23. A 1 only

- **Statement 1 is correct:** Agni-IV is an indigenously developed, nuclear-capable, long-range **surface-to-surface ballistic missile** with a strike range of around **4,000 kilometres**. It is designed for strategic deterrence.
- **Statement 2 is incorrect:** Agni-IV is a **two-stage solid-fuelled missile**, not a liquid-propellant system. Solid fuel enhances storage life, readiness, and rapid launch capability, which are critical for strategic missiles.
- **Statement 3 is incorrect:** The missile is capable of carrying a **one-tonne nuclear warhead** to a distance of approximately **4,000 kilometres but not 7500 km**, placing it firmly in the intermediate-range ballistic missile category.

24. A 1 and 3 only

- **Statement 1 is correct:** Alaknanda was discovered by astronomers from India using observations from the James Webb Space Telescope.
- **Statement 2 is incorrect:** Alaknanda is described as the **second farthest spiral galaxy**, not the farthest one discovered to date.
- **Statement 3 is correct:** The spiral arms were confirmed to be real structures only after astronomers removed the smooth background light from the galaxy’s disk and bulge, ruling out visual artefacts.

25. **B** 1 and 3 only

- **Statement 1 is correct:** Alknanda formed about **1.5 billion years after the Big Bang**, corresponding to a redshift of around  $z \approx 4$ .
- **Statement 2 is incorrect:** With a star-formation rate equivalent to **60 solar masses per year**, Alknanda exhibits characteristics of a **fully developed spiral galaxy**, not an underdeveloped one.
- **Statement 3 is correct:** The presence of a mature spiral structure at such an early stage of the universe contradicts existing models that predict spiral galaxies take several billion years to form.

26. **A** 1 and 2 only

- **Statement 1 is correct:** The robustness of Alknanda's discovery was strengthened through **three independent redshift measurements**, based on photometric reconstruction of its spectrum.
- **Statement 2 is correct:** Two possible formation pathways have been proposed: steady growth through cold gas accretion forming a stable rotating disk, and interactions or mergers with smaller companion galaxies triggering spiral arms.
- **Statement 3 is incorrect:** The discussion highlights the importance of **both domestic infrastructure** (such as a proposed 10-metre telescope in Hanle) and **international collaborations** like SKA and LIGO, not an exclusive reliance on global projects.

27. **B** 1 and 3 only

- **Statement 1 is correct:** Asteroids are primarily composed of rocky and metallic materials, whereas comets consist largely of **ice and frozen gases** (such as water, carbon dioxide, and ammonia) mixed with dust and rocky matter.
- **Statement 2 is incorrect:** Asteroids are indeed found mainly in the **asteroid belt between Mars and Jupiter**, but comets are not found between Venus and Mercury. Most comets originate from the **Kuiper Belt** and the **Oort Cloud**, which lie far beyond the orbit of Neptune.
- **Statement 3 is correct:** Comets develop a **glowing tail** when they approach the Sun, as solar radiation causes the frozen gases to sublimate and release dust and gas. Asteroids generally do not exhibit such tails.

28. **D** Statement–I is incorrect, but Statement–II is correct

- **Statement–I is incorrect:** Giant stars generally have **shorter lifespans** than dwarf stars. Although they contain much more fuel, their large mass causes them to burn that fuel at a much faster rate, leading to an earlier exhaustion of nuclear fuel.
- **Statement–II is correct:** Giant stars possess **hotter and denser cores**, which result in a **higher rate of nuclear fusion reactions** compared to dwarf stars. This higher reaction rate accounts for their greater luminosity and energy output. Therefore, Statement–II does not support Statement–I; instead, it explains why giant stars burn out faster. Hence, option **[D]** is the correct answer.

29. **A** 1 and 2 only

- **Statement 1 is correct:** Stingless bees are the **first insects globally** to be granted explicit legal rights.
- **Statement 2 is correct:** The ordinances were passed by the Peruvian municipalities of **Satipo and Nauta**.
- **Statement 3 is incorrect:** The municipal ordinances **build upon Peru's 2024 national law**, which already recognizes stingless bees as native species deserving protection.

**30. A 1 and 2 only**

- **Statement 1 is correct:** Stingless bees are **critical pollinators**, sustaining over **80% of Amazonian flora**, including economically important crops.
- **Statement 2 is correct:** Out of roughly **500 species worldwide**, nearly half live in the Amazon, with **170+ species in Peru alone**.
- **Statement 3 is incorrect:** Stingless bee honey is **distinct from commercial honey**—it is more watery, sweet-sour in taste, and valued for **medicinal properties**, not shelf stability.

**31. A 1 and 2 only**

- **Statement 1 is correct:** The ordinance explicitly recognizes rights such as **existence, survival, healthy populations, habitat restoration, and freedom from pollution**, linking bee conservation with Indigenous rights.
- **Statement 2 is correct:** Communities report that **climate change is pushing stingless bees toward higher elevations**, making them harder to find.
- **Statement 3 is incorrect:** The Amazon Rainforest spans **nine countries** and covers about **5.5 million km<sup>2</sup>**, not less than 3 million km<sup>2</sup>.

**32. A 1 and 3 only**

- **Statement 1 is correct:** Scheduled Commercial Banks recorded **double-digit growth in both deposits and credit** during FY25.
- **Statement 2 is incorrect:** Although balance sheets expanded in double digits, the **pace of growth moderated compared with FY24**, not increased.
- **Statement 3 is correct:** The report explicitly attributes sectoral resilience to **strong balance sheets, improved asset quality, and robust profitability**.

**33. A 1 and 2 only**

- **Statement 1 is correct:** The GNPA ratio declined to about **2.2% by end-March 2025** and further to **2.1% by end-September 2025**, marking a multi-decadal low.
- **Statement 2 is correct:** Banks maintained strong capital buffers, with **CRAR around 17.4%**, comfortably above **Basel III norms**, indicating strong shock-absorbing capacity.
- **Statement 3 is incorrect:** Asset quality improved despite **robust and broad-based credit growth**; it was driven by better risk assessment, recovery mechanisms, and credit underwriting—not by a contraction in lending.

**34. A 1 and 2 only**

- **Statement 1 is correct:** The report notes that **while the number of fraud cases declined, the value involved rose significantly**, signalling evolving risks.
- **Statement 2 is correct:** With rapid digital expansion, **cyber frauds and operational risks increased**, necessitating stronger cybersecurity frameworks.
- **Statement 3 is incorrect:** The report explicitly highlights **rising competition from non-bank entities** such as fintechs and capital markets, which can influence banks' credit flows and market share.