

P2. NATIONAL



SC directs Centre to frame SOPs to curb 'digital arrest' scams - Digital arrest scams illustrate the convergence of cyber crime, financial fraud and psychological coercion, demanding coordinated institutional, technological and legal responses.

P3. NATIONAL



Jammu and Kashmir — the elusive quest for Statehood - The post-2019 transformation of Jammu and Kashmir highlights the interaction between federalism, security, democratic governance and regional development.

P8. HEALTH



'Six-in-one vaccine may boost immunisation programme' - The hexavalent vaccine combines protection against six childhood diseases in one injection, offering potential improvements in immunisation efficiency, health-system operations and beneficiary convenience.

P9. ECONOMICS



Misleading Food Claims and Regulatory Oversight: The Dabur Case - The Dabur case highlights the intersection of food safety regulation, consumer protection and biodiversity governance through enforcement of advertising standards and biological resource compliance.

Editor's Note

What are the most pressing developments in national news today? With the latest edition of Pala Civil Times, let us explore them one by one in an organised manner, helping you stay updated while building conceptual depth. We begin with the Supreme Court's directions to States to establish robust mechanisms to combat digital arrest scams as coordinated efforts gradually improve the situation. As August 5 marks seven years since the revocation of Article 370, we also examine the impact of Jammu and Kashmir's reorganisation on governance, security and development. On the health page, we analyse how the proposed hexavalent vaccine could strengthen India's Universal Immunisation Programme while assessing the challenges to its adoption. We also cover the FSSAI's action against misleading claims on popular food products, highlighting the regulatory framework behind it. In our Decoded section, we examine India's roadmap to building the sporting ecosystem required for its 2036 Olympic bid. Alongside each topic, we connect relevant Previous Year Questions to demonstrate their continuing UPSC relevance. We hope this edition enriches your understanding. Happy reading!

Editorials Decoded



Boom and Bust



India's recent growth pattern highlights the challenge of balancing rapid wealth creation with inclusive employment and income growth to ensure broad-based economic development.



Top Spot



India's 2036 Olympic bid seeks to combine world-class event hosting with long-term transformation of the country's sporting ecosystem through grassroots development, institutional reforms and enhanced international competitiveness.

SC directs Centre to frame SOPs to curb 'digital arrest' scams

A digital arrest scam is a cyber-enabled fraud in which criminals impersonate officials from law enforcement, taxation, customs or investigative agencies and falsely claim that an arrest warrant has been issued against an individual. Victims are psychologically coerced through threats, fabricated legal proceedings and fake official settings into transferring money or disclosing sensitive information. The growing scale of such organised fraud has necessitated coordinated action involving law enforcement agencies, financial institutions, telecom authorities and cyber-security institutions to prevent financial loss and strengthen public trust.

Nature, Modus Operandi and Institutional Framework

Digital Arrest: Criminals falsely claim legal proceedings or arrest warrants to intimidate victims into immediate compliance.

Identity Impersonation: Fraudsters pose as officials from customs, income tax authorities or central investigative agencies.

Psychological Coercion: Victims are shifted to video platforms such as WhatsApp or Skype and shown fabricated police station environments to create legitimacy.

Financial Extortion: Money is demanded through bank transfers or UPI payments under the pretext of avoiding arrest.

Institutional Response: The Indian Cyber Crime Coordination Centre (I4C), Ministry of Home Affairs, Cyber Fraud Mitigation Centre, banks, telecom operators, RBI, CBI and State governments coordinate prevention, investigation, grievance redressal and money restoration.

Current Status and Recent Developments

Declining Complaints: Cases reported on the National Cyber Crime Reporting Portal declined from 1,23,672 (2024) to 58,249 (2025) and 16,377 up to June 30, 2026.

Financial Recovery: The Money Restoration Mechanism Portal, covering 57 banks and all 36 States/UTs, completed restoration in 36,290 cases, involving ₹18.05 crore.

Expanded Banking Coordination: A data-sharing MoU between the RBI Innovation Hub and I4C supports 69 banks covering 1,23,590 branches.

Strengthened Enforcement: The Supreme Court directed preparation of SOPs for temporary debit holds on mule accounts, operationalisation of e-Zero FIRs and State Cyber Crime Coordination Centres, and time-bound grievance redressal and restoration.

Societal Significance and Challenges

Organised Cyber Crime: Digital arrest scams are complex trans-jurisdictional offences that combine identity fraud, financial laundering and psychological manipulation.

Institutional Integration: Real-time coordination among banks, telecom operators, investigative agencies and cyber-security institutions is essential for rapid detection and response.

Financial Protection: Temporary debit holds on suspected mule accounts, faster freezing of fraudulent transactions and timely restoration reduce victim losses.

Strengthened Investigation: Wider adoption of e-Zero FIRs, operational Cyber Crime Coordination Centres and coordinated CBI investigations improve enforcement against organised networks.

Technology-driven Governance: Standard operating procedures, AI-assisted monitoring, structured grievance redressal, State-wise performance monitoring and public awareness can significantly enhance cyber resilience

Way Forward

Digital arrest scams represent one of the most sophisticated forms of cyber-enabled financial crime, exploiting fear, technological anonymity and institutional impersonation. While recent reductions in reported complaints and improvements in financial restoration indicate progress, sustained success depends on coordinated governance, rapid investigation, banking safeguards, telecom regulation, technological innovation and widespread public awareness. A robust ecosystem combining prevention, timely response and effective victim compensation remains essential to protecting citizens in an increasingly digital economy.

PYQ Compass

UPSC questions previously asked from the themes discussed on this page.



Q. What are the internal security challenges being faced by India? Give out the role of Central Intelligence and Investigative Agencies tasked to counter such threats. (GS III – 2023)

RELEVANCE GS II : Governance; GS III : Internal Security

Jammu and Kashmir — the elusive quest for Statehood

On 5 August 2019, the special constitutional status of Jammu and Kashmir under Article 370 was revoked, followed by the reorganisation of the former State into the Union Territories of Jammu and Kashmir and Ladakh. The changes marked a major restructuring of India's federal and administrative framework. Seven years later, the region presents a mixed picture involving security concerns, economic outcomes, democratic processes and continuing discussions regarding the restoration of full Statehood.

Constitutional and Administrative Changes

Constitutional Reorganisation: Jammu and Kashmir's special status was removed on 5 August 2019, and Statehood ended on 9 August 2019 through parliamentary measures.

Union Territory Structure: Jammu and Kashmir became a Union Territory with a legislature, while Ladakh became a separate Union Territory.

Security Measures: The transition was accompanied by deployment of additional security personnel, temporary restrictions on movement and communication, and preventive detentions.

Governance Framework: Administrative authority is shared between the elected government and the Lieutenant Governor under existing rules governing Union Territories.

Democratic Process: Assembly elections were conducted in 2024, resulting in the formation of an elected government.

Present Situation

Security Scenario: Terror-related incidents continue in parts of Jammu and Kashmir, including attacks in areas such as Pahalgam, Poonch-Rajouri and adjoining districts.

Economic Indicators: According to the J&K Economic Survey 2025–26, per capita income stood at 76.6% of the national average, compared to 79.9% in 2013–14; unemployment remains above the national average (graduate unemployment at 23.9%).

Law and Order Measures: Public Safety Act (PSA) and the Unlawful Activities (Prevention) Act (UAPA) continue to be used in security management. Communication restrictions are periodically imposed as well.

Statehood Debate: The restoration of Statehood remains an important political issue, with continuing demands from political parties and public representatives. The Lieutenant Governor continues to exercise important powers relating to administration, police and certain governance functions.

RELEVANCE

GS III : Internal Security

Significance and Challenges

Security–Liberty Balance: Ensuring public security while protecting civil liberties and democratic freedoms remains a key governance challenge.

Democratic Accountability: Greater devolution of powers and restoration of full representative institutions can strengthen accountability and public participation.

Economic Development: Employment generation, investment, tourism, infrastructure and human capital development are essential for stability.

Institutional Confidence: Transparent governance, effective grievance redressal and responsive administration can enhance public trust.

Federal Balance: The experience of Jammu and Kashmir highlights broader debates regarding federalism, regional aspirations and cooperative governance within the Union.



Way Forward

While integration, security and development remain important objectives, sustainable progress depends on balancing security needs with democratic participation, economic opportunities and accountable governance. The future trajectory of Jammu and Kashmir will be shaped by the effectiveness of institutions, restoration of public confidence and continued engagement with the aspirations of its people.

PYQ Compass

UPSC questions previously asked from the themes discussed on this page.



Q. Discuss the nature of Jammu and Kashmir Legislative Assembly after the Jammu and Kashmir Reorganization Act, 2019. Briefly describe the powers and functions of the Assembly of the Union Territory of Jammu and Kashmir. (GS II – 2025)

Integrity of Public Examinations in India: Beyond Conventional Paper Leaks

Public examinations such as NEET, UGC-NET and other national recruitment and admission tests carry significant academic, economic and social consequences. Their credibility depends upon fairness, confidentiality and institutional integrity throughout the examination process. Recent examination controversies have shifted attention from conventional paper leaks to broader vulnerabilities involving examination administration, digital systems and insider risks, emphasising the need for comprehensive safeguards across the entire examination lifecycle.

Nature of Examination Compromises

Conventional Paper Leak: Traditionally involves unauthorised disclosure of a printed question paper before the examination.

Broader Compromise: Confidential questions, question banks, examiner identities, digital data or administrative information may be disclosed without any printed paper being leaked.

Multiple Vulnerabilities: Risks exist during question setting, moderation, translation, digitisation, compilation and examination administration.

Diverse Breaches: Cyber intrusions, insider access, organised unfair means, impersonation and compromised examination centres can undermine examination integrity.

Lifecycle Perspective: Securing only the transportation of printed papers is insufficient without protecting earlier and later stages of the examination process.

Major Issues and Responses

Major Controversies: Recently NEET-2024, UGC-NET 2024 and NEET-2026 witnessed cancellations or re-conducts.

Investigations: CBI submitted closure reports in the NEET-2024 and UGC-NET 2024 cases after reportedly finding no prosecutable evidence of a conventional paper leak, while the NEET-2026 investigation remains ongoing.

Operational Irregularities: Reported concerns included incorrect question paper distribution, delayed OMR handling, exceptional grace marks, tie-breaking disputes, cybersecurity incidents and unusually high scores from certain centres.

Institutional Accountability: Official actions relied on intelligence inputs, whistleblower information and investigative processes, highlighting challenges in preventive detection.

Reform Initiative: A committee chaired by **Nandan Nilekani** has been constituted to recommend systemic improvements.

RELEVANCE

GS II : Government Policies and Interventions

Challenges and Way Forward

Preventive Oversight: Examination authorities should remain primarily responsible for preventing breaches instead of relying solely on post-facto investigations.

Institutional Controls: Conflict-of-interest scrutiny, expert rotation, antecedent verification, audit trails and cybersecurity audits should be integrated throughout the examination lifecycle.

Comprehensive Framework: A Public Examination Integrity Framework (PEIF) with standardised end-to-end SOPs can strengthen security and accountability.

Evidence-based Reform: A comprehensive White Paper documenting operational failures, cybersecurity incidents, investigations and lessons learnt can support meaningful reforms.

Public Confidence: Transparent governance, early risk detection and robust institutional safeguards are essential to preserve the credibility of high-stakes examinations.



Way Forward

The integrity of public examinations depends on protecting every stage of the examination process rather than focusing only on conventional paper leaks. Sustainable reforms require preventive governance, technological safeguards, institutional accountability and transparent oversight. A comprehensive approach that strengthens systems before crises occur is essential for ensuring fairness, maintaining public trust and safeguarding the credibility of India's examination ecosystem.

PYQ Compass

UPSC questions previously asked from the themes discussed on this page.



Q. What are the aims and objects of the recently passed and enforced, The Public Examination (Prevention of Unfair Means) Act, 2024? Whether University/State Education Board examinations are also covered under the Act? (GS II – 2024)

Top spot (The Hindu : 05-08-2026)

India has formally expressed its aspiration to host the 2036 Summer Olympic Games, viewing the event as an opportunity to strengthen its global standing while accelerating the development of sports infrastructure and athletic excellence. A successful bid would make **India only the fourth Asian country to host the Olympics**. Beyond hosting the event, the larger objective is to transform India into a competitive sporting nation through long-term investments in talent identification, coaching, institutional capacity and sports culture.

Vision and Institutional Preparedness

Grassroots Focus: The expanded Khelo India Scheme prioritises early talent identification, wider participation and long-term athlete development.

Institutional Expansion: Khelo India Centres, Centres of Excellence and accredited academies are proposed to increase from about one per district to two or three on average.

Integrated Development: Khelo India Feeder Schools and Khelo India Utkrishta Vidyalaya integrate education with sports in line with the National Education Policy.

Athlete Ecosystem: Expansion of Khelo India athlete programmes, digitised athlete databases, structured coaching and bottom-up communication aim to strengthen the sporting ecosystem.



Recent Developments

Enhanced Investment: The Union Cabinet approved ₹29,054 crore for the new phase of the Khelo India Scheme, with the overall sports outlay reaching ₹36,441 crore for 2026–31.

Talent Pipeline: Existing Khelo India Athletes and Emerging Khelo India Athletes programmes seek to expand the athlete base from 2,904 to around 28,000.

Coaching Reforms: A National Coach Accreditation Board, training of grassroots coaches, language support and improved utilisation of physical education teachers seek to standardise coaching quality.

Performance Continuum: Grassroots talent is expected to progress towards elite competition through continued support under the **Target Olympic Podium Scheme**.

Performance Benchmark: The 2030 Commonwealth Games in Ahmedabad are expected to serve as an important milestone in assessing India's Olympic preparedness.

RELEVANCE

GS II : Human Resource Development

Challenges and Way Forward

Performance Deficit: India requires a substantial improvement from recent Olympic performances to become a top-ten medal-winning nation, with an estimated requirement of 30–40 medals, including double-digit gold medals.

Implementation Quality: Transparent execution, efficient utilisation of financial resources and effective coordination across institutions remain central challenges.

Sporting Culture: Greater participation through schools, clubs, community competitions and the Fit India Movement is necessary to broaden the talent base.

Integrity in Sports: Strong anti-doping measures are essential to address India's reputation as a doping hub and preserve the credibility of athlete development.

Long-term Sustainability: Continuous investment in infrastructure, coaching, sports science and athlete progression is crucial for sustaining international competitiveness beyond a single Olympic cycle.

Way Forward

India achieved its best-ever 21st-century Olympic finish at 48th place with seven medals at the Tokyo Olympics (2021), followed by 71st place with six medals at the Paris Olympics (2024). In this regard, India's 2036 Olympic aspiration extends beyond hosting a global sporting event to building a robust and inclusive sporting ecosystem. Expanded investments, grassroots development and institutional reforms provide a strong foundation, but lasting success will depend on transparent implementation, sporting integrity and sustained improvement in international performance.

PYQ Compass

UPSC questions previously asked from the themes discussed on this page.



Q. An athlete participates in Olympics for personal triumph and nation's glory; victors are showered with cash incentives by various agencies, on their return. Discuss the merit of state sponsored talent hunt and its cultivation as against the rationale of a reward mechanism as encouragement. (GS II – 2014)

Boom and Bust (TH BusinessLine : 05-08-2026)

The expansion of artificial intelligence has significantly influenced global financial markets, with AI-related companies driving stock market valuations and investor optimism. While technological advancements have attracted substantial capital, increasing concentration of investments in a few companies has raised concerns regarding speculative bubbles, financial stability and systemic risks. Recent developments in South Korea have highlighted the potential consequences of excessive leverage and concentrated exposure to AI-linked assets.

Key Features of the AI-Driven Market Boom

Concentrated Growth: AI semiconductor companies have become major drivers of stock market performance, increasing concentration risk.

Leveraged Investments: Products such as *single-stock leveraged Exchange Traded Funds (ETFs) amplify both gains and losses.*

High Valuations: AI-led market optimism has resulted in elevated valuation multiples in major equity markets.

Retail Participation: Large-scale participation by leveraged retail investors has increased market vulnerability during corrections.

Global Capital Flows: Significant investments are being directed towards AI infrastructure and related capital expenditure.



Recent Developments and Emerging Risks

South Korean Correction: The benchmark Kospi Index declined from 9,386 (19 June) to 5,263 (29 July), driven largely by sharp corrections in major AI semiconductor companies.

Speculative Products: Single-stock leveraged ETFs experienced substantially larger losses than their underlying securities during the downturn.

Concentration Risk: A small number of AI companies are expected to account for a disproportionately large share of future earnings growth in major equity indices.

India has so far remained relatively insulated due to limited AI-focused listed companies and strong regulatory oversight.

Significance and Challenges

Systemic Risk: Excessive dependence on a limited number of companies can increase financial market instability.

Bubble Vulnerability: Elevated valuations and speculative leverage increase the possibility of sharp market corrections.

Global Spillovers: A slowdown in AI investments or significant market correction may affect capital flows, trade and financial markets worldwide.

Regulatory Vigilance: Strong market regulation, prudent leverage norms and continuous monitoring of concentration risks can improve financial resilience.

Investor Awareness: Diversified investment strategies and informed risk assessment are essential to reduce exposure to speculative market cycles.

Long-Term Implications

The AI revolution presents significant economic opportunities while simultaneously creating new financial vulnerabilities. Sustainable market growth requires balancing technological optimism with prudent regulation, diversified investment and effective risk management. Strengthening institutional safeguards and monitoring systemic risks will be essential to maintaining financial stability.

PYQ Compass

UPSC questions previously asked from the themes discussed on this page.



PYQ
COMPASS

Q. Consider the following statements : (2024)

Statement-I : If the United States of America (USA) were to default on its debt, holders of US Treasury Bonds will not be able to exercise their claims to receive payment.

Statement-II : The USA Government debt is not backed by any hard assets, but only by the faith of the Government.

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

RELEVANCE

GS III : Indian Economy

Misleading Food Claims and Regulatory Oversight: The Dabur Case

Food safety regulation extends beyond ensuring product quality to preventing misleading claims and promoting informed consumer choice. Recent regulatory action against Dabur India demonstrates the role of statutory authorities in enforcing food labelling standards and biodiversity compliance. The episode also illustrates how consumer protection, environmental governance and responsible business practices intersect in the regulation of food products and biological resources.

Regulatory Framework and Key Provisions

Food Safety Oversight: The Food Safety and Standards Authority of India (FSSAI) directed withdrawal of food products carrying misleading "100%" claims.

Advertising Regulations: Claims such as "100% Natural", "100% Pure", "100% Organic" and similar expressions were found inconsistent with the Food Safety and Standards (Advertising & Claims) Regulations, 2018 as they were considered ambiguous and unverifiable.

Organic Certification: Display of the Jaivik Bharat logo without valid FSSAI organic endorsement was found inconsistent with the Food Safety and Standards (Organic Foods) Regulations, 2017.

Compound Foods: Claims of "100% Purity" were held impermissible for compound foods under the existing advertising regulations.

Regulatory Powers: FSSAI directed immediate withdrawal of the identified products and sought an Action Taken Report within 15 days.

Recent Developments and Compliance Issues

Immediate Enforcement: The regulatory action covered products including honey, apple cider vinegar, virgin coconut oil, sesame oil, cow ghee, coconut water and coconut milk carrying "100%" claims.

Biodiversity Compliance (2023): In 2023, the National Biodiversity Board (NBB) had informed the National Green Tribunal that Dabur had commercially accessed 125 biological resources including Red Sander and Indian Sandalwood, before obtaining the required approvals under the Biological Diversity Act.

Access and Benefit Sharing: The dispute involved calculation of the Access and Benefit Sharing (ABS) component, with the NBB maintaining that entities obtaining approvals after accessing biological resources could not claim benefit-sharing calculations based on purchase price.

RELEVANCE

GS III : Indian Economy and Planning

Significance

Consumer Protection: Scientific, verifiable and non-misleading claims strengthen consumer confidence and informed decision-making.

Regulatory Compliance: Businesses must ensure continuous compliance with food safety, advertising and organic certification requirements.

Biodiversity Governance: Prior approvals and benefit-sharing obligations are important for sustainable commercial utilisation of biological resources.

Institutional Coordination: The case demonstrates complementary roles played by food safety, biodiversity and judicial institutions in regulatory enforcement.

Responsible Business Practices: Transparent labelling, timely approvals and adherence to environmental regulations can reduce legal disputes and improve corporate credibility.

Way Forward

The Dabur case illustrates that food safety regulation encompasses truthful advertising, proper certification and responsible sourcing of biological resources. Strong regulatory oversight promotes consumer welfare while ensuring that commercial activities remain consistent with environmental sustainability and statutory obligations. Continued compliance, transparent business practices and effective institutional enforcement remain essential for strengthening public trust in India's food sector.

PYQ Compass

UPSC questions previously asked from the themes discussed on this page.



- Q. In, India, markets in agricultural products are regulated under the (2015)
- Essential Commodities Act, 1955
 - Agricultural Produce Market Committee Act enacted by States
 - Agricultural Produce (Grading and Marking) Act, 1937
 - Food Products Order, 1956 and Meat and Food Products Order, 1973

HEALTH

'Six-in-one vaccine may boost immunisation programme'

The hexavalent (six-in-one) vaccine is a combination vaccine designed to protect infants against six vaccine-preventable diseases through a single injection. Its proposed introduction into India's Universal Immunisation Programme aims to simplify childhood immunisation by reducing the number of injections, improving programme efficiency and easing the operational burden on healthcare providers while maintaining routine immunisation coverage.

Key Features of the Hexavalent Vaccine

Six-Disease Protection: Provides immunity against diphtheria, tetanus, pertussis (whooping cough), Hepatitis B, Haemophilus influenzae type b (Hib) and polio.

Combination Vaccine: Replaces multiple vaccine doses with a single injection during immunisation visits.

Reduced Injections: Minimises the number of injections received by infants, improving vaccination convenience.

Operational Benefits: Reduces workload for frontline health workers and lowers cold-chain storage requirements.

Caregiver Convenience: Saves caregiver time by simplifying vaccination visits.



Significance

Improved Efficiency: Combination vaccines can streamline immunisation delivery and optimise health-system resources.

Enhanced Coverage: Fewer injections may improve acceptance and convenience for children and caregivers.

Health System Gains: Lower cold-chain requirements and reduced workload can improve programme implementation.

Evidence-Based Policy: Economic assessments provide valuable inputs for future decisions regarding vaccine adoption.

Affordability: Sustainable procurement strategies and competitive pricing remain important for large-scale implementation.

Way Forward

The hexavalent vaccine offers an opportunity to simplify India's childhood immunisation programme while improving operational efficiency and beneficiary convenience. Although higher procurement costs remain an important consideration, evidence suggests that appropriate pricing and efficient implementation could generate broader system-level benefits. Careful evaluation of economic and operational factors will be important in future decisions regarding its inclusion in the Universal Immunisation Programme.

Findings of the study

Programme Assessment: The study evaluated introduction of the hexavalent vaccine within India's Universal Immunisation Programme, which vaccinates nearly 26 million infants annually.

Implementation Models: Two scenarios were examined—replacement of the current pentavalent and fractional IPV doses during primary immunisation, and replacement of both the primary schedule and the DTP booster.

Economic Analysis: Costs were assessed from both government and household perspectives, including procurement, syringes, cold-chain logistics, healthcare worker time and caregiver time.

Cost Consideration: Vaccine procurement cost remains the largest determinant of programme expenditure.

Price Sensitivity: The study estimates that a 50% reduction in vaccine price could allow operational savings to outweigh additional procurement costs under the primary immunisation schedule.

RELEVANCE

GS II : Health

PYQ Compass

UPSC questions previously asked from the themes discussed on this page.



Q What is the importance of using Pneumococcal Conjugate Vaccines in India? (2020)

1. These vaccines are effective against pneumonia as well as meningitis and sepsis.
2. Dependence on antibiotics that are not effective against drug-resistant bacteria can be reduced.
3. These vaccines have no side effects and cause no allergic reactions.

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 1, 2 and 3

PYQ Compass

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Q. Consider the following statements : (2024)

Statement-I : If the United States of America (USA) were to default on its debt, holders of US Treasury Bonds will not be able to exercise their claims to receive payment.

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

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- (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

Ans : a

1) Statement-I: "If the United States of America (USA) were to default on its debt, holders of US Treasury Bonds will not be able to exercise their claims to receive payment." This statement is correct.

A debt default occurs when a borrower (in this case, the USA) fails to meet its debt obligations, including payments of interest or principal on time. If the USA defaults, holders of US Treasury Bonds (considered one of the safest investments globally) would not receive their payments as agreed.

2) Statement-II: "The USA Government debt is not backed by any hard assets, but only by the faith of the Government." This statement is correct.

US Treasury Bonds and other government debt are not backed by tangible assets like gold or real estate. Instead, they are backed by the "full faith and credit" of the US Government, which relies on its ability to collect taxes, issue new debt, and manage its finances. **Statement-II explains Statement-I.** The USA's debt relies on its reputation and the confidence of investors. If this confidence is lost due to a default, bondholders lose their assurance of repayment because there are no hard assets to back the debt. This lack of tangible backing makes default a significant risk to the global financial system.

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- 3. These vaccines have no side effects and cause no allergic reactions.

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 3 only
- d) 1, 2 and 3

Ans : b

Statement 1 is Correct: Pneumococcal conjugate vaccines (PCV) are designed to protect against infections caused by *Streptococcus pneumoniae*, including pneumonia, meningitis, and sepsis. These are serious conditions that can lead to significant morbidity and mortality, particularly in young children.

Statement 2 is Correct: By preventing infections caused by *Streptococcus pneumoniae*, the use of antibiotics can be reduced, especially against drug-resistant strains of bacteria. This helps in reducing the global problem of antibiotic resistance.

Statement 3 is Incorrect: Like all vaccines, pneumococcal conjugate vaccines can have side effects, although they are generally mild and temporary. Common side effects include redness or swelling at the injection site, fever, or irritability. Serious allergic reactions are rare but can occur.

PRACTICE QUESTIONS

Q. Which of the following measures are intended to strengthen India's response against digital arrest scams?

1. Operationalisation of e-Zero FIR mechanisms.
2. Standard operating procedures for temporary debit holds on suspected mule accounts.
3. State Cyber Crime Coordination Centres.

Select the correct answer using the code below:

- (a) 1 only
- (b) 1, 2 and 3
- (c) 2 and 3 only
- (d) 1 and 3 only

Answer: (b) 1, 2 and 3

Statement 1 – Correct. The Supreme Court directed States to operationalise e-Zero FIR mechanisms.

Statement 2 – Correct. The RBI was directed to prepare an SOP for banks to place temporary debit holds on mule accounts linked to cyber-enabled fraud and money laundering.

Statement 3 – Correct. States were directed to notify and operationalise State Cyber Crime Coordination Centres to strengthen institutional response.

All three measures are part of the coordinated governance framework against digital arrest scams.

Q. Which of the following developments have been identified as challenges to upward economic mobility in India?

1. Emerging impact of artificial intelligence on the IT sector.
2. Limited employment generation in manufacturing.
3. Expansion of low-productivity employment opportunities.

Select the correct answer using the code below:

- (a) 1, 2 and 3
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1 and 3 only

Answer: (a) 1, 2 and 3

Statement 1: Correct. Technological changes, including AI, are affecting employment prospects in the IT sector.

Statement 2: Correct. Manufacturing has not absorbed labour on the scale required.

Statement 3: Correct. Employment growth has been significant in relatively low-productivity occupations, limiting opportunities for sustained income mobility.

Q. With reference to the reorganisation of Jammu and Kashmir in 2019, consider the following statements:

1. Jammu and Kashmir became a Union Territory with a legislature.
2. Ladakh became a Union Territory without a legislature.
3. Assembly elections are yet to be conducted in the Union Territory of Jammu and Kashmir after its reorganisation.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (a) 1 and 2 only

Statement 1 – Correct. Under the 2019 reorganisation, Jammu and Kashmir became a Union Territory with a legislative assembly.

Statement 2 – Correct. Ladakh became a separate Union Territory without a legislative assembly.

Statement 3 – Incorrect. Assembly elections in the Union Territory of Jammu and Kashmir were conducted in 2024, resulting in the formation of an elected government.

Hiroshimaites and the Discovery of a New Alloy from the Hiroshima Atomic Bomb

Researchers have discovered a previously unknown multicomponent metal alloy within hiroshimaites—glass-like debris formed during the Hiroshima atomic bombing (6 August 1945). The study, published in Science Advances (29 July 2026), demonstrates that nuclear explosions can create entirely new materials under extreme physicochemical conditions.

What is Samudra Manthan?

- Hiroshimaites are tiny glass-like spherical particles (spherules) formed during the 1945 Hiroshima atomic bomb explosion.
- They were produced when the intense heat of the nuclear fireball vaporised buildings and metals which later condensed and rapidly solidified.
- These spherules are primarily recovered from the beach sands of Hiroshima Bay, where they preserve microscopic evidence of the explosion.
- Scientists consider hiroshimaites to be a high-resolution archive of the chemical and physical conditions that existed during the nuclear detonation.
- Chemical analysis showed that the grain consists of a homogeneous multicomponent alloy containing - Iron (Fe), Chromium (Cr), Nickel (Ni), Manganese (Mn), Molybdenum (Mo), Silicon (Si), and Aluminium (Al)
- The alloy possesses a previously unknown crystal structure, making it a new material not previously identified in nature or synthesised under conventional laboratory conditions.

How was the Alloy Formed?

- The Hiroshima nuclear explosion generated temperatures exceeding 7,000°C, creating an extremely energetic plasma environment.
- At these temperatures, construction steel, aluminium and numerous urban materials completely vaporised, producing a mixed metallic vapour.
- As the fireball expanded, it cooled at an exceptionally rapid rate through a process known as ultrafast quenching.
- During this rapid cooling, the vaporised metallic elements condensed and solidified before they could separate into ordinary mineral phases.



Scientific Significance

- The discovery demonstrates that high-energy nuclear plasma events can function as natural laboratories capable of producing entirely new materials.
- It provides direct evidence that extreme transient environments can stabilise complex multicomponent metallic phases that cannot easily be synthesised using traditional metallurgical methods.
- The newly discovered alloy shares several characteristics with High-Entropy Alloys and Quasicrystals.
- High-Entropy Alloys (HEAs) : They contain multiple principal metallic elements and are valued for their exceptional strength, corrosion resistance and thermal stability.
- Quasicrystals : they possess unusual atomic arrangements that provide unique mechanical and physical properties
- Such materials are of considerable interest in aerospace, defence, energy and advanced engineering applications.

Future implications

- Hiroshimaites preserve a detailed chemical record of the nuclear fireball, allowing scientists to reconstruct the extreme temperatures, pressures and cooling processes that occurred during the explosion.
- The study demonstrates that atomic-blast debris can serve as a unique source for discovering previously unknown materials and understanding matter under extreme conditions.