Prelims Exam Topics

WITHHOLDING TAX ON GOVERNMENT BONDS

Context

The Government of India and the RBI are considering reducing or removing withholding tax on government bonds to attract foreign investment

About Withholding Tax

- **Meaning:** Withholding tax is a tax deducted at source on income earned by non-residents from investments in India.
- **Who Levies It:** Levied by the Government of India under income-tax provisions on payments made to foreign investors.
- **Applied On:** Interest income earned by foreign investors from holding Indian government bonds.
- **Current Rate:** Non-residents currently pay around **20% withholding tax**, among the highest globally.
- **Earlier Relaxation:** India had adopted a concessional **5% withholding tax rate**, which remained in force until **2023**.
    - **Reason:** Lower rate was introduced to attract foreign portfolio investment into Indian debt markets.
- **Countries with Lower Rates:** China effectively exempts some government debt interest; Vietnam levies 5%; Malaysia exempts government bonds from withholding tax.
- **Implications of Reducing Withholding Tax:** Higher Foreign Capital Inflow, Support to Forex Reserves and Lower Borrowing Cost:
- **Possible Limitation:** High U.S. interest rates and geopolitical risks may still limit foreign inflows despite tax reduction.
- **Policy Concern:** Complete removal may reduce tax revenue without guaranteeing significant investment inflows

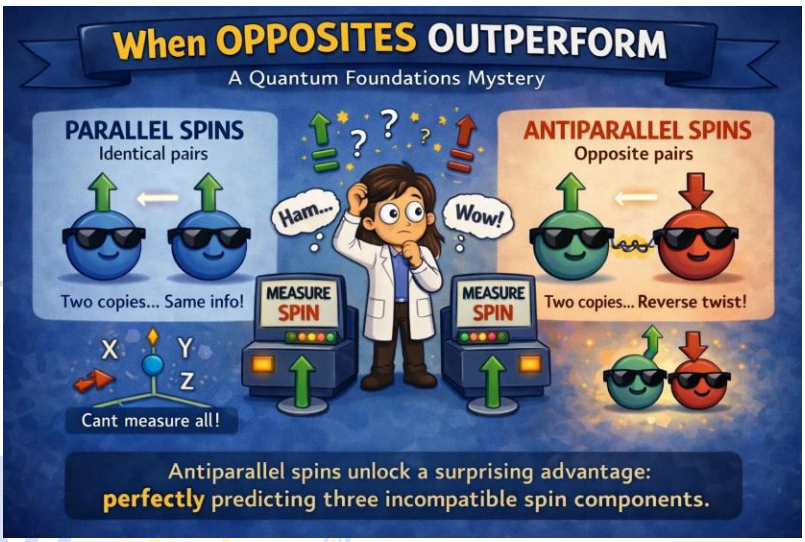
ANTIPARALLEL QUANTUM STATES

Context:

Indian researchers have discovered that antiparallel qubit states can reveal more information than identical quantum states

About the Discovery

- **Quantum Measurement Limitation:** Quantum mechanics normally restricts simultaneous precise measurement of incompatible properties due to the following two Principles.
    - **Heisenberg Uncertainty Principle** — precise measurement of one property disturbs another.
    - **Bohr's Complementarity Principle** — some properties cannot be fully known together.



- The study shows that clever preparation of qubits can partially overcome these limitations, enabling richer quantum measurements.
- **How it works:**
    - Qubits have a property called **spin**, which can point in different directions.
    - Some spin measurements are **incompatible**: knowing one precisely prevents knowing another.
    - By preparing two qubits in an **antiparallel** arrangement, researchers found measurement strategies that make three such incompatible spin components effectively compatible for that pair — enabling richer joint measurements.
- **Implications**

- **Device characterization**: Better ways to probe unknown quantum devices using fewer resources, speeding up testing and calibration.
- **Quantum cryptography**: Protocols that rely on extracting or hiding information from qubits may be redesigned to use antiparallel pairs for improved performance or security.

COMMON CRITERIA DEVELOPMENT BOARD (CCDB)

Context

India assumed the chairmanship of the Common Criteria Development Board (CCDB) for the 2026–2028 term during the CCRA meeting in Tokyo.

About the CCDB

- **Nature**: CCDB is the technical standards body under the Common Criteria Recognition Arrangement (CCRA), which enables mutual recognition of IT security certifications globally.
- **Main Objective:** Develops and manages international standards for evaluating and certifying secure IT products and systems.
- **Global Recognition Mechanism:** IT security certificates issued by member countries are mutually recognised without re-certification under the CCRA framework.
- **Membership:** CCRA includes 20 certificate-authorising nations and 18 certificate-consuming nations.
- **India's Role:** India joined CCRA in 2013 as a Certificate Authorising Nation through Ministry of Electronics and Information Technology (MeitY) and STQC Directorate.
- **Significance of India's Chairmanship:** Strengthens India's role in shaping global cybersecurity standards, trusted digital infrastructure and emerging technology security frameworks.

PLACES IN NEWS: SOLOMON ISLANDS

Context

Matthew Wale was elected Prime Minister of the Solomon Islands after the fall of the pro-China government led by Jeremiah Manele.

About Solomon Islands

- **Location**: An island nation in the southwestern Pacific Ocean, located east of Papua New Guinea and northeast of Australia.
- **Region:** Part of the Melanesian group of islands in Oceania.
- **Capital:** Honiara, located on Guadalcanal Island.
- **Neighbouring Seas/Oceans:** Situated in the Pacific Ocean; surrounded by the Solomon Sea and Coral Sea.

- **Major Islands:** Guadalcanal, Malaita, Choiseul, New Georgia and Santa Isabel.
- **Geopolitical Shifting:** Shifted diplomatic recognition from Taiwan to China in 2019.
    - **China–Solomon Security Pact (2022):** Agreement allows China to deploy police and military personnel in the islands. Western countries fear the pact could enable a permanent Chinese strategic presence in the Pacific.

COUNTRY STRATEGIC OPPORTUNITIES PROGRAMME (COSOP)

Context

The Government of India and the **International Fund for Agricultural Development (IFAD)** launched a new eight-year **Country Strategic Opportunities Programme (COSOP) for the period 2026–2033.**

About COSOP

- COSOP is a strategic investment and development framework that defines the long-term partnership between a host country and IFAD. It serves as an operational blueprint to modernize rural livelihoods, moving beyond simple poverty alleviation toward building market-oriented, climate-resilient rural systems.
- **Organizations Involved:** International Fund for Agricultural Development (IFAD).

- **Term:** The program has an eight-year duration, spanning from 2026 to 2033.

Key Features

- **Strategic Priorities:**
    - **Resilience Building:** Enhancing the social, economic, and climate resilience of vulnerable rural communities.
    - **Knowledge Scaling:** Strengthening knowledge systems to replicate successful Indian development models globally.
- **Institutional Strengthening:** Focuses on empowering grassroots organizations, including Self-Help Groups (SHGs), Farmer Producer Organisations (FPOs), and cooperatives.
- **Market-Oriented Livelihoods:** Integration of rural enterprises into value chains through value addition, infrastructure support, and e-commerce integration.
- **Financial Inclusion:** Leveraging SHGs for large-scale financial empowerment, particularly for women-led enterprises.
- **South-South Cooperation:** Positioning India as a global knowledge leader to share expertise in digital agriculture services and inclusive finance with countries in Africa, Southeast Asia, and Latin America.
- **Innovation in Agri-Allied Sectors:** Partnering with NABARD to support new-age innovations in agriculture, fisheries, and animal husbandry.

LEADS 2025 REPORT

Context

The **Union Minister of India released the LEADS 2025 Report** and felicitated the **winners of the LEAPS 2025 Awards in New Delhi.**

What is it?

- LEADS (Logistics Ease Across Different States) is the flagship annual assessment and benchmarking tool for India's logistics sector. It evaluates the logistics ecosystem of each State and Union Territory (UT) across various parameters like infrastructure, services, and regulatory environment.

- **Published By:** Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry.

Key Features of the 2025 Report

- **Methodological Evolution:** LEADS 2025 (the 7th edition) features a more rigorous methodology, moving from a 3-tier to a new 4-tier performance framework to better reflect the maturity of different logistics ecosystems.
- **Emphasis on Objective Indicators:** To ensure robustness, nearly 59% weightage is now assigned to measurable, objective indicators rather than purely perception-based data.
- **Alignment with National Policies:** The report is tightly integrated with the PM GatiShakti National Master Plan and the National Logistics Policy (NLP).
- **Assessment Parameters:** States are evaluated on Policy and Institutional Framework, Infrastructure Quality (Road, Rail, Warehouse), Reliability of Services, and Operating Environment (Safety, Ease of Entry).

THE NATIONAL JUTE BOARD (NJB)

Context

The **National Jute Board** has expanded the implementation of the **Jute Crop Information System (JCIS), a technology-driven platform developed with ISRO to modernize crop monitoring.**

About the National Jute Board

- The National Jute Board is the **apex body under the Ministry of Textiles,** Government of India, responsible for the overall development of the jute sector.
- **Established In:** The board is governed by the National Jute Board Act, 2008, and was formally enacted on February 12, 2009.

Key Functions

- **Research and Development:** Engaging in R&D to explore diverse and innovative applications for jute fibers.

- **Machinery Assistance:** Providing financial and technical support for the modernization of jute mills and processing units.
- **Market Promotion:** Showcasing Indian Jute in the global arena through international exhibitions and trade fairs.
- **Incentive Schemes:** Extending scholastic incentives to the children of jute workers and addressing health-related issues within the workforce.
- **Technology Dissemination:** Bridging the gap between lab-scale innovations and field-level implementation for farmers and artisans.

About Jute Crop Information System (JCIS)

- The **Jute Crop Information System (JCIS) is a state-of-the-art digital platform** developed in collaboration with the **Indian Space Research Organisation (ISRO)** and the **Jute Corporation of India (JCI).**

Key Features

- **Integrated Satellite Imagery:** Uses ISRO's satellite data and vegetation indices to monitor the health and extent of jute cultivation across districts.
- **Digital Tools:**
    - **BHUVAN JUMP:** A mobile application used by the I-CARE field network for large-scale collection of geo-tagged field data.
    - **PATSAN:** A web-based analytics platform that provides surveillance and production assessments for stakeholders and government officials.
- **Smart Sampling:** Employs geospatial smart-sampling for Crop Cutting Experiments (CCE) to ensure highly accurate yield estimation.
- **Weather Analytics:** Integrates real-time weather data to provide district-level early warning alerts for floods, droughts, and temperature fluctuations.
- **Disaster Assessment:** Capable of developing flood impact models to estimate crop and quality losses immediately after natural calamities.

- **Automated Reporting:** Streamlines communication between state and national agencies to eliminate inconsistencies in production trends.

NON-TARIFF BARRIERS (NTBS)

Context

In report Invisible Barriers: The Costs of Non-Tariff Measures, UNCTAD revealed that non-tariff barriers (NTMs) now impose higher trade costs than traditional tariffs for 88% of countries.

Definition

- Non-Tariff Barriers (NTBs) are policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods.
- While tariffs are simple taxes on imports, NTBs are more complex invisible hurdles—such as regulations, standards, or quotas—that change the quantities traded or the prices of goods.

Types of Non-Tariff Measures

Technical Measures

- **Sanitary and Phytosanitary (SPS) Measures:** Rules to protect human, animal, or plant life from pests, diseases, or toxins (e.g., pesticide limits in fruits).
- **Technical Barriers to Trade (TBT):** Regulations on product size, weight, packaging, and labeling (e.g., energy efficiency ratings for electronics).

Non-Technical Measures

- **Quantitative Restrictions:** Quotas (limits on volume) or outright bans on certain products.
- **Import Licensing:** Requirements to obtain special permits before importing.
- **Price Control Measures:** Measures to support domestic prices, such as anti-dumping duties or administrative fees.
- **Rules of Origin:** Laws determining where a product was made to decide if it qualifies for lower trade rates.

How does it work?

- NTBs function as compliance hurdles. To enter a foreign market, an exporter must prove that their product meets the destination country's specific legal requirements. This often involves:
- **Testing and Certification:** Sending products to accredited labs for safety checks.
- **Specialized Packaging:** Adapting the physical product or its container to meet local language or safety laws.
- **Inspections:** Allowing foreign officials to audit domestic factories or farms.

Key Features

- **Invisible Nature:** Unlike a 10% tariff, which is clear and fixed, NTBs are often hidden in thick regulatory books, making them difficult for small firms to identify.
- **Dual Purpose:** Many NTBs serve legitimate goals (e.g., ensuring food is safe), but they can also be used as disguised protectionism to keep foreign competitors out.
- **Geopolitical Tool:** Governments increasingly use NTMs to secure strategic sectors, such as green technologies or critical minerals.

WTO and Non-Tariff Barriers

- The **World Trade Organization (WTO)** does not ban NTBs but aims to ensure they are not used as unfair trade barriers.
- **SPS and TBT Agreements:** These WTO agreements mandate that regulations must be based on scientific evidence and should not discriminate against foreign products.
- **Transparency Mandate:** Member countries are required to notify the WTO of any new trade regulations so that other countries have time to adapt or object.
- **Specific Trade Concerns (STCs):** A mechanism where countries can formally challenge a neighbor's regulation if they believe it unfairly restricts their exports.
- **Technical Assistance:** The WTO and UNCTAD work to help developing nations build the labs and certification bodies needed to meet global standards.

Mains Exam Topics

AI-POWERED FINANCIAL INCLUSION IN INDIA

Context

India's transformative journey toward **AI-powered financial inclusion,** driven by the convergence of **Digital Public Infrastructure (DPI)** and advanced analytics.

What is Financial Inclusion?

Financial inclusion is the process of ensuring that individuals and businesses, particularly vulnerable and low-income groups, have access to useful and affordable financial products and services.

Factsheet on Financial Inclusion in India

- **Identity Foundation:** As of March 2026, over 144 crore Aadhaar numbers have been generated, providing a secure biometric identity for authentication.
- **Banking Reach:** Jan Dhan accounts have surged to 58.16 crore (as of April 2026), with cumulative deposits totaling ₹3.02 lakh crore.
- **Payment Velocity:** In March 2026 alone, UPI processed transactions worth approx. ₹29.53 lakh crore, accounting for 81% of India's retail payment volume.
- **Credit Potential:** AI-driven models have the potential to unlock a credit gap of USD 130–170 billion in economic value for underserved MSMEs.

Rise of AI in Enhancing Financial Inclusion

- **Alternative Credit Scoring:** AI analyzes digital footprints rather than just traditional histories to provide credit to those without CIBIL scores.
- **Language Barrier Removal:** AI models enable citizens to interact with complex financial systems in their native tongue.

- **Fraud Detection and Security:** Real-time AI monitoring identifies suspicious patterns to protect first-time digital users from cybercrime.
- **Hyper-Personalized Solutions:** AI helps financial institutions design products specifically tailored to the cash-flow patterns of informal workers.
- **Operational Efficiency:** Automation of documentation and KYC processes through AI reduces the cost and time of service delivery.

Challenges associated with AI in Finance

- **Algorithmic Bias:** If training data is flawed, AI might unintentionally discriminate against certain demographics or regions.
- **Data Privacy Concerns:** The shift to consent-based sharing requires robust safeguards to prevent the misuse of sensitive personal information.
- **Digital Literacy Gap:** While AI simplifies the interface, many users still struggle with the underlying digital concepts, leaving them vulnerable to social engineering.
- **Cybersecurity Evolution:** As AI tools for defense improve, so do AI-powered deepfake and phishing attacks targeting the financial sector.
- **Technological Divide:** High-resolution AI services require 5G and modern smartphones, which may still be out of reach for the absolute bottom of the pyramid.

Way Ahead

- **Strengthening Banking BHASHINI:** Scale the voice-first AI interface to ensure the next half-billion users can bank without needing to type or read.
- **Expanding ULI Reach:** Integrate more Regional Rural Banks (RRBs) and Co-operative banks into the Unified Lending Interface to deepen rural credit.
- **Ethical AI Frameworks:** Develop national standards for Explainable AI in finance to ensure credit decisions are transparent and free from bias.
- **Incentivizing Fintech-Bank Collabs:** Use the Regulatory Sandbox to encourage legacy banks to adopt agile, AI-first startups' risk-assessment models.

- **Continuous Digital Education:** Launch AI-led financial literacy campaigns that use gamified learning to teach cybersecurity to new users.