

MANTHAN

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Contents

1. 'Biggest ever' US-EU trade deal	3
2. New Income Tax Bill 2025 passed in Parliament.....	7
3. Japan's Population Crisis.....	13
4. India should go for Brown Revolution 2.0 to restore soil health.....	20
5. Azerbaijan and Armenia sign peace deal at White House	25
6. Unified Payments Interface.....	30
Answer Key and Explanation	38



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1. 'Biggest ever' US-EU trade deal



- US President Donald Trump and European Commission President Ursula von der Leyen announced a landmark US-EU trade agreement.
- The announcement was made at Trump's Turnberry golf club in Scotland and marks a significant recalibration of trade relations between the two major economies.

The New Baseline Tariff: 15% on All EU Goods

- The centerpiece of the deal is the establishment of a 15% baseline tariff on all goods imported from the European Union to the United States, effective August 1, 2025.
- This tariff covers all EU goods, including:
 - Medicines
 - Semiconductors
 - Cars and automotive components
 - Machinery
 - Chemicals
 - Food and beverages

- **Previously, EU goods faced a combination of tariffs:** a 10% general tariff, a 25% automobile tariff, and additional reciprocal charges.
 - Trump had threatened a 30% blanket tariff if no deal was reached by August 1.
 - The final 15% rate represents a compromise, seen as a relief to European exporters.

Retained High Tariffs on Steel, Aluminium, and Cars

- While a general 15% tariff now applies to most EU goods, some key sectors remain heavily penalized:
- **Steel and Aluminium: 50% Tariffs Continue**
 - European steel and aluminium products continue to face a 50% import tax.
 - These are unaffected by the current deal.
 - Von der Leyen hinted at future talks to possibly introduce a quota-based exemption system, allowing limited imports at lower tariffs.
 - **Automobiles: 27.5% Total Tariff**
 - **EU automobiles now face 27.5% tariffs:**
 - A 25% Trump-specific tariff,
 - Plus the existing 2.5% US tariff.
- German automakers like Volkswagen, Mercedes-Benz, and BMW are expected to be the most impacted.
- Germany's industrial sector expressed dissatisfaction, calling the deal "an inadequate compromise."
- BDI (Federation of German Industries): "Sends a fatal signal to the closely intertwined economies on both sides of the Atlantic."

Key Auto Trade Stats (2024)

Metric	Value
EU vehicle exports to US	757,654 units (€38.9 billion / \$45.41 billion)
US vehicle exports to EU	169,152 units (€7.8 billion / \$9.1 billion)

US Market Access and EU Investment Commitments

- The deal includes important concessions by the EU to expand American market access and investment:

Zero Tariffs for Specific US Exports

- **Certain American products will benefit from zero tariffs when exported to the EU:**
 - Aircraft and aircraft parts
 - Specific chemicals
 - Generic pharmaceuticals
 - Semiconductor equipment
 - Agricultural goods
 - Natural resources and raw materials

Massive EU Investment in the US

The EU has pledged:

- \$750 billion in purchases of US energy products (oil, liquefied natural gas, nuclear fuel, semiconductors)
- \$250 billion annually for 3 years

\$600 billion in additional investments in the US, including:

- Technology
- Infrastructure
- Military equipment (no fixed amounts disclosed)
- This deepened investment relationship also has geopolitical undertones, aligning with US goals of reducing Europe's energy dependency on rival states and strengthening transatlantic defense collaboration.

Temporary Relief for Pharmaceuticals and Semiconductors

- While the 15% tariff applies to all goods, pharmaceuticals and semiconductors received temporary relief, avoiding the harsher penalties previously threatened.
- Trump had threatened 200% tariffs on EU pharma and high levies on semiconductors.
- These sectors now face only the 15% baseline—for now.
- The decision was reportedly influenced by the EU's massive investment pledges.
- However, both sectors are still under separate tariff investigations, leaving the door open to future increases.

Pharmaceutical Sector Importance

- EU exported nearly €80 billion (\$93.3 billion) in pharmaceuticals to the US in 2024.
- Ireland leads the EU's pharmaceutical exports to the US, which Trump has criticized.

Semiconductors

- EU manufacturers remain vulnerable.
- US Commerce Secretary Howard Lutnick suggested semiconductor-specific tariffs may still be announced.

The Ireland-Northern Ireland Conundrum

- The deal has unintentionally created a unique issue for the island of Ireland, due to its post-Brexit status:
 - Northern Ireland (part of the UK) continues to trade with the US under 10% tariffs.
 - Ireland (an EU member) now faces 15% tariffs.
 - This could lead to trade distortions and raise diplomatic tensions between the two regions.
 - This echoes challenges faced during Brexit, which were ultimately resolved via the Windsor Framework (2023). A new understanding might be required to maintain the Good Friday Agreement, which underpins peace in the region.

The Bigger Picture: Pre-Tariff US-EU Trade

- Understanding the scale of US-EU trade helps contextualize the significance of this agreement:

2024 Trade Figures

Metric	Value
Total US-EU goods trade	\$975.9 billion
US trade deficit with EU	\$235.6 billion
EU exports to US	~\$455 billion

- **Major EU exports:** Machinery, vehicles, chemicals, food & drink
- **Top EU exporters:** Germany, Ireland, France, Italy
- The US was the EU's largest trade partner, accounting for 20% of EU exports.
- The EU ran a sizable trade surplus, which Trump often cited in defense of the tariffs.

QUESTIONS

- With reference to the US–EU trade agreement of 2025, consider the following statements:
 - A uniform 15% baseline tariff will apply to all EU goods entering the US, except for steel, aluminium, and automobiles.
 - EU automobile exports to the US face a combined tariff of 27.5%.
 - Northern Ireland, unlike the EU, continues to trade with the US under a 10% tariff regime.

How many of the statements given above is/are correct?

 - Only one statement
 - Only two statements
 - All the statements
 - None of the above
- Which of the following sectors received temporary relief under the 2025 US–EU trade deal, avoiding harsher penalties previously threatened?
 - Pharmaceuticals
 - Semiconductors
 - Automobiles

Select the correct answer using codes given below:

 - 1 and 2 only
 - 2 and 3 only
 - 1 and 3 only
 - 1, 2 and 3
- Under the 2025 US–EU trade deal, the EU pledged massive investments in the United States. Which of the following correctly describes these commitments?
 - \$750 billion in purchases of US energy products spread over 3 years.
 - \$600 billion in additional investments in US technology, infrastructure, and defense.
 - Zero-tariff access for US agricultural and semiconductor equipment exports to the EU.

Select the correct answer using the code below:

- A. 1 and 2 only
 - B. 2 and 3 only
 - C. 1 and 3 only
 - D. 1, 2 and 3
4. Which of the following adopted a law on data protection and privacy for its citizens known as ‘General Data Protection Regulation’ in April 2016 and started implementation of its from 25th May, 2018?
- A. Australia
 - B. Canada
 - C. The European Union
 - D. The United States of America
5. ‘Broad-based Trade and Investment Agreement (BTIA)’ is sometimes seen in the news in the context of negotiations held between India and _____.
- A. European Union
 - B. Gulf Cooperation Council
 - C. Organization for Economic Cooperation and Development
 - D. Shanghai Cooperation Organization explain

2. New Income Tax Bill 2025 passed in Parliament

New Income Tax Bill, 2025 Passed

A Modern Overhaul of a Six-Decade Old Law

- On August 12, 2025, the Indian Parliament passed the New Income Tax Bill, 2025, replacing the archaic Income Tax Act of 1961.
- The new legislation is set to come into effect from April 1, 2026, and aims to simplify, modernize, and streamline India’s income tax framework.
- The bill incorporates numerous recommendations from a Parliament Select Committee and promises greater clarity, consistency, and efficiency.

Objective of the New Bill

- Finance Minister Nirmala Sitharaman, speaking in the Rajya Sabha, described the new law as “leaner and more focused,” emphasizing that it is designed to be easy to read, understand, and implement.

Overview of the New Income Tax Bill, Simplifying Taxation for AI 2025

Aims to replace the
Income Tax Act, 1961

Introduces clearer terminology,
e.g., **"tax year"** instead of
"assessment year."

Includes terms like
"virtual digital asset"
to reflect the digital
economy

Clarifies rules for **global
income taxation** for residents
and non-residents



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- The bill reduces complexity by removing redundant provisions, legal inconsistencies, and outdated terminology.

Structural Overhaul

- The new Bill drastically restructures the tax code:
 - **Reduction in Sections:** From 819 sections in the 1961 Act to 536 sections in the new Bill.
 - **Chapters Simplified:** Reduced from 47 to 23 chapters.
 - **Word Count:** Cut from 5.12 lakh words to 2.6 lakh words.
 - **Addition of Tools:** Introduction of 39 tables and 40 formulas for simplified calculation and compliance.
- This structural rework is intended to make the tax code more navigable for both taxpayers and tax professionals.

Key Changes for Individual Taxpayers

a. Refunds on Late Returns Allowed

- The original draft included Clause 263(1)(a)(ix), which disallowed refunds for returns filed after the due date.
- This would have significantly restricted taxpayers' rights. Following criticism, the clause was entirely removed, restoring the status quo that allows refunds even on belated returns.

b. Liberalised Remittance Scheme (LRS)

- Clarification has been issued that no TCS (Tax Collected at Source) will apply to LRS remittances for education, provided they are financed through recognised financial institutions.
- This removes previous confusion caused by the omission of this exemption in the initial draft.

Key Changes for Corporate Taxpayers

a. Correction on Dividend Deductions

- The new Bill corrects prior drafting errors related to inter-corporate dividend deductions for companies opting for concessional tax rates.

b. AMT for LLPs Aligned

- The Alternate Minimum Tax (AMT) regime for Limited Liability Partnerships (LLPs) has been revised. The earlier version expanded its scope unnecessarily.
- The new law ensures only LLPs claiming specific benefits will be subject to AMT at 18.5%, while others can avail the preferential rate of 12.5%.

c. Nil-TDS Certificate Provision

- Taxpayers with no income tax liability are now allowed to obtain a nil-TDS certificate, which was previously ambiguous under the old framework.

d. Transfer Pricing and Set-off of Losses

- The Bill has addressed uncertainties in transfer pricing provisions and improved clarity on carry-forward and set-off of losses, aligning them more closely with practical business scenarios.

Other Significant Updates

a. House Property Income

- The bill clarifies that the 30% standard deduction on house property income will be applied after deducting municipal taxes, resolving previous interpretational issues.

b. Donations to Non-Profit Organisations (NPOs)

- The Bill accepts the Select Committee's recommendation to allow 5% exemption on total donations, not just anonymous donations, thereby offering greater flexibility to non-profit organisations.

Introduction of "Tax Year" Concept

- The Bill officially introduces the concept of a "Tax Year", defined as the 12-month period beginning April 1, aligning with the financial year.
- While the terminology is new, it reflects existing practice and aims to standardize language across tax documents.

Provisions for Digital and Virtual Data

a. Virtual Digital Space

- A contentious element retained in the Bill is the definition of "virtual digital space." It gives tax authorities broad powers to access:
 - Emails and servers
 - Cloud storage
 - Social media
 - Online investment/trading platforms
 - Banking apps and digital wallets

b. SOP for Handling Digital Data

- Finance Minister Sitharaman assured the House that the Income Tax Department will issue Standard Operating Procedures (SOPs) to ensure proper handling of seized personal digital data during search and survey operations, addressing concerns around privacy and data protection.

Taxation Laws (Amendment) Bill, 2025

- Alongside the main Income Tax Bill, the government introduced the Taxation Laws (Amendment) Bill, 2025 to make targeted amendments to the Finance Act, 2025.

1. Exemption for Saudi Public Investment Fund

- The amendment grants complete income tax exemption to the Public Investment Fund (PIF) of the Government of the Kingdom of Saudi Arabia and its wholly-owned subsidiaries.
- This applies to income from:
 - Dividends
 - Interest
 - Long-term capital gains
 - Other investment-related incomes
 - This aligns the PIF with similar exemptions previously granted to the Abu Dhabi Investment Authority (ADIA).
 - The move is seen as a signal to attract sovereign investments into India.

2. Pension Scheme Benefits Extended

- The amendment also extends income tax benefits under the market-linked National Pension System (NPS) to the Guaranteed Unified Pension Scheme (UPS). Key points include:
 - Tax-free withdrawal of up to 60% of the corpus at the time of retirement.
 - Alignment of tax treatment between NPS and UPS, enhancing retirement planning flexibility.
- As the law comes into effect from April 1, 2026, stakeholders—ranging from individual taxpayers to multinational corporations—must begin aligning with the new compliance expectations and benefits under this overhauled tax regime.

QUESTIONS

6. Consider the following provisions under the New Income Tax Bill, 2025:

1. Nil-TDS certificates can now be issued to taxpayers with no tax liability.
2. LLPs not claiming specific benefits will be exempt from Alternate Minimum Tax (AMT).
3. The 30% standard deduction on house property income will be applied before deducting municipal taxes.

Which of the above are correct?

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

7. The New Income Tax Bill, 2025 introduced the term “virtual digital space.” In this context, which of the following can be accessed by tax authorities under this provision?

1. Cloud storage
2. Banking apps and digital wallets
3. Printed personal diaries and physical files
4. Social media platforms

Select the correct answer using the code given below:

- A. 1 and 3 only
- B. 2, 3 and 4 only
- C. 1, 2, 3 and 4
- D. 1, 2 and 4 only

8. Under the New Income Tax framework (effective April 1, 2026), which of the following retirement-related provisions are correct?

1. The Guaranteed Unified Pension Scheme (UPS) will receive the same tax treatment as the National Pension System (NPS).
2. Withdrawals of up to 60% of the pension corpus at retirement will be tax-free.
3. Contributions to UPS will be eligible for full tax exemption without any limits.

Which of the statements are correct?

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

9. The Taxation Laws (Amendment) Bill, 2025 provides income tax exemption to the Public Investment Fund (PIF) of Saudi Arabia. This exemption applies to income from:

1. Dividends
2. Interest
3. Long-term capital gains
4. Rental income from immovable property in India

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

10. With reference to the New Income Tax Bill, 2025, consider the following statements:

1. The Bill reduces the total number of sections and chapters compared to the 1961 Income Tax Act.
2. It removes the provision disallowing refunds on belated returns.
3. It introduces the concept of a “Tax Year,” which is different from the existing financial year.

Which of the statements given above are correct?

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

11. With reference to India’s decision to levy an equalization tax of 6% on online advertisement services offered by non-resident entities, which of the following statements is/are correct?

1. It is introduced as a part of the Income Tax Act.
2. Non-resident entities that offer advertisement services in India can claim a tax credit in their home country under the “Double Taxation Avoidance Agreements”.

Select the correct answer using the code given below :

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

12. What is/are the most likely advantages of implementing ‘Goods and Services Tax (GST)’?

1. It will replace multiple taxes collected by multiple authorities and will thus create a single market in India.

2. It will drastically reduce the 'Current Account Deficit' of India and will enable it to increase its foreign exchange reserves.
3. It will enormously increase the growth and size of economy of India and will enable it to overtake China in the near future.

Select the correct answer using the code given below:

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

3. Japan's Population Crisis

Record-Breaking Population Decline in 2024

- Japan's total population declined by over 908,000 people in 2024, bringing it to around 120.65 million (approximately 12 crore).
- This was the largest annual drop since data collection began in 1968.
- It marked the 16th consecutive year of population decline in Japan.
- Only 686,061 newborns were recorded — the lowest since 1899, when official records began.
- Prime Minister Shigeru Ishiba called it a "quiet emergency".



Is Japan an Outlier?

Global Trend of Declining Fertility

- Japan is not unique. Most countries are witnessing declining birth rates and Total Fertility Rates (TFR).
- TFR is the average number of children a woman is expected to have during her lifetime.

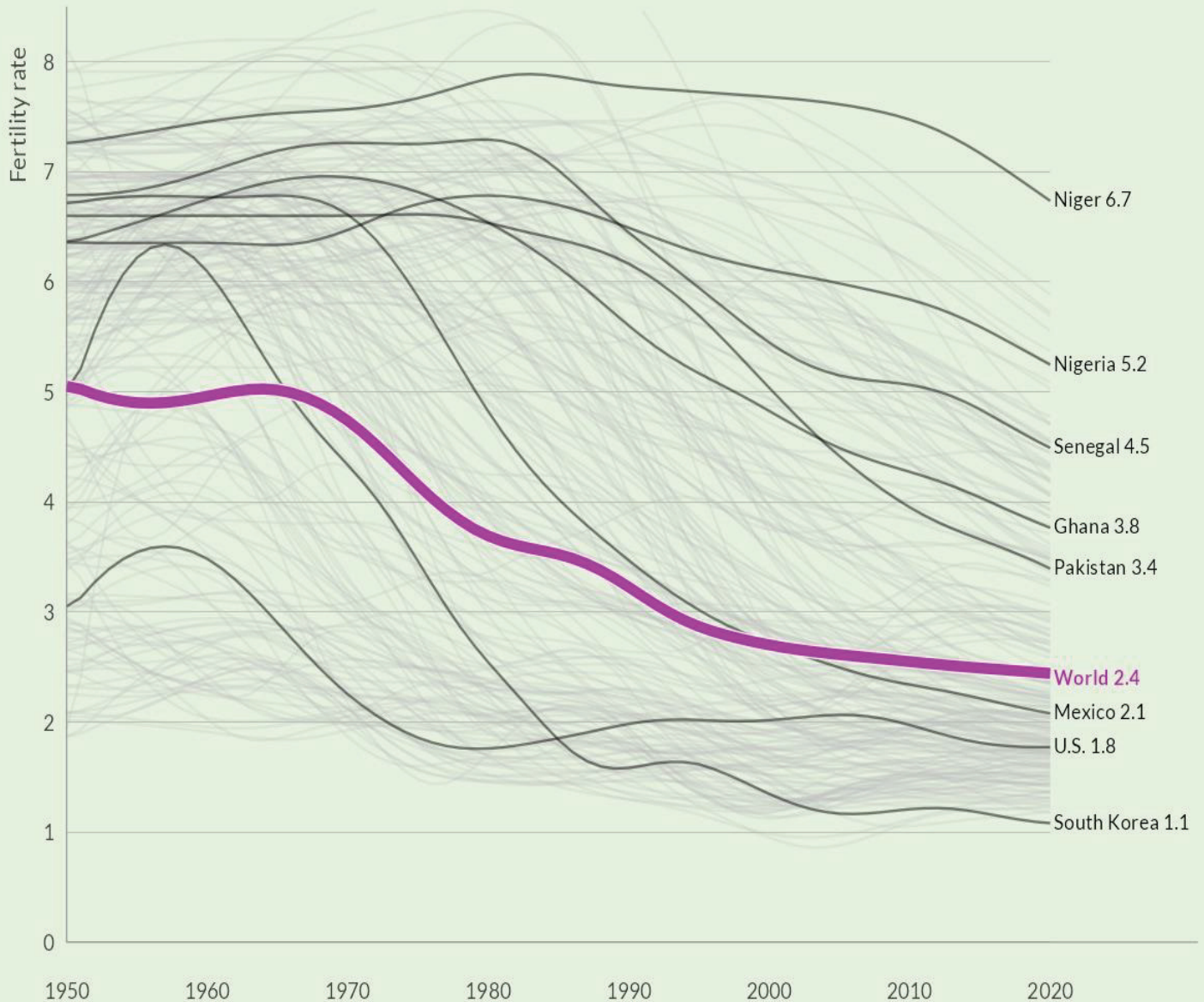
Demographic Transition Theory

As societies industrialize, they move from:

- High birth and death rates → to → Low birth and death rates.
- With better healthcare, education, and women's empowerment, families choose to have fewer children.

The Global Decline of the Fertility Rate

70 years ago the average woman had five children, since then the number has halved



Visualization by Pablo Alvarez | Data from Our World In Data
Fertility rate measures the average number of children per woman

Sociopolitical Shifts and Individualism

Demographer Peter McDonald attributes the decline to two major shifts:

Social liberalism:

- Individuals prioritize personal freedom and aspirations over traditional family roles.

Withdrawal of the welfare state (1980s-90s):

- Decrease in community support and social safety nets.
- Rise in individual insecurity and fear of failure.

Declining Fertility: A Widespread Phenomenon

- Observed in Both Developed and Developing Nations
- Affects countries with pro-natalist policies (France, Scandinavia) as well as those with high costs and work stress (Japan).
- Monetary incentives have shown limited success.
- Experts argue this trend may be irreversible beyond a certain point.

Benefits and Burdens of Low Fertility

Positive Aspects

- Improved health and education outcomes for women.
- Greater autonomy and financial freedom.
- Higher quality of life for children.

Negative Impacts

Aging population leads to:

- Shrinking working-age population (15-59 years).
- Rising healthcare and caregiving demands.
- Increased tax burden on the working population.

Common Cultural and Economic Patterns in East Asia

Key Factors Behind Low Fertility

- High living costs, especially in cities.
- Persistent traditional gender roles:
- Women bear the “double burden” of professional work and household responsibilities.

Pressure on children's education:

- High parental investment makes large families impractical.
- Despite a desire for two children, many stop at one.

Education Fever in South Korea

- University of Pennsylvania researchers point to:
- Parental pressure to invest heavily in children's academic success.
- Results in reluctance to have more than one or two children.

Japan's Specific Context

Economic and Social Constraints

- **Since the 1990s economic slowdown, young people face:**
 - Poor job security.
 - Rising living and housing costs.
 - Marriage and childbirth are deeply interlinked in Japan, unlike in the West.
 - Long work hours and intense job culture deter family formation.

Peter McDonald's Recommendations

- Governments should treat child-rearing as a shared social responsibility.
- Support for young families must include:
- Financial security, especially when children are young.
- Supportive work conditions and social infrastructure.

Immigration: A Stalled Solution

Japan's Immigration Policies

- Historically resisted immigration to preserve cultural homogeneity.
- In recent years, limited immigration allowed, mostly for skilled labor.
- However, there's growing political pushback, including the rise of a new anti-immigration party.
- Japan's demographic crisis mirrors a global shift, especially among industrialized and East Asian nations.
- While social freedoms and economic development have brought many gains, they have also led to fertility decline.
- **Reversing this trend appears difficult without structural changes in:**
 - Work culture
 - Gender roles
 - Government policy
 - Support for families

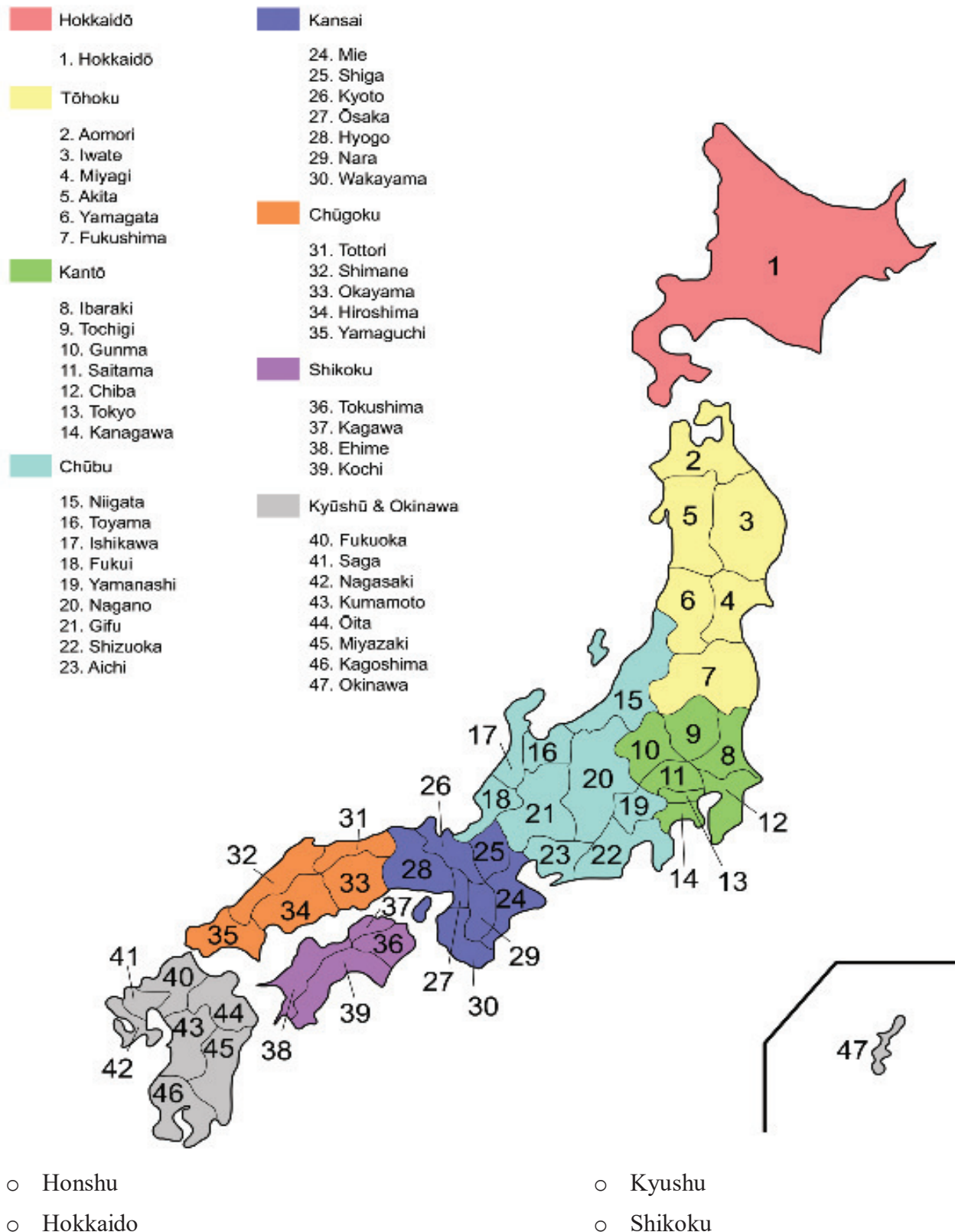
Japan

- **Location:** East Asia, island nation in the Pacific Ocean
- **Capital:** Tokyo (one of the most populous cities in the world)
- **Major Cities:** Osaka, Kyoto, Yokohama, Sapporo, Fukuoka, Hiroshima

Geography

- Archipelago: Composed of 14,000+ islands; four main ones are:

Regions and Prefectures of Japan



- **Mountains:** Cover about 70% of the country (including Mt. Fuji, its tallest peak)
- **Climate:** Varies from humid continental in the north to subtropical in the south
- **Natural Disasters:** Earthquakes, tsunamis, typhoons, and volcanic activity are common

Demographics

- **Population:** ~123 million (2025 est.)
- **Language:** Japanese (Nihongo)
- **Writing System:** Kanji (Chinese characters), Hiragana, Katakana
- **Religion:** Shintoism and Buddhism are predominant; secularism is also widespread
- **Literacy Rate:** ~99%

Government

- **System:** Constitutional monarchy with a parliamentary government
- **Emperor:** Naruhito (symbolic figurehead)
- **Prime Minister (2025):** Shigeru Ishiba
- **Legislature:** National Diet (House of Representatives & House of Councillors)

Economy

- **Currency:** Japanese Yen (¥ / JPY)
- **Economy:** Third-largest nominal GDP in the world (after the US and China)
- **Key Industries:**
 - Technology and electronics (Sony, Panasonic)
 - Automotive (Toyota, Honda, Nissan)
 - Robotics
 - Precision machinery
 - Animation and gaming
- **Exports:** Vehicles, electronics, semiconductors, robotics, steel
- **Challenges:** Aging population, deflation, energy dependence

Culture

- **Traditional Arts:** Tea ceremony, calligraphy, ikebana (flower arrangement), Noh, Kabuki
- **Modern Culture:** Anime, manga, J-pop, fashion, video games (Nintendo, Sony)
- **Cuisine:** Sushi, ramen, tempura, miso soup, wagyu beef
- **Etiquette:** Politeness, bowing, punctuality, group harmony (wa)

Education

- Highly competitive system
- Strong emphasis on discipline and hard work
- **Top universities:** University of Tokyo, Kyoto University

Transportation

- Known for punctual, clean, and efficient transport
- **Shinkansen (Bullet Trains):** Can exceed 320 km/h (200 mph)
- Extensive metro systems in major cities

QUESTIONS

13. The total fertility rate in an economy is defined as_____.
- A. the number of children born per 1000 people in the population in a year.
 - B. the number of children born to a couple in their lifetime in a given population.
 - C. the birth rate minus death rate.
 - D. the average number of live births a woman would have by the end of her child-bearing age.

14. Consider the following countries:

- 1. Italy
- 2. Japan
- 3. Nigeria
- 4. South Korea
- 5. South Africa

Which of the above countries are frequently mentioned in the media for their low birth rates, or ageing population or declining population?

- A. 1, 2 and 4 only
 - B. 1, 3 and 5 only
 - C. 2 and 4 only
 - D. 3 and 5 only
15. According to Demographic Transition Theory, declining birth rates in industrial societies are primarily associated with:
- A. Poor healthcare and high mortality
 - B. Decline in literacy and education
 - C. Improved healthcare, women's empowerment, and social modernization
 - D. Increasing agricultural dependency
16. With reference to Japan's population trends, consider the following statements:
- 1. Japan's population has been declining continuously for over 15 years.
 - 2. In 2024, Japan recorded the lowest number of births since official records began in 1899.
 - 3. Japan's fertility rate is currently above the replacement level of 2.1.

Which of the statements given above is/are correct?

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

4. India should go for Brown Revolution 2.0 to restore soil health

- India, the world's most populous nation, faces a critical challenge in managing its vast agricultural waste.
- With over 350–990 million tonnes of agro-residues generated annually (Koul et al., 2022), improper disposal — including open burning — leads to severe air pollution, greenhouse gas emissions, and declining soil fertility.
- Inspired by the success of the Amul dairy cooperative, Brown Revolution 2.0 envisions a decentralised, cooperative-based model for recycling agro-waste into compost, vermicompost, and biochar — restoring soil health and driving rural prosperity.

The Crisis of Declining Soil Fertility

- India's agricultural productivity is under threat due to the alarming depletion of soil organic carbon (SOC) — a key determinant of soil health.



- Decades of intensive monocropping and chemical input dependence, as part of the Green Revolution legacy, have degraded the soil's natural fertility.
- According to the NAAS Strategy Paper (2025), a large proportion of Indian farmlands fall below critical SOC thresholds, threatening long-term food security.

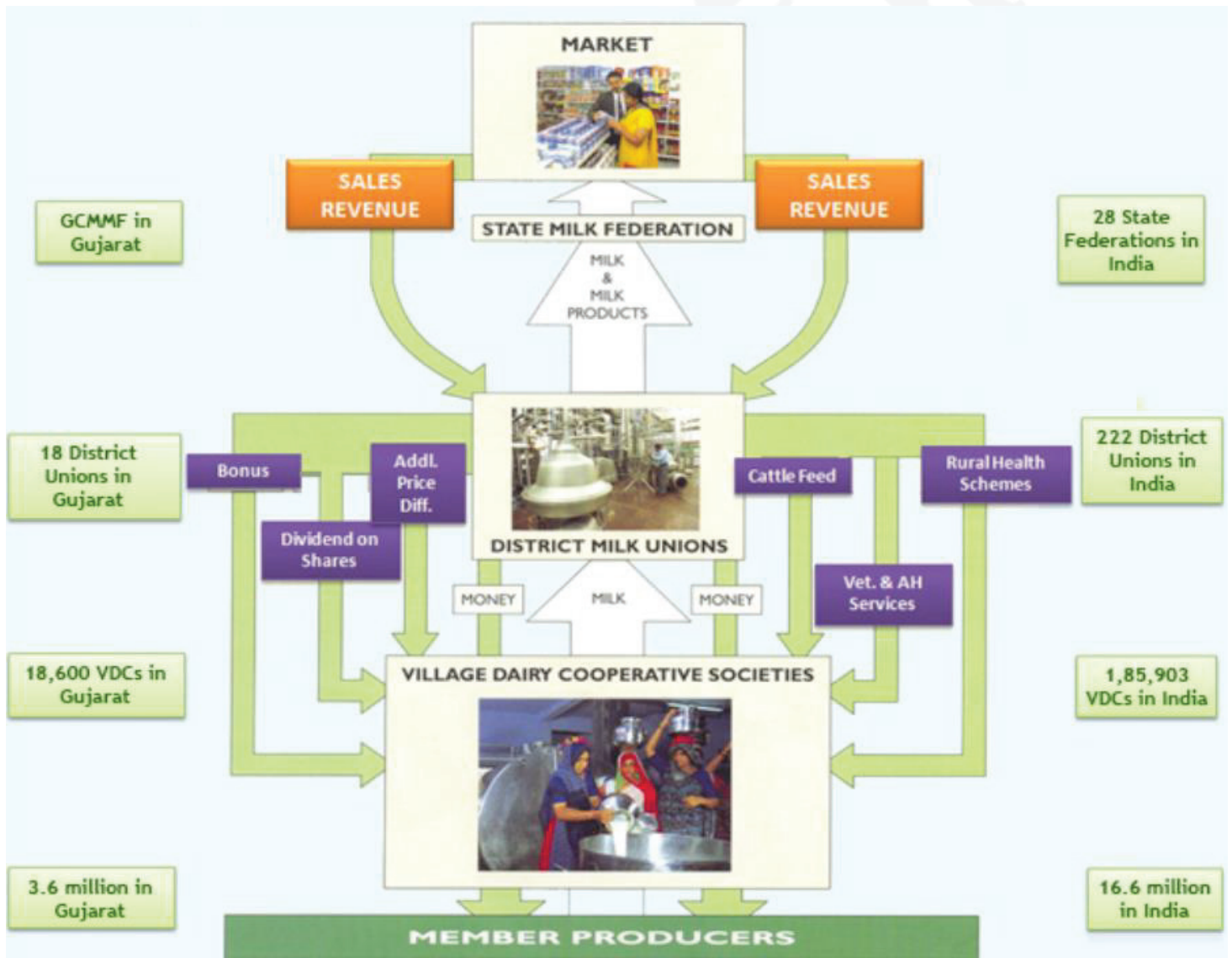
- Brown Revolution 2.0 proposes a national movement to address this soil crisis by recycling agro-waste from a wide range of sources — including field crops (rice, wheat, sugarcane), horticulture, oilseeds, plantations (tea, coconut, oil palm), livestock, and fisheries — and returning it to the soil in scientifically processed forms.

Agro-Waste: From Hazard to Resource

- Currently, less than 20% of India's agricultural waste is scientifically recycled. The remainder is burned, dumped, or left to decay, leading to significant environmental and health consequences:
- Air pollution from stubble burning in North India contributes to hazardous PM2.5 levels and releases substantial greenhouse gases (e.g., 1,460 kg of CO₂ per tonne of paddy straw burned).
- Water pollution through eutrophication and leachates.
- Loss of soil nutrients, organic matter, and potential value from biomass.
- Especially in horticultural districts, the organic fraction of agro-waste can reach up to 70%, underscoring the untapped potential for recycling into organic soil amendments.

Policy Blind Spots and Missed Opportunities

- Current policies are overly focused on converting agro-waste into biofuels or high-value industrial products, which, while economically attractive, benefit only a small fraction of the waste generated.



- This industrial-centric view ignores the foundational role of organic recycling in agriculture. Without replenishing soil organic carbon, even industrial uses will decline due to lower feedstock quality and availability.
- Thus, Brown Revolution 2.0 argues for a re-prioritization of policy toward soil-centric recycling — not as a secondary option, but as a strategic cornerstone for sustainable agriculture.

The Amul Model: A Template for Cooperative Agro-Waste Management

- Drawing inspiration from the Amul dairy cooperative, which revolutionized rural milk production through a federated, profit-sharing, community-owned model, Brown Revolution 2.0 envisions a similar structure for agro-waste management:
- Village-level cooperatives for collection, processing, and distribution of compost, vermicompost, and biochar.
- Support from ICAR, SAUs, and Krishi Vigyan Kendras (KVKs) for technical training and extension.
- Pooled logistics, quality assurance, and traceability through federated cooperative layers.
- This model ensures local ownership, rural employment, and scalable operations, with profits shared among members and surplus amendments sold commercially.

Technological Innovations and AI Integration

To maximize impact and efficiency, Brown Revolution 2.0 integrates cutting-edge technologies:

- Rapid in-vessel composting, modular biochar units, and optimized vermicomposting for local processing.
- **AI and IoT platforms for:**
 - Monitoring soil health in real time.
 - Optimizing processing parameters.
 - Forecasting biomass flows.
 - Enabling traceable carbon credit certification.
- These systems will also enhance transparency, decision-making, and financial sustainability, empowering farmers with actionable data through integration with schemes like the Soil Health Card.

Policy Recommendations for Implementation

- A robust framework for Brown Revolution 2.0 must include:
- Mandated cooperatives for agro-waste processing in each agricultural district.
- Economic incentives, akin to a minimum support price, for processed biomass.
- Subsidised composting and biochar units integrated into extension networks.
- Strict enforcement against open burning, coupled with viable alternatives.
- A National Organic Carbon Credit Registry to monetize verified soil carbon sequestration.
- Data integration with Soil Health Card schemes to support farmer decision-making.
- Targeted capacity-building for women, youth, and self-help groups to foster inclusive participation.
- Continuous research and region-specific demonstrations to ensure contextual relevance.

Strategic Benefits Across Sectors

Brown Revolution 2.0 offers multi-dimensional benefits:

- **Agricultural:** Restores soil fertility, enhances moisture retention, and improves resilience to climate extremes.
- **Economic:** Generates rural jobs in logistics, technology, and production; reduces fertilizer dependency.
- **Environmental:** Cuts GHG emissions and air pollution, improves water quality and biodiversity.
- **Technological:** Demonstrates scalable, data-driven models for sustainable development.
- **Social:** Strengthens cooperative institutions, boosts rural incomes, and fosters community resilience.

Brown Revolution

- The Brown Revolution refers to a movement in India focused on improving soil health, sustainable agriculture, and livestock production, particularly in relation to fertility and productivity of land.
- It is often associated with leather production, cocoa, non-conventional energy, and organic farming, depending on the context.
- **Purpose:** To enhance soil fertility, livestock farming, and sustainable agriculture.
- **Focus Areas:**
 - Organic farming
 - Soil conservation
 - Water management
 - Efficient use of fertilizers and pesticides
- **Associated Leader:** Dr. K.L. Chadha is sometimes credited with promoting ideas related to the Brown Revolution.
- **Color Symbolism:** “Brown” signifies the earth/soil, emphasizing the importance of land and sustainability.

Comparison with Other Revolutions:

Revolution	Focus Area
Green	Agricultural production (grains)
White	Milk and dairy production
Blue	Fisheries and water resources
Yellow	Oilseed production
Brown	Soil health & sustainable farming

QUESTIONS

17. With reference to the term Brown Revolution 2.0 recently discussed in the Indian context, it primarily refers to:
- A. Promotion of leather exports and tanning industries
 - B. A movement for improving soil health through agro-waste recycling
 - C. Expanding non-conventional energy sources such as biofuels
 - D. Increasing cocoa production in tribal belts

18. Match List I with List II:

List I

- A. Blue Revolution
- B. White Revolution
- C. Yellow Revolution
- D. Green Revolution

List II

- I. Increase in crop yield and Agricultural Products
- II. Increase in Oil-Seeds Production
- III. Increase of Fish Production
- IV. Increase in the field of milk production

Choose the most appropriate answer from the options given below:

- A. A-IV, B-III, C-II, D-I
- B. A-III, B-IV, C-II, D-I
- C. A-I, B-III, C-II, D-IV
- D. A-III, B-I, C-II, D-IV

19. Which of the following are considered major causes of declining soil organic carbon (SOC) in India?

- 1. Intensive monocropping
- 2. Dependence on chemical inputs
- 3. Stubble burning and poor agro-waste management
- 4. Excessive irrigation using groundwater

Select the correct answer using the code below:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 3 only
- D. 1, 2, 3 and 4

20. Brown Revolution 2.0 draws inspiration from which successful cooperative model in India?

- A. Operation Flood (Amul Dairy Cooperative)
- B. White Revolution (NDDB)
- C. Green Revolution (ICAR)
- D. Blue Revolution (Fisheries)

21. Which of the following technologies are envisaged under Brown Revolution 2.0 to maximize efficiency?

- 1. In-vessel rapid composting units
- 2. Modular biochar units
- 3. AI- and IoT-based soil health monitoring
- 4. Blockchain-based traceability for carbon credits

Select the correct answer:

- A. 1 and 2 only

- B. 1, 2 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

22. What are the multi-dimensional benefits expected from Brown Revolution 2.0?

1. Restoring soil fertility and resilience to climate extremes
2. Generating rural jobs and reducing fertilizer dependency
3. Cutting GHG emissions and improving water quality
4. Strengthening cooperative institutions and boosting rural incomes

Select the correct answer:

- A. 1, 2 and 3 only
- B. 2, 3 and 4 only
- C. 1 and 4 only
- D. 1, 2, 3 and 4

5. Azerbaijan and Armenia sign peace deal at White House



Armenia and Azerbaijan

- **Location:** Both countries are in the South Caucasus, between the Black and Caspian Seas, bordered by Russia, Iran, and Turkey.
- **Religions:** Armenia is predominantly Christian (Armenian Apostolic Church), while Azerbaijan is a Muslim-majority (Shia Islam) country.
- **Languages:** Armenian and Azerbaijani, respectively.

Nagorno-Karabakh Region

- An area of around 4,400 sq km within Azerbaijan, but historically populated mostly by ethnic Armenians.
- Known to Armenians as Artsakh.
- During the Soviet era, it was designated an autonomous oblast (province) within the Azerbaijan SSR, despite its Armenian majority.

Origins and Causes of the Conflict

1. Ethnic and Historical Tensions

- Long-standing ethnic animosities between Armenians and Azerbaijanis.
- Both countries claim historical ownership of Nagorno-Karabakh.
- Armenians view the region as a cultural and historical homeland.
- Azerbaijan views it as sovereign Azerbaijani territory, unjustly claimed by Armenians.



2. Soviet-Era Decisions

- In 1923, Stalin placed Nagorno-Karabakh under Azerbaijan's control to appease Turkey.
- This decision sowed seeds of discontent, especially among the local Armenian population.

3. Collapse of the Soviet Union

- As the USSR weakened in the late 1980s, ethnic Armenians in Nagorno-Karabakh began pushing to join Armenia.
- Azerbaijan opposed this, leading to inter-communal violence.
- In 1991, as both Armenia and Azerbaijan gained independence, open war broke out.

Key Phases of the Conflict

First Nagorno-Karabakh War (1988–1994)

- Full-scale war between Armenia and Azerbaijan.
- Ethnic Armenians, backed by Armenia, took control not only of Nagorno-Karabakh but also seven surrounding Azerbaijani districts.
- Estimated 30,000 deaths; over 1 million displaced (mostly Azerbaijanis).
- 1994 ceasefire brokered by Russia; Nagorno-Karabakh established de facto independence, unrecognized internationally.

Years of Stalemate (1994–2020)

- Sporadic clashes along the Line of Contact.
- Failed peace initiatives led by the OSCE Minsk Group (Russia, France, US).
- Armenia consolidated its grip over the region, despite international law recognizing it as part of Azerbaijan.

Second Nagorno-Karabakh War (2020)

- In September 2020, Azerbaijan launched a six-week offensive, with Turkish support and Israeli-made drones.
- Azerbaijan recaptured significant territories, including the strategic town of Shusha.
- Over 6,500 deaths.

A Russia-brokered ceasefire in November 2020

- Returned parts of Nagorno-Karabakh and surrounding districts to Azerbaijan.
- Introduced Russian peacekeepers to monitor the region.

Post-2020 Tensions

- Despite the ceasefire, tensions continued:
 - Border skirmishes.
 - Blockade of the Lachin Corridor (the only road linking Armenia to Karabakh).
 - Political instability in Armenia, with mass protests against PM Nikol Pashinyan.
 - Pressure on ethnic Armenians to leave Nagorno-Karabakh.

2023: Azerbaijan Reclaims Karabakh

- In September 2023, Azerbaijan launched a one-day military operation and regained full control over Nagorno-Karabakh.
- Thousands of ethnic Armenians fled, effectively ending the region's de facto autonomy.
- Armenia did not intervene militarily, signaling a pivot toward peace and normalization.

2025 Peace Agreement – US-Brokered Deal

Context

- Russia's influence declined in the Caucasus due to its war in Ukraine.
- The US filled the diplomatic vacuum, with Trump administration actively engaging in the region.

Key Provisions

- Peace agreement signed by Ilham Aliyev (Azerbaijan) and Nikol Pashinyan (Armenia) at the White House.
- Transit corridor (Trump Route) connecting mainland Azerbaijan to its Nakhchivan exclave via Armenia.
- US gains development rights to the corridor (rail, energy pipelines, fiber optic).

Separate US-Armenia and US-Azerbaijan bilateral agreements on:

- Energy
- Technology

- Economic cooperation



Symbolic & Geopolitical Impacts

- Handshake with Trump symbolizing a new era of peace.

Undermines Russian dominance in the region.

- Boosts Trump's global image as a peacemaker, prompting calls for a Nobel Peace Prize.
- Iran cautiously welcomed peace but warned against a foreign-controlled corridor near its border.

Why the Corridor Matters

- Geopolitically strategic: Connects Azerbaijan to Turkey through Armenia, bypassing Iran.
- Offers energy export routes to Europe.

QUESTIONS

- 23.** With reference to the Azerbaijan–Armenia peace agreement of 2025, consider the following statements:
1. The agreement was brokered by Russia.
 2. It includes the establishment of a transit corridor linking Azerbaijan to its Nakhchivan exclave via Armenia.
 3. The agreement grants the United States development rights for energy pipelines, railways, and fiber optics.

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

24. Which of the following regions is associated with long-standing territorial disputes between Armenia and Azerbaijan, and has been the focus of multiple wars and ceasefire agreements?
- A. South Ossetia
 - B. Abkhazia
 - C. Nagorno-Karabakh
 - D. Crimea
25. In the context of the Azerbaijan–Armenia peace deal of 2025, why is the transit corridor connecting Azerbaijan to Turkey through Armenia geopolitically significant?
- A. It bypasses Iran, providing Azerbaijan direct access to the Mediterranean.
 - B. It connects Armenia to the European Union, boosting trade.
 - C. It strengthens Russia's role as a key transit country for energy exports.
 - D. It allows Armenia to control access to the Caspian Sea.
26. Which of the following statements is Not true regarding the Armenia and Azerbaijan?
- A. Armenia is a landlocked country while Azerbaijan is not.
 - B. The Dram is the currency of Azerbaijan while Manat is the currency of Armenia.
 - C. Baku is the capita of Azerbaijan while Yerevan is the capital of Armenia.
 - D. Both countries share border with Turkey
27. Which of the following countries share a land border with both Armenia and Azerbaijan?
- 1. Turkey
 - 2. Iran
 - 3. Russia
 - 4. Georgia

Select the correct answer using the codes given below:

- A. 1 and 3 only
- B. 2 and 3 only
- C. 1 and 4 only

6. Unified Payments Interface

- India has emerged as the global leader in fast payments, according to a recent note by the International Monetary Fund titled Growing Retail Digital Payments: The Value of Interoperability. At the heart of this transformation is the Unified Payments Interface, better known as UPI.
- Launched in 2016 by the National Payments Corporation of India, UPI has changed how people send and receive money in the country. It brings all your bank accounts together in one mobile app. You can transfer money instantly, pay merchants, or send funds to friends with just a few taps. Its appeal lies in its speed and ease of use. Today, UPI processes over 18 billion transactions every month in India.



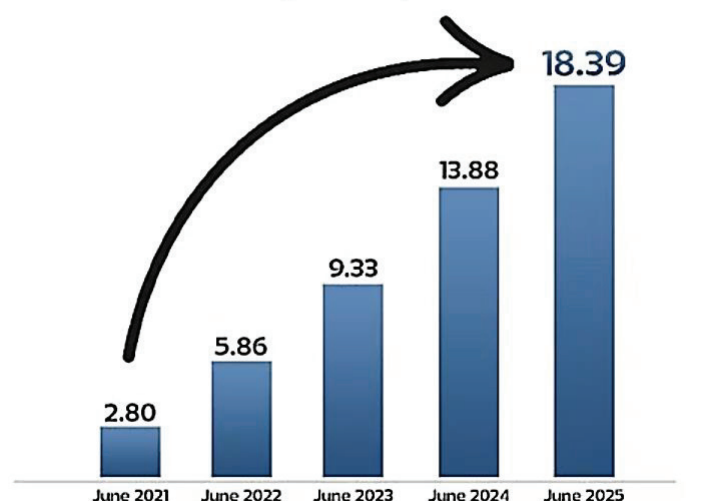
What is UPI?

- Unified Payments Interface (UPI) is a real-time payment system that enables instant money transfers between bank accounts through a mobile application. It is built on the Immediate Payment Service (IMPS) infrastructure. UPI brings multiple bank accounts into a single app and supports various features such as fund transfers, merchant payments, and peer-to-peer payment requests, making digital transactions quick and convenient.
- This shift has taken India away from cash and card-based payments and pushed it towards a digital-first economy. Millions of individuals and small businesses now rely on UPI for safe and low-cost transactions.
- By making payments quick and accessible, UPI has become a powerful tool for financial inclusion.
- India's leadership in real-time payments is not an accident. It reflects years of bold digital groundwork and a vision to use technology for inclusive growth. UPI is no longer just a payment system. It is a global benchmark for innovation in public digital infrastructure.

UPI in Figures: A Snapshot of Success

- The scale of UPI today is remarkable. In June 2025 alone, it handled over ₹24.03 lakh crore in payments. This was spread across 18.39 billion transactions. Compared to the same month last year, when there were 13.88 billion transactions, the growth is clear. There is an increase of about 32 per cent in just one year.
- The UPI system now serves 491 million individuals and 65 million merchants. It connects 675 banks on a single platform, allowing people to make payments easily without worrying about which bank they use.
- Today, UPI accounts for 85 per cent of all digital transactions in India. Its impact goes

Growth in UPI Transaction Volume
(In Billions)



beyond national borders, powering nearly 50 per cent of global real-time digital payments.

- These figures show more than just numbers. They reflect trust, convenience and speed. Every month, more individuals and businesses choose UPI for their payments. This growing use is a strong sign that India is moving steadily towards a cashless economy.

UPI Leads the World in Real Time Payments

- India's Unified Payments Interface is also now the world's number one real-time payment system. It has surpassed Visa to take the lead in processing daily transactions. UPI handles more than 640 million transactions every day, compared to Visa's 639 million. This scale is extraordinary, especially when you consider that UPI achieved it in just nine years.
- As mentioned earlier, UPI now accounts for almost 50 per cent of transactions globally. This shows the strength of an open and interoperable system built for speed and simplicity.
- The success story does not stop at home. UPI is making its presence felt across borders. It is already live in seven countries, including the UAE, Singapore, Bhutan, Nepal, Sri Lanka, France and Mauritius. Its entry into France is a milestone because it is UPI's first step into Europe. This allows Indians travelling or living there to pay seamlessly without the usual hassles of foreign transactions.
- India is also pushing for UPI to become a standard within the BRICS group, which now has six new member nations. If this happens, it will improve remittances, boost financial inclusion and raise India's profile as a global tech leader in digital payments.

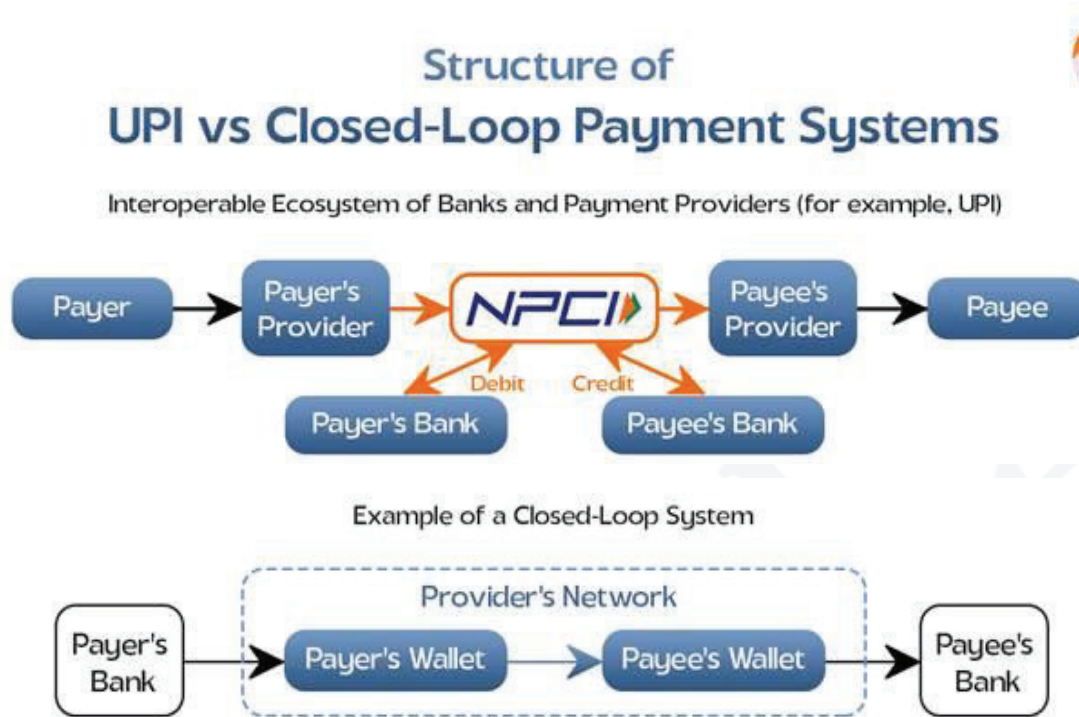
Interoperability and UPI

- Interoperability means different systems can work together smoothly. In payments, it allows people to send and receive money even if they use different banks or apps. For this to happen, all parts of the system must follow common rules. These include technical standards so the software works together, clear ways to interpret shared information, and agreed rights and responsibilities for everyone involved.



- Before UPI, digital payments in India were limited by closed-loop systems. A closed-loop system is one where transactions can only happen within the same platform. For example, a wallet app allowed transfers between its own users but not to someone using a different wallet. Similarly, while people could use IMPS to move money between banks, they could not do so through third-party apps.
- UPI changed this. It connected banks and fintech apps through a common platform. Now, a user can pick any UPI-enabled app and pay someone using another app, without worrying about which bank they use. This is true interoperability in action.

- This openness has two big benefits. First, users have the freedom to choose their favourite app, based on trust or ease of use. Second, it creates healthy competition among providers to offer better features and security. As more apps join and improve, people get more choices and better services. This has helped UPI grow quickly and become part of everyday life for millions.



Source: IMF

How UPI Has Changed Everyday Life

- UPI has made digital payments part of daily life in India. It brings ease, speed, and safety to even the smallest transactions. Here is how it impacts ordinary people:
- Money Anytime, Anywhere: No need to stand in queues or wait for bank hours. UPI lets people send or receive money instantly, 24x7, right from their mobile phones.
- One App for All Accounts: Managing money is simpler. People can link all their bank accounts in one app instead of juggling multiple platforms.
- Safe and Quick Payments: With secure two-step authentication, payments happen in seconds without compromising safety.
- Privacy First: Users no longer share sensitive bank details. A simple UPI ID is enough, reducing risks for everyone.
- QR Code Convenience: Paying with UPI is as simple as scanning a QR code. This helps speed up transactions at shops and service points.
- No More Cash-On-Delivery Hassles: Online shopping becomes easier as UPI replaces the need to keep exact change for deliveries.
- Payments for Everything: People can now pay bills, donate, or recharge phones without stepping out of their homes.
- Help Is Just a Tap Away: Any issue with a payment can be reported directly in the app, making grievance redressal easy.

The Digital Foundation Behind UPI

- UPI's rise as the world's leading real-time payment system was not an accident. It is the result of years of planning and investment in digital infrastructure. India built a strong foundation that brought millions into the formal financial system, gave them secure digital identities and connected them through affordable internet. This combination created the perfect environment for UPI to grow and succeed.

Pradhan Mantri Jan Dhan Yojana

- Financial inclusion was the first big step. The Jan Dhan scheme opened bank accounts for millions who had never used formal banking before. As of July 9 2025, over 55.83 crore accounts have been created. These accounts give people direct access to government benefits and a safe place to save money.

Aadhaar and Digital Identity

- Aadhaar provided a unique identity for every resident. Each person gets a number linked to their biometrics, making authentication easy and reliable. This system ensures that benefits and services reach the right person. Since inception, over 142 crore Aadhaar cards have been generated cumulatively as on 30th June 2025, forming the backbone of many digital services, including UPI.

Connectivity and the 5G Revolution

- The next pillar was connectivity. India achieved one of the fastest 5G rollouts in the world, with 4.74 lakh base stations now active and covering almost all districts. This supports a massive mobile subscriber base of 116 crore in 2025. At the same time, internet data costs have fallen sharply from ₹308 per GB in 2014 to just ₹9.34 in 2022. With fast networks and affordable data, more people than ever can access digital services.

Conclusion

- India has emerged as the global leader in fast payments, and UPI is at the heart of this achievement. It has not only made digital transactions quick and secure but has also set a new global standard for innovation in public digital infrastructure.
- What started as a simple system to link bank accounts to mobile apps has become the backbone of a digital-first economy. Its growth is built on strong foundations of financial inclusion, digital identity and affordable connectivity. UPI's expansion into other countries highlights its global potential. As more nations adopt this model, India's vision of a secure, real-time, and open payment system is influencing the future of digital finance. The UPI story is far from over.
- It is a story of technology designed for people, and it will continue to connect lives and economies around the world.

QUESTIONS

28. Consider the following statements regarding UPI (Unified Payments Interface):

- UPI accounts for 85% of all digital transactions in India.
- UPI is operational in over 10 countries, including France and Mauritius.
- The growth of UPI is primarily attributed to its interoperability, allowing users to transact seamlessly across different banks and payment apps.
- UPI has been the key factor in India's transition from a cashless society to a digital-first economy.

Which of the statements given above is/are correct?

- A. 1, 3, and 4 only
B. 2, 3, and 4 only

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

29. Which of the following statements about UPI's role in financial inclusion is/are true?

1. UPI has made digital payments quick, secure, and accessible to millions, including individuals and small businesses in rural areas.
2. UPI has become a tool for financial exclusion by limiting access to only those who possess smartphones.
3. UPI's interoperability has led to widespread use across different platforms and banking apps, enhancing access to financial services.
4. UPI has played a role in improving women's financial empowerment, especially in rural and underserved communities.

Select the correct answer using the code given below:

- A. 1, 3, and 4 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 3 and 4 only

30. Consider the following statements about the growth of UPI:

1. It was launched in 2016.
2. It was launched by the National Payments Corporation of India (NPCI) to simplify digital payments and enhance financial inclusion in India.

Which of the statements given above is/are correct?

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

31. Which of the following statements about UPI's interoperability is/are correct?

1. UPI operates in a closed-loop system, where users can only make transactions within the same platform.
2. UPI's interoperability allows users to send money across different banking apps, making payments simple and accessible.
3. UPI's open system promotes competition among service providers, ensuring better features and security for users.
4. UPI's success has been limited to India, and its adoption in other countries is still in its nascent stages.

Select the correct answer using the code given below:

- A. 2 and 3 only
- B. 1 and 2 only
- C. 2, 3, and 4 only
- D. 1, 2, and 3 only

32. Which of the following is a most likely consequence of implementing the 'Unified Payments Interface (UPI)'? [UPSC-PYQ-2017]

- A. Mobile wallets will not be necessary for online payments.
- B. Digital currency will totally replace the physical currency in about two decades.
- C. FDI inflows will drastically increase.
- D. Direct transfer of subsidies to poor people will become very effective.

33. Consider the following statements: [UPSC-PYQ-2017]

1. National Payments Corporation of India (NPCI) helps in promoting financial inclusion in the country.
2. NPCI has launched RuPay, a card payment scheme.

Which of the statements given above is/are correct?

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

34. With reference to digital payments, consider the following statements: [UPSC-PYQ-2018]

1. BHIM app allows the user to transfer money to anyone with a UPI-enabled bank account.
2. While a chip-pin debit card has four factors of authentication, BHIM app has only two factors of authentication.

Which of the statements given above is/are correct?

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

35. Consider the following countries: [UPSC-PYQ-2025]

- I. United Arab Emirates
- II. France
- III. Germany

IV. Singapore

V. Bangladesh

How many countries amongst the above are there other than India where international merchant payments are accepted under UPI?

- A. Only two
- B. Only three
- C. Only four
- D. All the five



Career
Launcher

ANSWER KEY AND EXPLANATION

1. **C General tariff:** 15% baseline Exceptions: Steel & aluminium (50%), autos (27.5%). EU automobiles now face 27.5% tariffs. Northern Ireland (UK) trades under 10% tariff, creating a distortion with Ireland (EU).
2. **A** Pharma and semiconductors: Only 15% tariff, avoiding Trump's threatened 200% (pharma) and special semicon levies.
Automobiles: Still face 27.5% tariff, no relief.
3. **D** EU to buy \$250 billion annually for 3 years = \$750 billion energy imports. Extra \$600 billion in tech, infra, and military-related investments. EU gave zero tariffs for US aircraft, semicon equipment, agricultural goods, natural resources, etc.
4. **C** The General Data Protection Regulation (GDPR) was adopted by the European Parliament, the Council of the European Union, and the European Commission in April 2016. It came into force on 25th May 2018 across all EU member states. GDPR is considered one of the world's strictest privacy and security laws. It: Strengthens individuals' rights over their personal data. Imposes obligations on companies to protect user data. Applies not only to organizations located within the EU but also to those outside the EU if they deal with EU citizens' data. Example: A US company like Google or Facebook must comply with GDPR when handling data of EU citizens.
5. **A** The Broad-based Trade and Investment Agreement (BTIA) refers to a proposed Free Trade Agreement (FTA) between India and the European Union (EU). Negotiations for this agreement began in 2007 with the aim of: Reducing tariffs on goods. Opening up trade in services. Promoting investments between India and EU member states. However, talks have faced repeated deadlocks due to differences on issues such as: Tariffs on automobiles and wines/spirits (EU demand for lower tariffs, India's protective stance). Intellectual property rights. Market access for services and movement of professionals (India's priority). Sustainable development and labour standards (EU's priority). The BTIA, if concluded, would be one of India's most significant trade agreements since the EU is one of India's largest trading partners.
6. **A** Nil-TDS certificate provision clarified. AMT for LLPs aligned – only those claiming benefits face 18.5% AMT; others get 12.5%. Standard deduction of 30% is applied after deducting municipal taxes, not before. The Alternate Minimum Tax (AMT) regime for Limited Liability Partnerships (LLPs) has been revised. The earlier version expanded its scope unnecessarily. The new law ensures only LLPs claiming specific benefits will be subject to AMT at 18.5%, while others can avail the preferential rate of 12.5%. Nil-TDS Certificate Provision: Taxpayers with no income tax liability are now allowed to obtain a nil-TDS certificate, which was previously ambiguous under the old framework. The bill clarifies that the 30% standard deduction on house property income will be applied after deducting municipal taxes, resolving previous interpretational issues.
7. **D** "Virtual digital space" covers emails, servers, cloud storage, social media, online trading platforms, banking apps, and wallets. Printed diaries and physical files are not included.
8. **A** UPS aligned with NPS for tax benefits. Up to 60% withdrawal tax-free. Contributions are tax-deductible but subject to limits (like NPS) □.

9. **B** The Bill grants full exemption to PIF on dividends, interest, long-term capital gains, and other investment-related incomes. Rental income from property is not covered.
10. **A** The new Bill reduces sections from 819 → 536 and chapters from 47 → 23. Refunds for belated returns were restored after criticism. The new “Tax Year” is same as the financial year (April 1–March 31), not different. Hence, 1 & 2 correct, 3 incorrect.
11. **D** **Statement 1:** It is introduced as a part of the Income Tax Act. This is incorrect. The Equalization Levy was introduced in 2016 Finance Act as a separate chapter, not as part of the Income Tax Act, 1961. It was kept outside the Income Tax Act to avoid complications with tax treaties.
Statement 2: Non-resident entities that offer advertisement services in India can claim a tax credit in their home country under the “Double Taxation Avoidance Agreements (DTAA).” This is also incorrect. Since equalization levy is not treated as income tax, it does not fall under DTAA provisions. Hence, foreign companies cannot claim tax credit in their home countries.
12. **A** **Statement 1:** It will replace multiple taxes collected by multiple authorities and will thus create a single market in India. GST subsumed central and state indirect taxes (excise, VAT, service tax, etc.), creating a “one nation, one tax, one market” system.
Statement 2: It will drastically reduce the Current Account Deficit (CAD) of India and will enable it to increase its foreign exchange reserves. CAD depends on external trade balance (imports vs exports), foreign capital flows, and exchange rates. GST is a domestic tax reform, not directly related to external account balance.
Statement 3: It will enormously increase the growth and size of economy of India and will enable it to overtake China in the near future. GST may improve efficiency, ease of doing business, and tax compliance, contributing to higher GDP growth, but it will not single-handedly cause India to surpass China’s economy “in near future.” That is an overstatement.
13. **D** **Total Fertility Rate (TFR):** It measures the average number of live children a woman would give birth to during her reproductive years (usually taken as 15–49 years), if current age-specific fertility rates remain constant. It is a synthetic measure, not dependent on one year’s births alone, but rather an estimate based on fertility trends.
14. **A** The question is about countries that are frequently in the news for low birth rates, ageing population, or declining population. Italy has one of the world’s lowest fertility rates (~1.2–1.3). Its population is ageing rapidly, and it is projected to shrink significantly in coming decades. Japan is famous for its ageing population and declining workforce. Its fertility rate (~1.3) is well below replacement level (2.1). Japan has one of the oldest populations in the world. Nigeria has a very high fertility rate (~5.0) and one of the fastest growing populations in the world. It is expected to become the world’s third most populous country by 2050. South Korea has the world’s lowest fertility rate (~0.7 in 2023–24). Population decline and ageing are major national concerns. South Africa has a moderate fertility rate (~2.3). Its demographic issue is not low fertility but rather youth bulge, unemployment, and inequality.
15. **C** DTT explains how industrialization → improved healthcare → lower mortality, followed by women’s education and empowerment → lower fertility. Japan is in the late stage (Stage 4/5) of demographic transition with low birth & death rates.

16. **B** Japan's population decline has continued for 16 consecutive years. Only 686,061 newborns in 2024 → the lowest since 1899 records began. Japan's TFR is ~1.3, far below replacement level 2.1.
17. **B** Brown Revolution 2.0 envisions cooperative-based recycling of agro-waste (compost, biochar, vermicompost) to restore soil organic carbon and fertility. Historically, "Brown Revolution" has also been linked to leather, cocoa, and non-conventional energy — but here the focus is on soil health and sustainable farming.
18. **B** Among the given options, option B is correctly matched. The Blue Revolution aims to increase the overall fish production in a responsible and sustainable manner for economic prosperity. The White Revolution is referred to as the concept of unexpected increase in milk production. The Yellow Revolution was launched to increase the production of Edible oilseeds in the country to meet the domestic demand. The Green Revolution is referred to as the process of increasing agricultural production by incorporating modern tools and techniques.
19. **D** Decline in SOC is due to monocropping, chemical fertilizers, stubble burning, and over-irrigation leading to soil degradation. NAAS Strategy Paper (2025) warns that much of Indian farmland is below critical SOC thresholds, threatening long-term productivity.
20. **A** The model is federated, community-owned, and profit-sharing like Amul (Operation Flood). Proposes village-level agro-waste cooperatives for compost/biochar, supported by ICAR, KVKs, and SAUs.
21. **D** Brown Revolution 2.0 emphasizes tech-driven solutions: Rapid composting & biochar units at local scale. AI & IoT for real-time soil health monitoring. Traceable carbon credit certification (blockchain/registries).
22. **D** **Agricultural:** Soil fertility, water retention.
Economic: Rural jobs, lower fertilizer imports.
Environmental: Lower PM2.5, lower CO₂ emissions, better water quality.
Social: Cooperative empowerment, women/youth inclusion.
23. **B** **Statement 1 is incorrect:** The peace agreement was brokered by the United States, not Russia, marking the shift in diplomatic influence in the region.
Statement 2 is correct: The transit corridor (Trump Route) will connect Azerbaijan to its Nakhchivan exclave through Armenia.
Statement 3 is correct: The U.S. gains development rights to the corridor for infrastructure projects like railways, energy pipelines, and fiber optics.
24. **C** Nagorno-Karabakh is the region in dispute between Armenia and Azerbaijan. It has been the focal point of two major wars (1988–1994, 2020) and subsequent ceasefire agreements. The region was recaptured by Azerbaijan in 2023, following a military operation.
25. **A** The transit corridor strategically bypasses Iran, linking Azerbaijan to Turkey and allowing access to European energy markets and potentially reducing Iran's influence in the region. This has geopolitical significance as it opens up new trade and energy export routes to Europe.

- 26. B** Armenia is a landlocked country, but Azerbaijan is not. Azerbaijan has a coastline along the Caspian Sea, making it not landlocked. Both Armenia and Azerbaijan share a border with Turkey, though Armenia shares a short border with Turkey, and Azerbaijan shares a longer border with Turkey through its Nakhchivan exclave. Armenia is a landlocked country in the Armenian highlands of West Asia. It is a part of the Caucasus region and is bordered by Turkey to the west, Georgia to the north and Azerbaijan to the east, and Iran and the Azerbaijani exclave Nakhchivan to the south. Yerevan is the capital, largest city and financial center. The Armenian dram is the currency of Armenia. Azerbaijan is a transcontinental at the boundary of West Asia and Eastern Europe. It is a part of the South Caucasus region and is bounded by the Caspian Sea to the east, Russia's republic of Dagestan to the north, Georgia to the northwest, Armenia and Turkey to the west, and Iran to the south. Baku is the capital and largest city. The manat is the currency of Azerbaijan.
- 27. D** Armenia and Azerbaijan both share land borders with Turkey and Iran. Turkey borders Armenia to the west, and Azerbaijan to the west via the Nakhchivan exclave. Iran shares borders with both countries to the south. Russia and Georgia do not directly share borders with both.
- 28. A** **Statement 1:** UPI accounts for 85% of digital transactions in India, which is correct, according to the passage.
Statement 2: UPI is operational in seven countries, not over 10, so this statement is incorrect.
Statement 3: UPI's interoperability is a crucial feature that allows seamless transactions across different platforms, which is true.
Statement 4: UPI has indeed been a key factor in India's transition to a digital-first economy, facilitating cashless transactions and financial inclusion.
- 29. A** **Statement 1:** UPI's quick, secure, and accessible nature has indeed improved financial inclusion for individuals and businesses in rural areas.
Statement 2: This statement is incorrect as UPI has facilitated financial inclusion, even for people with low literacy and access to basic smartphones.
Statement 3: UPI's interoperability allows seamless transactions between different apps and banks, which expands access to financial services.
Statement 4: UPI has indeed empowered women in rural and underserved areas by providing financial independence and easy access to digital services.
- 30. C** **Statement 1:** The Unified Payments Interface (UPI), launched in 2016, is the core innovation that has propelled India to become a global leader in fast payments. It has revolutionized the way people send and receive money in India.
Statement 2: UPI was launched in 2016 by the National Payments Corporation of India (NPCI) to simplify digital payments and enhance financial inclusion in India.
- 31. A** **Statement 1:** This is incorrect. UPI operates in an open, interoperable system, not a closed-loop system.
Statement 2: UPI's interoperability indeed allows users to make payments across different banking apps, making it easier for people to transact.

Statement 3: UPI's openness creates healthy competition among providers, leading to better features and security for users.

Statement 4: UPI has made its mark globally, expanding to seven countries (including the UAE, Singapore, France), so this statement is incorrect.

32. A Option A is correct. The Unified Payments Interface (UPI) is a real-time, digital payment system that allows users to make instant transfers directly between bank accounts, making mobile wallets less necessary. With UPI, users can perform transactions without requiring third-party wallets like Paytm or Google Pay, making the process more streamlined and efficient.

33. C Statement 1 is correct: The National Payments Corporation of India (NPCI) plays a crucial role in promoting financial inclusion by developing and operating payment and settlement systems in India. Through systems like UPI, RuPay, IMPS, and others, NPCI enables access to banking services, especially in underserved areas, thereby facilitating financial inclusion.

Statement 2 is also correct. NPCI launched RuPay, India's own card payment network, similar to global networks like Visa and MasterCard. RuPay was created to provide an affordable payment solution for Indian consumers, and it supports the government's financial inclusion efforts, including the Pradhan Mantri Jan Dhan Yojana (PMJDY). Thus, the correct answer is (c) – Both 1 and 2.

34. A Statement 1 is correct because the BHIM (Bharat Interface for Money) app is designed for UPI (Unified Payments Interface), which allows users to transfer money to anyone who has a UPI-enabled bank account. BHIM app allows users to make direct bank transfers using just the recipient's UPI ID, making it widely accessible.

Statement 2 is incorrect because a chip-pin debit card uses two-factor authentication (card + PIN), not four factors. On the other hand, the BHIM app uses two factors of authentication: mobile number (linked to the bank account) and MPIN (Mobile PIN) for making transactions. So, this part of the statement is inaccurate. Therefore, the correct answer is (A) – 1 only.

35. B As of now, UPI (Unified Payments Interface) is accepted for international merchant payments in several countries outside India, including: United Arab Emirates (UAE), France, Singapore, Sri Lanka, Mauritius, Bhutan and Nepal. Therefore, among the countries listed in the question, only three—United Arab Emirates, France, and Singapore—currently support UPI for international merchant payments. Germany and Bangladesh do not have UPI integration at this time.