INSIDE ➡

CSE Prelims Special
GS Roundup-1 | 79

Covering 36 Most Important Topics from which Questions are Frequently Asked in the Preliminary Examination

REGULAR COLUMNS

The **Current Affairs based MCQs** of the October 2023 Issue of Civil Services Chronicle Magazine is available at **www.chronicleindia.in** under the **Free Resources** section

Chandrayaan-3 Mission
Significant Milestone in India's Space Odyssey

India has a huge untapped potential in the space sector. Through adequate policy measures, this potential can be harnessed to make the country stand at par with the other space superpowers of the world. Space activities are very expensive and this investment gap can be bridged by promoting the private sector. This will not only yield the best results but will also help India achieve top position in the global space industry.

■ Dr. Amarjeet Bhargava

On 23rd August, 2023, India's Chandrayaan-3 Lander Module successfully soft landed on the Moon's South Pole. With this, India has become the first country to land a spacecraft in the uncharted region near the South Pole of the Moon. India is the fourth country in history to complete a soft landing on the Moon after the United States, the Soviet Union and China.

On this momentous occasion, it was announced by the Prime Minister that the point where Vikram Lander touched the surface of the Moon will be named 'Shiv Shakti' and the spot where Chandrayaan-2 (which failed in 2019) left its footprint on the Moon, will be known as 'Tiranga Point'. Also, August 23 has been declared as 'National Space Day' to commemorate the remarkable achievement of Chandrayaan-3 landing.

The successful soft landing of Chandrayaan-3 on the Moon is being seen as an important milestone in the field of space exploration. India's ambitious space program will, in due course of time, help establish the country as a space superpower in the future.

Discoveries made by Chandrayaan-3 so far

- **Presence of Sulfur and other Elements:** The presence of the Laser-Induced Breakdown Spectroscope (LIBS) instrument on Chandrayaan-3's 'Pragyan' rover has 'unequivocally confirmed' the presence of sulfur on the surface of the Moon's South Pole. Other traced elements includes aluminum (Al), calcium (Ca), iron (Fe), chromium (Cr), titanium (Ti), manganese (Mn), silicon (Si), and oxygen (O).
- **Temperature Variation on Lunar Surface:** Measurement of the temperature of the Moon's soil by Chandrayaan-3 has revealed that the temperature on the Moon's surface ranges from minus 10 degrees Celsius to about 70 degrees Celsius. At the same time, the temperature below the surface (80 mm) was recorded at minus 10 degrees. Similarly, a temperature of 60 degrees was recorded about 20 mm above the surface.

About Chandrayaan-3

- Chandrayaan-3 is a Lunar Exploration Mission of the Indian Space Research Organization (ISRO). It was launched using the LVM3 rocket system.
- It is the third mission in the Chandrayaan series after Chandrayaan-1 and Chandrayaan-2. With the success of this latest mission, Indian scientists have demonstrated the full capability of a safe landing and roving of a rover on the lunar surface.
- Chandrayaan-3 consisted of a lander and a rover configuration. The lander that soft landed on the moon has been named 'Vikram' and the rover that is moving on the lunar surface has been named 'Pragyan'.

LAUNCH VEHICLE MARK 3

- Launch Vehicle Mark-III (LVM3), is a three-stage medium-lift launch vehicle developed by ISRO.
- Earlier known as 'GSLV Mk-III', it is the most powerful rocket in the ISRO's stable.
- The 3-stages include two solid boosters S200 strap-ons, and a core stage (consisting of an L110 liquid stage and a C25 cryogenic stage). This Launch Vehicle uses cryogenic engine (CE20).
- It can carry a payload of up to 8,000 kilograms to a low-Earth orbit (LEO) and about 4,000 kilograms of payload to a geostationary transfer orbit (GTO).

Mission Objectives

The mission objectives of the Chandrayaan-3 mission was
- to perform a safe and soft landing on the lunar surface;
- to demonstrate roving on the Moon; and
- to conduct in-situ scientific experiments.

Modules & Payloads

Modules

Three modules were included in the Chandrayaan-3 mission:
   (i) Propulsion Module (PM)
   (ii) Lander Module (LM)
   (iii) Rover
- The main function of the Propulsion Module (PM) was to propel the Lander Module (LM) to the final 100 km

15th BRICS Summit
Leveraging Collective Power

> *Collaboration among the BRICS nations, since the inception of the grouping, has led to a significant impact on global governance, efforts to democratise international relations, and economic development. BRICS continues to take impressive steps in developing and broadening cooperation, as has been witnessed in the grouping's recent decision to add six new members.*

■ **Chandrakant Singh**

On 22-24 August, 2023, Indian Prime Minister visited Johannesburg, South Africa, to attend the 15th BRICS (Brazil, Russia, India, China, and South Africa) Summit. This was the first in-person BRICS Summit since 2019. The theme for Summit was "BRICS and Africa: Partnership for Mutually Accelerated Growth, Sustainable Development and Inclusive Multilateralism".

BRICS plays a critical role in shaping the global economic policy and promoting financial stability, accounting for 17% of global trade and one-third of global GDP. The evolution of the grouping assumes significance in the current context of a changing world order.

Key Outcomes of the Summit

Reaffirming Multilateralism and Advocating Reform

- The BRICS leaders have released a collective statement underscoring their dedication to upholding multilateralism, international legal norms, and the pursuit of sustainable development.
- Additionally, they have voiced their endorsement for the overhaul of global entities such as the United Nations, with the aim of enhancing their inclusivity and capacity to address the concerns of developing nations.

Expanding Membership and Influence

The BRICS leaders have embraced a broader approach to membership.

- **Phase One of Expansion:** Argentina, Egypt, Ethiopia, Iran, Saudi Arabia, and the UAE have been formally invited to join the BRICS grouping, with their membership slated to commence on January 1, 2024.
- **An Overwhelming Interest:** More than 40 nations have expressed a keen interest in becoming part of BRICS.
- **Motivations for BRICS Expansion**
  - **China's Strategic Global Influence:** China's strategic vision for increasing its global influence serves as a driving force behind the expansion.
  - **Broader Engagement among Nations:** The desire for a wider and more inclusive engagement among nations with shared goals is another motivating factor.
  - **Limited Alternatives in Other Groups:** Limited alternatives in existing international organizations have prompted countries to seek membership in BRICS.
  - **Anti-Western Sentiment and Global South Unity:** A sentiment against Western dominance and a desire for greater unity among nations from the Global South also contribute to the expansion effort.

Common Currency Prospect

- The BRICS leaders have reached a consensus to investigate the potential establishment of a unified currency designed for facilitating trade and investment within the BRICS member nations.
- They have delegated the responsibility of examining the viability and advantages of such a currency to their finance ministers and central bank governors.
- The intended outcome is to potentially diminish their reliance on the US dollar and other dominant global currencies.

Addressing Regional and Global Concerns

- The BRICS leaders engaged in comprehensive discussions concerning a range of regional and global issues. These included the Covid-19 pandemic, climate change, counterterrorism efforts, cybersecurity, energy security, as well as matters concerning trade and investment.
- In unison, they advocated for fair and equitable access to vaccines and essential medical resources for all nations while committing to strengthen their collaborative efforts in the fields of health research and innovation.

BRICS EXPANSION

- The principles set forth in the BRICS Sanya Declaration of 2011 are aimed at increasing engagement and cooperation with non-BRICS countries, in particular developing countries, and to enhance the voice of the Global South in international affairs.
- The Beijing Declaration adopted at the 14th BRICS Summit in 2022 paved the way for membership expansion. China had proposed the "BRICS Plus" expansion plan in 2017.

BRICS as a Platform for Global South

◆ **Collective Voice:** BRICS represents a collective voice for the Global South, advocating for their interests on the global stage. By addressing common concerns and issues, BRICS members work together to influence international discourse and policy.

◆ **Development Financing:** The BRICS-led New Development Bank (NDB) provides financial assistance to developing countries for sustainable development projects. This offers an alternative to traditional Western-dominated development banks.

◆ **South-South Cooperation:** BRICS promotes South-South cooperation, facilitating collaboration among developing countries in various areas such as trade, technology, and agriculture, fostering self-reliance and shared growth.

◆ **Global Governance Reform:** BRICS seeks reform in global governance institutions to make them more representative and equitable, reflecting the interests of the Global South. This is crucial for a fairer international order.

◆ **Advocacy for Multipolarity:** BRICS advocates for a multipolar world order, where power is more evenly distributed among nations, challenging the dominance of Western powers and promoting a more diverse and balanced global landscape.

Way Forward

◆ **Unilateral Coercive Measures:** BRICS should jointly condemn and advocate against unilateral coercive measures, promote multilateral dispute resolution mechanisms, and explore alternative trade and financial systems to mitigate disruptions.

◆ **Global Governance Reform:** BRICS nations should continue to lobby for comprehensive reforms in global governance institutions. They can form coalitions with like-minded countries and propose specific reforms to make international institutions more representative and accountable.

◆ **Development Assistance:** BRICS countries can pool resources and expertise to ensure efficient development assistance, emphasizing project effectiveness, local ownership, and transparency in aid delivery.

◆ **Sustainable Development:** Establish working groups to facilitate the integrated implementation of SDGs, focusing on sharing best practices, technology transfer, and innovative financing mechanisms for sustainable development.

◆ **Climate Change:** Collaborate on climate action plans, encourage technology transfer, and support climate finance initiatives, ensuring that all BRICS nations contribute to global climate goals based on their respective capabilities.

◆ **Economic Cooperation:** Develop a comprehensive BRICS economic strategy that includes harmonizing trade policies, promoting investment, and addressing protectionism, with a focus on inclusive economic growth.

◆ **Institutional Development:** Establish a BRICS research institution focused on policy solutions tailored to the unique needs of developing countries, with clear objectives and a mandate agreed upon by all members.

◆ **Human Rights and Fundamental Freedoms:** Encourage open dialogues on human rights issues, share best practices, and emphasize the importance of cultural context in addressing these concerns while respecting international human rights standards.

◆ **Peace and Conflict Resolution:** BRICS should actively engage in diplomatic efforts, conflict prevention, and mediation in global conflicts. They can leverage their combined diplomatic influence to seek peaceful resolutions.

◆ **Public Health Governance:** Strengthen the BRICS Vaccine Research and Development Center, develop a robust early warning mechanism for infectious diseases, and work together to ensure equitable access to vaccines and critical medical supplies.

Conclusion

BRICS has emerged as a significant force in shaping the global landscape, advocating for the interests of the Global South, and seeking to address pressing challenges facing the world today. BRICS continues to evolve as a powerful alliance that seeks to address the challenges of an ever-changing world. Its commitment to multilateralism, cooperation on global issues, and expansion efforts reflect its ambition to create a more equitable and inclusive global order, benefitting not only its member nations but also the broader Global South. As BRICS moves forward, it has the potential to shape the future of international relations and foster a more balanced, sustainable, and prosperous world. ■■

Circular Economy in India
Critical Imperative to Ensure a Sustainable Future

A circular economy involves reusing products, rather than scrapping them and then extracting new resources. In a circular economic model, all forms of waste are returned to the economy or used more efficiently. Such an approach offers a way to not only protect the environment, but use natural resources more wisely, develop new sectors, create jobs and develop new capabilities.

Further, the shift to a circular economy goes beyond recycling and reusing materials. It is a call to evaluate the environmental impact of products and their components from the initial concept stage through to end-use. In a circular economy, waste streams are eradicated with true, regenerative design.

■ **Sharmila Senthil Kumar**

In July 2023, India's Union Minister of Environment, Forest and Climate Change launched the Resource Efficiency Circular Economy Industry Coalition (RECEIC) on the sidelines of the 4th G20 Environment and Climate Sustainability Working Group (ECSWG) and Environment and Climate Ministers' Meeting in Chennai.

RECEIC is an industry-led initiative with a global focus on promoting resource efficiency and circular economy practices. Designed as an autonomous body, the coalition is projected to continue operations beyond India's G20 tenure, thereby facilitating a sustainable environmental impact.

The Mission of RECEIC is to facilitate and foster greater company-to-company collaboration; build advanced capabilities across sectors and value chains; bring learning from diverse and global experiences of the coalition members, and unlock on-ground private sector action to enhance resource efficiency and accelerate circular economy transition.

The coalition is structured around the three guiding pillars of partnerships for impact, technology cooperation and finance for scale. It will also aim to contribute towards progress on key global goals and priorities set by the G20 and other international fora.

The extraction and processing of natural resources causes half of global emissions and over 90% of biodiversity loss. The shift to a circular economy is therefore crucial to achieving the UN's Sustainable Development Goals and the Paris Agreement goal of limiting global temperature rise to as close as possible to 1.5 degrees Celsius above pre-industrial times.

The transition towards circular economy from a linear economy through improved resource efficiency holds significant potential. Not only does a circular approach to production and consumption reduce carbon emissions and pollution, it also boosts innovation and increases competitiveness. It is, indeed, a paradigm shift from our current take-make-waste economy to a resource economy which aims to redefine growth, focusing on positive, society-wide benefits.

About Circular Economy

Circular economy is a system where materials never become waste and nature is regenerated. In a circular economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting.

- This approach can help tackle climate change and other global challenges like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources.

Circular Economy is based on three principles:

(i) **Eliminating Waste and Pollution:** The mismanagement of waste not only imperils human health and local ecosystems, but also exacerbates the climate crisis to alarming degrees. According to the World Bank, global waste is projected to increase by 70 per cent from a 2018 baseline by 2050 if companies do not divert from the "take-make-waste" linear economy approach.

(ii) **Circulating Products and Materials:** In order to let the circular economy become self-sufficient, it is not just enough to eliminate waste from the production process. Recovering and restoring products, components and materials for efficient reuse is an essential aspect of the circularity principle.

(iii) **Regenerate Nature:** Businesses need to focus on going beyond reducing their harmful impacts on the environment and should actively try to restore the health of our planet. This is the third and final cog of the closed loop system that is circular economy, actively feeding natural resources back into the planet.

- Circular economy departs from the traditional, linear economic model, which is based on a take-make-consume-throw away pattern. This model relies on large quantities of cheap, easily accessible materials and energy.

inFocus

- The Digital Personal Data Protection Act, 2023
- CAG Report on AB-PMJAY
- Amitabh Kant Committee Report
- Preserving the Amazon Rainforest : A Call to Action

The Digital Personal Data Protection Act, 2023

On 11th August 2023, the President of India gave assent to the "Digital Personal Data Protection Bill, 2023" following its approval from both houses of the Indian Parliament.

- The enactment of the Act comes 6 years after Justice K.S. Puttaswamy vs. Union of India, a landmark case in which the Supreme Court of India recognized the fundamental right to privacy in India, including informational privacy, within the "right to life" provision of India's Constitution.

Objectives

- Establish a seamless transition to data protection regulations, minimizing disruptions while necessitating vital changes in data processing practices.
- Enhance the quality of life and the business environment, fostering a conducive atmosphere for both individuals and enterprises.
- Propel India's digital economy and innovation ecosystem, empowering growth and technological advancement.

Need for Data Regulation in India

- India's thriving startup ecosystem, ranked as the third-largest globally, is marked by a multitude of innovative companies harnessing data-driven technologies to fuel progress and advancement. As this expansion accelerates, the necessity for strong data regulation becomes increasingly apparent.
- Often referred to as the "new oil" powering modern economies and technologies, data play a pivotal role in driving innovation and competitiveness.
- Striking a delicate balance between capitalizing on the advantages of data-driven technologies and preserving the privacy and security of individuals' personal data is essential.
- Effective data regulation establishes a comprehensive framework that safeguards against data misuse, breaches, and unauthorized access, creating a secure and reliable digital environment.
- By fostering trust and ensuring responsible data handling practices, this regulatory approach reinforces the foundation for a flourishing and sustainable digital ecosystem.

Salient Features

Seven Guiding Principles

1. **Consent, Lawfulness, and Transparency:** Personal data must be used with explicit consent, lawfully, and in a transparent manner.
2. **Purpose Limitation:** Data can only be used for the specific purpose for which consent was obtained.
3. **Data Minimization**: Collection of only necessary personal data to serve the designated purpose.
4. **Data Accuracy:** Ensuring data correctness and updates.
5. **Storage Limitation:** Storing data only for the required period.
6. **Reasonable Security Safeguards:** Implementing measures for data security.
7. **Accountability:** Holding entities responsible for data breaches through adjudication and penalties

Data Principal

- Under the Act, a 'data principal' is the individual to whom the personal data relates and is akin to the term 'data subject' used in other global data protection legislation.
- This definition stretches to parents or lawful guardians in cases concerning a child (an individual under the age of 18) and lawful guardians acting on behalf of individuals with disabilities.

Applicability

- The Act applies to the processing of digital personal data within India where such data is: (i) collected online or (ii) collected offline and is digitised.
- It will also apply to the processing of personal data outside India if it is for offering goods or services in India.
- Personal data is defined as any data about an individual who is identifiable by or in relation to such data. Processing has been defined as wholly or partially automated operation or set of operations performed on digital personal data. It includes collection, storage, use, and sharing.

Consent

- Personal data may be processed only for a lawful purpose after obtaining the consent of the individual.

INDIA WATCH

Polity & Governance
- Advisory Board on Banking and Financial Frauds
- National Consumer Disputes Redressal Commission
- Cauvery Water Dispute
- National Media Campaign of Department of Land Resources
- 9th CPA India Region Conference

- The Bhartiya Sakshya Bill, 2023
- The Bharatiya Nyaya Sanhita Bill, 2023
- The Bharatiya Nagarik Suraksha Sanhita Bill, 2023

Judiciary
- Supreme Court unveils Handbook to Eliminate Gender Stereotypes

Plans/Policies
- India Smart Cities Awards Contest (ISAC) 2022
- Reforms towards Digital Transformation & Customer Protection

Reports
- CAG's Audit Report on Regional Connectivity Scheme-UDAN
- Specific Aspects of Election Process and their Reform

Polity & Governance

Advisory Board on Banking and Financial Frauds (ABBFF)

On 21st August, 2023, the Central Vigilance Commission (CVC) reconstituted the Advisory Board on Banking and Financial Frauds (ABBFF). The reconstituted APBFF will be chaired by Suresh N Patel, former Central Vigilance Commissioner.

- ABBFF **conducts the first level examination of bank frauds** before recommendations or references are made to investigate by agencies such as the Central Bureau of Investigation (CBI).
- It has been **empowered to examine the role of officials/ whole-time directors** (including ex-officials/ ex-whole-time directors) in public sector banks, public sector insurance companies; and public sector financial institutions in case of frauds amounting to Rs. 3 crore and above.
- It has also been empowered to **periodically carry out frauds analysis in the financial system** and give inputs, if any, for policy formulation related to the frauds, to RBI and CVC.
- The CVC or the Central Bureau of Investigation (CBI) can **also refer any case or technical matter** to the board for its advice.
- The board can also **give inputs for policy formulation** related to fraud to the Reserve Bank of India and the Central Vigilance Commission.

*Central Vigilance Commission was set up in **1964** on the recommendations of the Committee on Prevention of Corruption, headed by **K. Santhanam**. It is a **statutory body** governed by the Central Vigilance Commission Act 2003. The CVC is not controlled by any Ministry/Department. It is responsible to the Parliament.*

Its mandate is to inquire into offences alleged to have been committed under the Prevention of Corruption Act, 1988 by certain categories of public servants of the Central Government, Government Companies, societies and local authorities owned or controlled by Central Government.

National Consumer Disputes Redressal Commission

On 23rd August, 2023, the National Consumer Disputes Redressal Commission (NCDRC) dismissed an appeal filed by Cloudtail India Pvt. Ltd. challenging the order passed by the Central Consumer Protection Authority (CCPA) with regard to the violation of the rights of consumers by the company.

- NCDR is a **quasi-judicial commission** in India which was set up in 1988 under the Consumer Protection Act of 1986. Its head office is in New Delhi.
- The Commission is **headed by a sitting or a retired Judge of the Supreme Court of India** or a **sitting or a retired Chief Justice of High Court**.
- Section 21 of Consumer Protection Act, 1986 posits that the National Commission shall have **jurisdiction to entertain a complaint valued more than two crore** and also have Appellate and Revisional jurisdiction from the orders of State Commissions or the District fora as the case may be.
- **Section 23 of Consumer Protection Act, 1986,** provides that any person aggrieved by an order of NCDRC, may prefer an Appeal against such order to Supreme Court of India within a period of 30 days.

*Central Consumer Protection Authority (CCPA) is a regulatory authority set up under **Section 10(1) of the Consumer Protection Act, 2019.** It aims to protect the rights of the consumer by cracking down on unfair trade practices, and false and misleading advertisements that are detrimental to the interests of the public and consumers.*

*It has a **Chief Commissioner** as head, and **only two other commissioners as members** — one of whom will deal with matters relating to goods while the other will look into cases relating to services. The CCPA will have an **Investigation Wing** that will be headed by a Director General.*

SOCIETY WATCH

Indian Society

Supreme Court Judgment on Inheritance

On 1st September, 2023, the Supreme Court (SC) held that a child born of a void or voidable marriage can inherit the parent's share in a joint Hindu family property governed by the Mitakshara law.

The verdict was passed on a **petition challenging the 2011 judgment** of a two-Judge Bench in Revanasiddappa vs. Mallikarjun case, which held that children born out of void/voidable marriages were entitled to inherit their parents' properties, whether self-acquired or ancestral.

- The top court held that the children from such 'void or voidable' marriages **will not be able to inherit** the ancestral properties of the coparceners other than their parents under the Hindu law.
- **Section 16 of the Hindu Marriage Act, 1955** has statutorily conferred legitimacy to children born out of void or voidable marriages.
- In fact, Chief Justice of India pointed out that **Section 16(3)** stipulates that children from void and voidable marriages would have a right to their parents' property.
- The court also noted that after the enactment of the **Hindu Succession (Amendment) Act, 2005**, the share of a deceased person in a joint Hindu family governed by **Mitakashara law** can be devolved to his heirs by testamentary or intestate succession.
- Further, the SC made clear that a child born from a void or voidable marriage (under **section 11 and section 12 of the Hindu Marriage Act, 1955,** respectively) does not ispo facto become a coparcener (meaning joint heir in Hindu law) in the Hindu Mitakshara joint family.

*A **voidable marriage** is a marriage that is initially valid but has certain defects or conditions that can lead to its annulment if one of the parties chooses to do so. A **void marriage** is one that is considered invalid from the very beginning as if it never existed in the eyes of the law.*

*The **Mitakshara school of Hindu law** codified as the **Hindu Succession Act, 1956** governed succession and inheritance of property but only recognised males as legal heirs. The law applied to everyone who is not a Muslim, Christian, Parsi or Jew by religion. Mitakashara law of succession governing Hindu Undivided Families **applies to the whole of India except West Bengal and Assam.***

Self-respect Marriages

On 28th August, 2023, the Supreme Court (SC) observed that there is no blanket ban on advocates solemnising "self-respect" marriages under Section 7(A) of the Hindu Marriage Act, 1955.

The SC set aside a **2014 ruling of the Madras High Court** holding that marriages performed by the advocates are not valid and that self-respect marriages cannot be solemnised in secrecy.

- In 1968, the **Hindu Marriage (Tamil Nadu Amendment) Act, 1967**, received the President's approval and became the law.
- This amendment modified the Hindu Marriage Act by **inserting Section 7(A)** into it. However, it **extended only to the state of Tamil Nadu.**
- **Section 7(A) deals with the special provision on "self-respect and secular marriages".**
- It legally recognised "any marriage between any two Hindus", which can be referred to as **"Suyamariyathai" or "Seerthiruththa marriage"** or by any other name.
- Such marriages are **solemnized in the presence of relatives**, friends, or other persons, with parties declaring

Heritage
Art & Culture

Art & Culture

- India's Cultural Gifts to BRICS Leaders
- Chikri Wood Craft from J&K receives GI Tag
- Shinon Meeras Museum

- UNESCO World Heritage Sites
- UNESCO List of World Heritage in Danger
- Yelagiri Hut Shelters
- Mylara Cult
- Seethakali Folk Art
- Megalithic Hat Stones Unearthed in Kerala
- Prime Ministers' Museum and Library Society

Plans/Policies

- Adopt a Heritage 2.0 Programme
- Kashi Culture Pathway
- One District One Product Wall

Personality

- President Hailed Women Freedom Fighters

▸ Art & Culture

India's Cultural Gifts to BRICS Leaders

Recently, during the 15th BRICS summit hosted by South Africa in Johannesburg, Indian Prime Minister presented special gifts to the organization's leaders from different parts of India.

Bidari Surahi

- Indian PM gifted Bidri a pair of 'Surahi' to South African President Cyril Ramaphosa.
- Bidriware is a metal handicraft from the city of Bidar in Karnataka. It was developed in the 14th century C.E. during the rule of the **Bahmani Sultans**.
- The term "bidriware" originates from the township of Bidar, which is still the chief center of production.
- Cast from an alloy of **zinc, copper, and other non-ferrous metals**, they feature elegant patterns intricately engraved and inlaid with pure silver wire.
- The distinctive black hue, achieved by soaking the castings in a unique solution mixed with soil from Bidar Fort, contrasts strikingly with the silver inlay, creating a visually captivating effect.
- Bidri metal work, classified into four types – Teh nashin, Aftabi, Tarkashi, Zar buland – often draws inspiration from nature, folklore, and geometric patterns.
- This native art form has obtained Geographical Indications (GI) registry on 03/01/2006.

Nagaland Shawl

- It was gifted to Dr. Tshepo Motsepe, the First Lady of South Africa.
- Woven by **Naga tribes**, these shawls are renowned for their vibrant colours, intricate designs, and the use of traditional weaving techniques passed down through generations.

- Naga shawl are made with **narrow loin looms**. The shawls are woven with a rayon weft and weaving is done mostly with cotton.
- The shawl is beautified with figures woven on the centre such as elephants, tigers, cocks and circles, representing human heads.
- Naga Shawls are mostly made of **red and black wool.** These shawls are famous for their unique designs and motifs.
- They have distinctive patterns with traditional design motifs including simple clean lines, stripes, squares and bands.
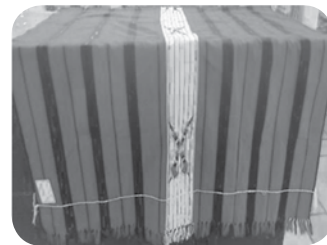
Gond Painting

- It was gifted to the Brazilian President Lula da Silva.
- Gond Painting is a famous folk art of the **Gond tribal community** of Central India.
- It is done to preserve and communicate the culture of the Gond tribal community.
- Gond tribes are **highly interlinked with nature**, and this appears in their paintings too.
- They include animals, the mahua tree, mythological stories, Hindu gods, local deities and folktales, etc.
- The artist uses his distinctive pattern and style to fill the images. These style signatures are used in collages to make a complete picture, such as **dots, fine lines, curved lines, dashes, fish scales, etc.**

ECONOMY WATCH

Agriculture
- 'A-HELP' Program
- Hydroponics

Banking & Finance
- Non-Deliverable Forwards (NDF)
- Compulsorily Convertible Debentures (CCDs)
- Incremental Cash Reserve Ratio (ICRR)
- Public Tech Platform for Frictionless Credit

- RBI Revises Guidelines for Infrastructure Debt Funds (IDF-NBFCs)
- Surety Insurance Bond
- RBI Launches UDGAM Portal
- Floating Interest Rate

Plans/Policies
- Mines and Minerals (Development and Regulation) Amendment Act, 2023
- Number of Jan Dhan Accounts Crosses 50 Crore
- Direct Incentive Disbursement Program
- Investment Attractiveness of Indian States
- North East Special Infrastructure Development Scheme
- Investor Education and Protection Fund

Infrastructure
- Bharat New Car Assessment Program

Reports/Surveys
- Forward Looking Surveys

Agriculture

'A-HELP' Program

On 14th August, 2023, the Department of Animal Husbandry and Dairying launched the 'A-HELP' (Accredited Agent for Health and Extension of Livestock Production) program in Gujarat.

The program aims to **empower women** by engaging them as trained agents who contribute significantly to disease control, artificial insemination under the Rashtriya Gokul Mission (RGM).

- The initiative is part of the **Pashudhan Jagriti Abhiyaan** which aims to **empower farmers and improve livestock** health, disease management, and animal infertility concerns.
- The Pashudhan Jagrati Abhiyaan includes **workshops, awareness camps, seminars, and practical training sessions** conducted by State Veterinary Universities in collaboration with State Animal Husbandry Departments.
- Collaborations with **experts from Indian Immunological Ltd.** enhance the initiative's efficacy by providing essential nutritional supplements, mineral mixtures, dewormers, and medicines to farmers.
- This holistic approach combines knowledge and tangible resources for the betterment of livestock.
- The 'A-HELP' program exemplifies the **integration of women's power** in the livestock sector. It aligns with the vision of the Prime Minister for socio-economic progress and empowers women while advancing the livestock sector.

Pashudhan Jagriti Abhiyan is being led by the Department of Animal Husbandry and Dairying (DoAH&D). In this campaign, efforts are made to effectively transform the 112 most under-developed districts across the country by organising village-level camps to spread awareness on entrepreneurship.

*Rashtriya Gokul Mission (RGM) is being implemented for the development and conservation of indigenous bovine breeds since December 2014. It is continued under the umbrella scheme Rashtriya Pashudhan Vikas Yojana from 2021 to 2026. Main objective is to **promote indigenous cattle & buffalo** rearing and conservation in a scientific and holistic manner.*

Hydroponics

Recently, ICAR-Indian Institute of Horticulture Research, Bengaluru (IIHR) has developed a variant of hydroponics - "Cocoponics".

Cocoponics refers to the **soilless production** of vegetables using cocopeat as a substrate.

- Hydroponics is a **type of horticulture** and a **subset of hydroculture** which involves growing plants, usually crops or medicinal plants, without soil, by using water-based mineral nutrient solutions.
- The nutrients used in hydroponic systems can come from many different **organic or inorganic sources**, including fish excrement, purchased chemical fertilizers, or artificial nutrient solutions.
- At present, this technology is mostly confined to **urban farming, rooftop gardening** and **commercial farming.**
- It significantly **reduces water usage** compared to traditional soil-based farming by delivering water directly to plant roots, minimizing wastage.
- Plants in hydroponic systems often **grow faster than those in soil** due to consistent access to nutrients and ideal growing conditions.
- It **enables year-round cultivation** regardless of external weather conditions, ensuring a continuous supply of crops.
- Adoption of hydroponics can help **achieve food security** and make nations self-reliant through sustainable practices.

SCIENCE & TECHNOLOGY

Space Science

Aditya-L1 Mission Successfully Launched

On 2nd September, 2023, India celebrated a significant milestone as the Aditya-L1 solar mission was successfully launched from Sriharikota, marking the nation's first step toward achieving its solar mission goals.

- The mission aims to **explore the Sun and its corona.**
- The **major science objectives** of the mission are:
  - Understanding the Coronal Heating and Solar Wind Acceleration.
  - Understanding initiation of Coronal Mass Ejection (CME), flares and near-earth space weather.
  - To understand coupling and dynamics of the solar atmosphere.
  - To understand solar wind distribution and temperature anisotropy.
- In four months, the spacecraft will be **placed in its Halo orbit, L1**, which is considered closest to the Sun, where its seven payloads will study various aspects of the Sun.
- According to scientists, there are **five Lagrange points** (or parking areas) between the Earth and the Sun where a small object tends to stay if put there.
- These points in space can be used by spacecraft to remain there with **reduced fuel consumption.**
- The Sun emits a diverse range of radiations and particles, but Earth's protective atmosphere hinders ground-based observations.
- Solar storms have the potential to damage human technologies, including satellites and communication systems.
- Therefore, studying the Sun from space is essential for understanding solar phenomena and interplanetary dynamics **beyond Earth's protective shield.**
- The mission seeks to observe the Sun 24x7, a task not feasible from Earth's orbit due to frequent obstructions.

- Aditya L1 is equipped with two major instruments, **SUIT (Solar Ultraviolet Imaging Telescope) and VELC (Visible Emission Line Coronagraph),** along with five smaller instruments.
- SUIT captures **continuous ultraviolet images** of the Sun, crucial for studying the Sun's corona.
- VELC is a spectrograph focusing on the Sun's corona, extending beyond the visible disk.

Aditya L1's observations will aid in understanding the link between solar surface activities and high-energy particle emissions during solar storms.

Perseid Meteor Shower Enchants Skywatchers

The globally anticipated Perseid meteor shower illuminated the night skies in August, captivating stargazers eager to witness the spectacle of shooting stars.

- The Perseids are one of the **biggest meteor showers** and occur every year in the **late summer.**
- In 2023, the Earth entered the Perseids debris field on July 17. The shower continued through August 24 with a **peak on 12th and 13th August.**
- It is called a "Perseid" meteor shower because the meteors appear to originate from the **constellation of Perseus** - named after a figure from Greek mythology.
- Meteor showers happen when the **debris left behind by comets or asteroids** burns up in Earth's atmosphere.
- The phenomenon brings up to **100 meteors an hour**, as the Earth slams into the debris left behind from comet **109P/Swift-Tuttle.**
- As the debris hits the Earth's atmosphere, it burns up, resulting in the **bright flashes known as shooting stars**, which can be seen with the naked eye.

The Perseids can be observed from anywhere on Earth, but the best views are possible in the **Northern Hemisphere**, where the constellation Perseus is visible.

ECOLOGY & ENVIRONMENT

Sustainable Development
- India's Greenhouse Emissions Drop 33%
- Yamuna River's Water Quality Shows Improvement
- Japan Releases Nuclear Wastewater into Pacific Ocean

Biodiversity
- India's Tiger Population Distribution Raises Conservation Concerns
- Italy Allocates Funds for Invasive Crab

Climate Change
- Antarctic Sea Ice Hits Record Low
- Hawaii Devastated by Large-Scale Wildfires
- Rising Waves Signal Climate Impact
- Great Barrier Reef: Serious Threat Remains
- Deterioration of Gulf of Eilat Coral Reefs

Disaster Management
- China's "Sponge Cities" and Flood Vulnerability
- CWC Launches 'Floodwatch' App for Advanced Flood Forecasting

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Sustainable Development

India's Greenhouse Emissions Drop 33%

According to a latest assessment made for submission to the United Nations, India's greenhouse gas emissions have fallen by 33% in 14 years, surpassing expectations, due to increased renewable energy generation and expanded forest cover.

- The reduction in emissions intensity **aligns with India's commitment to the UN Convention on Climate Change** to decrease emissions intensity by 45% from the 2005 level by 2030.
- India's emissions intensity fell by 33% from 2005 to 2019, indicating progress in decoupling economic growth from greenhouse gas emissions.
- India's average rate of reduction in emissions increased to 3% annually in the period 2016-2019, from just about 1.5% in the period 2014-2016.
- The growth of **non-fossil power generation and initiatives targeting emissions** in industrial, automotive, and energy sectors contributed to the reduction.
- As of 2019, forests and trees covered 24.56% of India's geographical area. The expansion of forest cover and promotion of green hydrogen production further aided emissions reduction.
- Non-fossil fuel-based power, including hydro, nuclear, and renewables, constituted 25.3% of India's total power generation.

Developing countries, including India, emphasize the need for developed nations to curb their extensive fossil fuel consumption. The progress in emissions reduction should help India resist international pressure to abandon coal usage.

Yamuna River's Water Quality Shows Improvement

Recently, heavy rainfall in the catchment areas and increased water flow due to spate conditions led to improved water quality in the Yamuna River. However, water quality standards are still not met at several points.

- A **Delhi Pollution Control Committee (DPCC)** report reveals that despite improved conditions, the Yamuna River's water quality falls short of desired levels at eight testing points in Delhi.
- **Dissolved oxygen levels,** a critical indicator of water quality, have increased at all eight points, but remain below the required levels.
- The levels of dissolved oxygen downstream of Wazirabad are still below the required standards set by the Central Pollution Control Board (CPCB).
- Despite increased water flow, other water quality parameters such as **biochemical oxygen demand (BOD) and faecal coliform levels** do not meet standards.
- The BOD levels remain **above the standard of 3 mg/litre** at seven of the eight sampling points.
- The faecal coliform levels have decreased from previous months but still exceed the permissible limit.

Rejuvenation efforts could lead to the resurgence of biotic communities like phytoplankton, zooplankton, aquatic plants, fish, and molluscs in the river.

Japan Releases Nuclear Wastewater into Pacific Ocean

On 24ᵗʰ August, 2023, Japan initiated the release of treated radioactive wastewater from the damaged Fukushima power plant into the Pacific Ocean, sparking debates about safety and environmental impact.

- **International Atomic Energy Agency** (IAEA), UN's atomic energy regulator, said the water will have "negligible" radiological impact on people and the environment.
- Protests arose in Japan and South Korea due to the release.
- The water has been stored in over 1,000 tanks after the **2011 earthquake and tsunami** caused a nuclear meltdown.

International Relations
- India and Greece Elevate Ties to Strategic Partnership
- G20 Trade and Investment Ministers' Meeting
- India and China Agree to Resolve LAC Issues

- Trinidad and Tobago Join India Stack Collaboration
- India and Vietnam Discuss Bilateral Trade Challenges
- Cabinet Approves India-Suriname MoU on Medicines Cooperation

World Issues
- Russia Targets Ukrainian Grain Route along Danube
- Iran and Saudi Arabia Hold Diplomatic Talks
- African Union and European Union Respond to Niger's Military Coup
- Ethiopia's Amhara Region Declares Emergency
- Disputed Gas Field in Middle East Raises Regional Tensions

International Relations

India and Greece Elevate Ties to Strategic Partnership

On 25th August, 2023, India's Prime Minister visited Greece. During this Prime Ministerial visit to Greece after four decades, India and Greece agreed to usher in a new era of collaboration.

- During bilateral talks in Athens, Indian Prime Minister emphasized the enduring warmth and depth of relations between the two countries despite the extended gap.
- Greece also conferred the **Grand Cross of the Order of Honour** on Prime Minister Narendra Modi.
- Both leaders agreed to elevate the India-Greece partnership to **'strategic' level.**
- Both countries are poised to **expand cooperation across sectors** including defence and security, infrastructure, agriculture, education, emerging technologies, and skill development.
- Both leaders expressed readiness to confront international challenges together, emphasizing adherence to the **UN Charter** amid global turmoil and conflicts, including the Ukraine crisis.
- The two leaders resolved to strengthen defence industrial collaboration, enhance maritime security, and foster compliance with the Convention on the Law of the Sea.

As a natural progression of ties, a Migration and Mobility Partnership Agreement is set to be inked, facilitating skilled workforce migration between India and Greece.

G20 Trade and Investment Ministers' Meeting

On 24-25 August, 2023, the G20 Trade and Investment Ministers' Meeting was held in in Jaipur, Rajasthan. The meeting concluded with the adoption of key principles and action-oriented measures to enhance global trade and investment.

- During the meeting, the **Jaipur Call for Action** was issued to enhance information access for MSMEs, addressing informational gaps.
- It will help **promote industry, MSME sector, upgrade the global trade help desk**, and bridge information gaps for MSMEs to help them expand their business and trade.
- There were five priorities before the Trade and Investment Working Group — trade for growth and prosperity, trade and resilient global value chains, integrating MSMEs in global trade, logistics for trade and WTO reforms.
- The G20 Ministers endorsed the **G20 Generic Mapping Framework for Global Value Chains** (GVCs), with a specific focus on aspects such as data, analysis, and the resilience of GVCs.
- India is seeking **re-establishment of the dysfunctional dispute resolution mechanism** under the World Trade Organisation (WTO) based on the principle of 'common but differentiated responsibility' along with a push towards consensus-based decision making G20 Trade and Investment Ministers' meeting under India's Presidency concludes in Jaipur.
- Under the WTO, **countries can appeal in the appellate body** to adjudicate disputes.
- The appellate body at the WTO stopped functioning from December 2019, but the panels are still working.
- Several countries including the US have been pushing for reforms in the WTO.

There was a consensus among the G20 participants to support the sharing of best practices related to Mutual Recognition Agreements (MRAs) for professional services, aiming to enhance international recognition of technical qualifications.

India and China Agree to Resolve LAC Issues

On August 13-14, 2023, the 19th round of India-China Corps Commander Level Meeting was held. During the meeting, India and China jointly announced their commitment to resolve outstanding matters along the Line of Actual Control

STATE WATCH

Meghalaya

CM Solar Mission

- It aims to bolster resilience, autonomy, and environmentally sustainable progress within the state.
- The mission, backed by an investment of Rs 500 crore from the government over the next five years, is set to transform the state's energy landscape and contribute to its sustainable development.
- The state government has allocated an annual investment of Rs 100 crore to kickstart the solar mission.
- Additionally, plans are underway to attract diverse funding partners, including contributions from corporate social responsibility, carbon credits, and international organizations sharing the vision of sustainable energy.
- The Mission will help to bridge this gap and create a more reliable and sustainable energy ecosystem.

Gujarat

'Sinh Suchna' App

- On the Occassion of World Lion Day (10th August 2023), Chief Minister of Gujarat launched the 'Sinh Suchna' web app which will provide exact information regarding the location and movement of the lions in real-time.
- The app empowers individuals to directly report lion sightings to the forest department.
- This innovative approach facilitates real-time tracking and swift conflict resolution.
- The event was also marked by the unveiling of a 'Lion Anthem' and the release of two books celebrating Gujarat's natural heritage. Titled "The King of the Jungle – The Asiatic Lions of Gir" and "Hu Gujarat no Sinh," these publications pay homage to the state's rich biodiversity.
- The lion population in Gujarat has now grown to 674, spanning an area of 30,000 square kilometers.

Kerala

Assembly Approves Resolution to Rename State as 'Keralam'

- Aimed at embracing its cultural and linguistic heritage, the Kerala Legislative Assembly has passed a resolution requesting the Central government to change the name of the state from 'Kerala' to 'Keralam'.
- In Malayalam, the state was denoted as 'Keralam', but in alternative languages, it is called as 'Kerala'.
- The term 'Keralam' traces its roots to the fusion of two Malayalam words – "Kera," symbolizing coconut, and "Alam" denoting land.
- Thus, 'Keralam' intricately encases the essence of the "Land of Coconut Trees" paying homage to the state's prolific coconut cultivation, a pivotal contributor amounting to about 45% of India's overall coconut harvest.
- The modern state of Kerala was established along linguistic lines in 1956, a significant juncture that witnessed the inclusion of the Malabar Coast and the Kasargod taluka (administrative subdivision) from South Kanara into the newly evolving Travancore-Cochin entity.

Athidhi Portal

- It is a user-friendly web portal to expedite the registration of migrant workers in Kerala.
- Contractors, who bring migrant workers to the state and employers, can register the workers in the portal. It also allows workers to register themselves individually as well.
- The enrolling officer will examine the details entered in the portal and issue a unique ID to each worker.
- The portal will also ensure that they have social security.

CSE Prelims Special
GS Roundup-1

Dear Readers,

We are starting the CSE Prelims GS Roundup Series from this issue for the upcoming Prelims 2024 examination. The content published in this section will cater to the needs of the UPSC/State PCS Civil Services Prelims exams.

A careful analysis of the past 10-15 years Prelims questions reveals that the questions (especially in UPSC CSE) are never repeated but the topics are repeated. Questions are framed from different dimensions of the topics.

Accordingly, in this October issue, we have come up with the CSE Prelims GS Roundup-1. We have covered 36 most important topics from which questions are frequently asked in the Civil Services Preliminary Examination.

The GS Roundup Series will cover the entire syllabus of the Prelims exam, comprising Indian History, Art & Culture, Geography, Indian Polity & Governance, Economy, General Science & Science & Technology, and Ecology & Environment.

We hope you find the content helpful in your preparation for the Civil Services Examinations.

We encourage you to send us your feedback at cscenglish@chronicleindia.in

Happy reading!

Indian History, Art and Culture

Sufi & Bhakti Movement: Personalities

Bhakti Movement: Personalities (North India)

Sant Gyaneshwar (1275–1296)

- Gyaneshwar's "Jnaneshwari" is a commentary on the Bhagavad Gita, providing insights into its philosophical and spiritual dimensions.
- He was a Marathi saint, philosopher, and poet who expressed profound spiritual concepts in accessible language.
- Gyaneshwar's teachings blended devotion (bhakti) with deep philosophical knowledge (jnana).

Kabir Das (1440–1518)

- "Bijak", a collection of verses and hymns attributed to Kabir, reflecting his spiritual insights is regarded as his most notable work.
- Kabir's couplets, called "Dohas," remain widely studied and translated due to their profound wisdom.
- His works were primarily composed in the vernacular language, making them accessible to a broader audience.

Ravidas (1450–1520)

- Ravidas' devotional compositions are found in the Guru Granth Sahib, representing his devotion to God.
- His poetry emphasized social equality and challenged the discriminatory caste system.

Guru Nanak Dev (1469–1539)

- "Japji Sahib" is Guru Nanak's composition at the beginning of the Guru Granth Sahib, encapsulating Sikh philosophy.
- His teachings, along with those of subsequent Gurus, were compiled in the Guru Granth Sahib, the holy scripture of Sikhism.
- Guru Nanak undertook four extensive journeys, collectively known as the "Udasis," spreading his message.
- He emphasized oneness, service, and devotion to God regardless of social or religious background.

Surdas (1478–1583)

- "Sur Sagar" and "Sur Saravali" are collections of his devotional compositions dedicated to Lord Krishna.
- Despite his visual impairment, Surdas composed heartfelt poetry expressing his profound love for Krishna.
- Legends suggest Krishna granted Surdas divine vision to see and compose his divine plays (leelas).

Meera Bai (1498–1547)

- Meera Bai's compositions, often in praise of Lord Krishna, are collected in the "Padavali" and "Bhajans."
- She was a Rajput princess who renounced worldly life to dedicate herself to devotion.

Tulsidas (1532–1623)

- "Ramcharitmanas" is an epic poem by Tulsidas and is a retelling of the Ramayana in Awadhi language, focusing on devotion to Lord Rama.
- His work played a significant role in popularizing devotion to Lord Rama and influencing Hindi literature.
- He composed numerous devotional hymns, emphasizing the greatness of Lord Rama.

Sant Eknath (1533–1599)

- Eknath composed numerous devotional abhangas, reflecting his devotion to Lord Vithoba.
- He was a prominent Marathi saint, poet, scholar, and religious reformer.
- Eknath's commentary on the Bhagavad Gita, called the "Eknathi Bhagwat," is highly regarded.

Dadu Dayal (1544–1603)

- Dadu Dayal's teachings emphasized inner spirituality, meditation, and love for God.
- He renounced material pursuits and advocated for a life centered on devotion and self-realization.
- Dadu Dayal's verses, collected in the "Bani" and "Satsai," focus on detachment and divine love.

Sant Tulsi Sahib (1763–1843)

- Tulsi Sahib was a spiritual master and poet, advocating Surat Shabd Yoga meditation for union with the divine.
- His poetry, collected in "Ghat Ramayan" and "Radhasoami Mat Prakash," emphasizes the inner journey.
- His teachings laid the foundation for the Radhasoami spiritual tradition, which emphasizes direct communion with the divine.

Bhakti Movement: Personalities (South India)

Ramanuja

- He gave philosophical justification for bhakti and tried to establish a careful balance between orthodox Brahmanism and popular bhakti which was open to all.
- Though he did not support the idea of the "lower" castes having access to the Vedas, he advocated bhakti as a mode of worship accessible to all including the Sudras and even the outcastes.

Nimbarka

- He was a Telugu Brahamana, who lived in Vrindavan near Mathura (North India).
- He believed in total devotion to Krishna and Radha.

Madhava

- Like Ramanuja, he did not dispute orthodox Brahmanical restriction of the Vedic study by the Sudras.