

DAILY CURRENT AFFAIRS

By



SOURCES



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Important News Articles

1. Argentina, India sign social security agreement - The Hindu
2. Educational institutions run by religious, linguistic minorities need not provide reservation for SCs, STs and OBCs: Madras High Court - The Hindu
3. At 36%, EBCs largest group in Bihar, shows caste study - The Hindu
4. Dr Jitendra Singh launches the Intelligent Grievance Monitoring System (IGMS) 2.0 Public Grievance portal and Automated Analysis in Tree Dashboard portal of DARPG - PIB
5. Amended norms for 28% GST on e-gaming kick in; companies raise concerns - Indian Express
6. Army's Project Udbhav to rediscover 'Indic heritage of statecraft' from ancient texts - The Hindu
7. How important is the first asteroid sample? - The Hindu
8. Aditya L1 exits Earth's sphere of influence: ISRO - Indian Express
9. Medicine Nobel 2023 goes to duo who paved the way for mRNA COVID vaccines - The Hindu
10. IAF likely to induct Astra BVR air-to-air missile by year-end - The Hindu
11. Senescent immune cells promote lung tumor growth: Study - The Print
12. Gross GST revenue growth slowed to 10.2% in Sept. - The Hindu

Editorials, Gists and Explainers

1. An ageing India needs age-responsive TB care - The Hindu
2. The largest climate action lawsuit against 32 countries - The Hindu
3. Building BRICS for the future - The Hindu

Quick Look

1. Kaimur Wildlife Sanctuary
2. Kalakkad-Mundanthurai Tiger Reserve
3. Badis limaakumi
4. Sela Tunnel Project
5. Pygmy Hog
6. Seamount
7. National Service Scheme
8. Sanwariya Seth Temple
9. United Nations Conference on Trade and Development (UNCTAD)
10. Green Ammonia

Important News Articles

GS II

1. Argentina, India sign social security agreement - The Hindu

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- Recently, **India and Argentina** signed the '**Social Security Agreement**'.
- It aims to ensure **legal rights of professionals in each other's domain** that will assist in **risk-free international mobility**.

Prelims Takeaway

- Social Security Agreement
- Location Based Questions

Key Features

- It is aimed at **ensuring rights of Indian nationals employed** in various Indian and international concerns **in Argentina** as well as for **Argentine nationals seeking employment in India**.
- It would **protect the rights** of professionals and workers **against loss of benefits or contributions made towards social security** in both countries.
 - It would thus facilitate **greater movement** of professionals and labour force
- It also **takes care of factors like rent, subsidy and lump sum payments** as per national laws of both countries.
- It has **created a legal framework** which will enable professionals on both sides to **claim old age and survivor's pensions**.
- It also **safeguards permanent and total disability pension** for employed persons as well as to legislations in Argentina concerning contributory benefits of the **Social Security System**.

2. Educational institutions run by religious, linguistic minorities need not provide reservation for SCs, STs and OBCs: Madras High Court - The Hindu

Relevance: Constitution of India —historical underpinnings, evolution, features, amendments, significant provisions and basic structure.

News:

- The Madras High Court recently ruled that **educational institutions run by religious and linguistic minorities need not follow the rule of reservation** with respect to the SC, ST and OBC students.
- It has also held that the **government cannot compel such institutions to provide reservation to such candidates**.

Prelims Takeaway

- Minority Institutions
- Reservation

Key Highlights

- The court ruled the **State government would not have any right to restrict the minority status of an institution** to a particular period.
- **Once minority status is granted** to an institution, **it will persist**, until the **National Commission for Minority Educational Institutions (NCMEI)** cancels it for valid reasons.
- It upheld the government's right to stipulate that **minority institutions can admit students from the respective religious and linguistic minorities** up to 50% of the sanctioned intake based on merit.
- They clarified that **students admitted on merit should not be counted** within the first 50% of admissions allocated for minorities.

Legal Provisions

- The judges found support in **Article 15(5) of the Constitution**, introduced through the 93rd amendment in 2005.
- It **specifically excludes minority institutions** from the State Government's authority to **provide special provisions for reservations**.
- The **Section 2(d) of the Act** also **excludes minority institutions established under Article 30(1) of the Constitution from its definition of 'private educational institution.'**
- Thus, the **State cannot impose reservation provisions on minority educational institutions.**

3. At 36%, EBCs largest group in Bihar, shows caste study - The Hindu

Relevance: Polity and Governance

News:

- The **Bihar government** recently released the **results of its caste survey**, shedding light on the state's demographic composition and caste dynamics.
- Parties have continued to **demand a caste census** saying that such an exercise is **necessary to streamline welfare policies**.

Prelims Takeaway

- Caste Census
- Census

Caste Composition

- The survey reveals the **caste composition in Bihar** as follows
 - Extremely Backward Classes (EBCs): 36.01%
 - Other Backward Classes (OBCs): 27.12%
 - Scheduled Castes (SCs): 19.65%
 - Scheduled Tribes (STs): 1.68%
 - Unreserved: 15.52%
- **Hindus make up 81.99%**, while **Muslims constitute 17.72%**.
- **Other religious denominations have minuscule populations.**

Survey Phases

- The survey **occurred in two phases**
 - **First phase:** Involved counting households in January.
 - **Second phase:** Aimed to collect caste, religion, economic, and family data.

First Caste Census as SECC

- Socio-Economic and Caste Census was **conducted for the first time in 1931**.
- It is meant to **canvas every Indian family**, both in rural and urban India, and ask about their **economic status and specific caste name**.
- It has the potential to allow for a **mapping of inequalities at a broader level**.

Difference Between Census & SECC

Census	Socio-Economic and Caste Census
It provides a portrait of the Indian population	It is a tool to identify beneficiaries of state support.
Since the Census falls under the Census Act of 1948, all data is considered confidential.	All the personal information given in the SECC is open for use by Government departments to grant and/or restrict benefits to households.

4. Dr Jitendra Singh launches the Intelligent Grievance Monitoring System (IGMS) 2.0 Public Grievance portal and Automated Analysis in Tree Dashboard portal of DARPG - PIB

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, the **Union Minister of State (Independent Charge) Science & Technology**, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space launched the **IGMS 2.0**.

Prelims Takeaway

- IGMS 2.0
- CPGRAMS

Intelligent Grievance Monitoring System (IGMS) 2.0

- It is a **public grievance portal and automated analysis** in the **Tree Dashboard portal** of the **Department of Administrative Reforms and Public Grievances (DARPG)**.
- It has been **implemented by IIT Kanpur** following an **MoU with DARPG for upgrading DARPG Information Systems (CPGRAMS) with Artificial Intelligence capabilities**.

Significance

- It provides **instant tabular analysis of grievances filed & disposed**, state-wise & district-wise grievances filed & ministry-wise data.
- It will also help the officials **identify the root cause of the grievance**.
- It will help the DARPG with the **creation of a draft letter for the selected scheme/ministry and expedite the grievance redressal process** by the concerned ministry/department.
- It has been **enabled with Artificial intelligence (AI) capacity**.

Centralised Public Grievance Redress and Monitoring System (CPGRAMS)

- It is an **online platform** available to the citizens **24x7 to lodge their grievances to the public authorities** on any subject related to **service delivery**.
- It is a **single portal connected to all the Ministries/Departments** of Government of India and States.
- Every Ministry and States has **role-based access to this system**.
- It is also **accessible to the citizens** through
 - standalone mobile applications** downloadable through Google Play store
 - mobile applications integrated with UMANG**
- The **status of the grievance can be tracked with the unique registration ID provided** at the time of registration of the complainant.

5. Amended norms for 28% GST on e-gaming kick in; companies raise concerns - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Amended provisions are set to kick in for **online gaming from Sunday** bringing into effect the **28 percent tax at face value at entry level** under the GST regime.
- Industry players and experts have, however, **raised concerns about compliance and the applicability** of the amended legal provisions.
- This is because **some states are still in the process of clearing the amendments** for their respective State GST (SGST) laws.

Prelims Takeaway

- Online Gaming
- Goods and Service Tax

The Changes

- The **uniform levy of 28 percent tax** is applicable
 - On the face value of the chips purchased in the case of casinos
 - On the full value of the bets placed with bookmaker/totalisator in the case of horse racing
 - On the full value of the bets placed in case of online gaming.
- It includes **definitions for online gaming, online money gaming, specified actionable claim and virtual digital assets**.

- It is mandatory for **offshore online money gaming firms** providing services to Indian users to **register** in the country and **pay taxes** or face access blockages.

Different types of online gaming

1. e-Sports

- These are video games that were **played privately or on consoles** in video game stores in the 1990s
- Now, they are played **online** in a **structured manner** between professional players, either individually or in teams.

2. Fantasy sports

- These are games in which the **player selects a team of real sports players** from several teams and **earns points** based on how well the players perform in real life.

3. Online casual games

- These could be **skill-based**, where the outcome is heavily impacted by **mental or physical skill or chance-based**
- A game of chance may be considered as **gambling** if players bet money or **anything of monetary value**.

The Indian online gaming market

- The online gaming industry **grew exponentially** during the **Covid-19 pandemic**.
- The **revenue** of the Indian mobile gaming industry is expected to **reach \$5 billion in 2025**.
- The industry in the country grew at a **Compound annual growth rate (CAGR) of 38% between 2017-2020**, as opposed to 8% in China and 10% in the US.
- India's percentage of **new paying users (NPU)** in gaming has been the **fastest growing** in the world.

GS III

6. Army's Project Udbhav to rediscover 'Indic heritage of statecraft' from ancient texts - The Hindu

Relevance: Defence

News:

- The **Indian Army** recently started an initiative, named **Project Udbhav**.
- A **study to compile Indian stratagems based on ancient texts** has been **ongoing since 2021**.
- A **book has been released listing 75 aphorisms** selected from ancient texts

Prelims Takeaway

- Project Udbhav
- Indian Army
- United Service Institution of India

Key Features

- **Objective:** To **rediscover the "profound Indic heritage of statecraft and strategic thoughts" derived from ancient Indian texts** of "statecraft, warcraft, diplomacy and grand strategy".
- It endeavours to **explore India's rich historical narratives** in the realms of **statecraft and strategic thoughts**.
- It also aims to **develop an indigenous strategic vocabulary**, which is deeply rooted in India's multifaceted philosophical and cultural tapestry.
- The overall aim is to **integrate age-old wisdom with modern military pedagogy**.
- This project is in collaboration with the **United Service Institution of India, a defence think-tank**.

7. How important is the first asteroid sample? - The Hindu

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- Recently, on September 24th, **NASA's first asteroid samples**, fetched from **asteroid Benu**, were dropped by **Osiris-Rex** into the **USA's Utah desert**.
- This was NASA's **third sample return** from a deep-space robotic mission.
- The samples are expected to **provide insights into the formation of Earth and life 4.5 billion years ago**.

Prelims Takeaway

- OSIRIS-REx
- Asteroid Benu
- NASA

OSIRIS-REx (Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer) Mission

- OSIRIS-REx is a **NASA asteroid-study and sample-return mission**.
- Launched in **September, 2016**, the spacecraft **reached asteroid Benu in 2018**.
- **Objective:** To obtain a **sample of at least 60 gm from Benu** and return the sample to Earth for a detailed analysis.
- The spacecraft contains **five instruments** meant to explore Benu including cameras, a spectrometer and a laser altimeter.



Asteroid Bennu

- Bennu is a **B-type Near-Earth Asteroid**.
 - B-type asteroids are a relatively uncommon type of carbonaceous asteroid.
- Because of its high carbon content, it **reflects about four percent of the light that hits it**, which is very low.
 - Earth reflects about 30 percent of the light.

Significance of Bennu as the Target Asteroid

- Asteroids such as Bennu can **act as a "time capsule" for our solar system's earliest history**.
- Scientists believe that it is **4.5 billion years old** and **hasn't undergone drastic changes** since its formation.
- Therefore, it **contains chemicals and rocks dating back to the birth** of the Solar System.
- In particular, Bennu was selected because of the **availability of pristine carbonaceous material**, a key element in organic molecules necessary for life.
- It will help researchers learn about **how our planet and solar system formed**, as well as the **origin of organics** that may have led to life on Earth.

8. Aditya L1 exits Earth's sphere of influence: ISRO - Indian Express

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

News:

- Recently, ISRO stated that India's solar mission **Aditya L1 has now left the Earth's sphere of influence**.
- This is the region up to which our **planet's gravitational pull can impact a satellite**.

Prelims Takeaway

- Aditya-L1 Mission
- Lagrange Points
- ISRO

Aditya-L1 Mission

- **Launched by ISRO to the L1 orbit which is about 1.5 million km** from the Earth.
- It is expected to **take more than 120 days** for the spacecraft to reach the L1.
- The **orbit allows Aditya-L1 to look at the Sun continuously** without any occultation/eclipses.

Objective

- To study the **Sun's corona, Sun's photosphere, chromosphere, solar emissions, solar winds and flares and Coronal Mass Ejections (CMEs)**.
- To carry out **round-the-clock imaging of the Sun**.

Launch Vehicle and Payloads

- **Launched using the Polar Satellite Launch Vehicle (PSLV)**
 - **Previous Launches**
 - Chandrayaan-1 in 2008
 - Mars Orbiter spacecraft in 2013
- The mission will **have 7 payloads (instruments) on board viz.**
 - Visible Emission Line Coronagraph (VELC)
 - Solar Ultraviolet Imaging Telescope (SUIT)
 - Solar Low Energy X-ray Spectrometer (SoLEXS)
 - Aditya Solar wind Particle Experiment (ASPEX)
 - High Energy L1 Orbiting X-ray Spectrometer (HEL1OS)
 - Plasma Analyser Package for Aditya (PAPA)
 - Advanced Tri-axial High Resolution Digital Magnetometers

What is L1?

- It refers to **Lagrangian/Lagrange Point 1, one of the five points in the orbital plane of the Earth-Sun system**.
- These are **positions in space where the combined gravitational pull** of two large masses roughly balance each other.
- These **can be used by spacecraft to reduce fuel consumption** needed to remain in position.

9. Medicine Nobel 2023 goes to duo who paved the way for mRNA COVID vaccines - The Hindu

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- This year's **Nobel Prize for Physiology or Medicine** has been **jointly awarded to Katalin Kariko and Drew Weissman**.
- They have been awarded for their "**discoveries concerning nucleoside base modification** that enabled the **development of effective mRNA vaccines against COVID-19**".

Prelims Takeaway

- Messenger RNA
- mRNA Vaccines

Messenger RNA (mRNA)

- It is a **single-stranded RNA molecule** that is complementary to one of the DNA strands of a gene.
- It is an RNA version of the gene that **leaves the cell nucleus and moves to the cytoplasm where proteins are made**.
- During **protein synthesis**, the **ribosome moves along the mRNA, reads its base sequence, and uses the genetic code to translate into amino acid**.

mRNA Vaccines

- Such vaccines **make use of the messenger RNA molecules** that tell the body's cells what proteins to build.
- Here, the **mRNA is coded to tell the cells to recreate the spike protein of the coronavirus SARS-CoV-2**, which causes Covid-19.
 - It is the spike protein which appears as spikes on the surface of the coronavirus.
 - It initiates the process of infection and allows the virus to penetrate cells after which it goes on to replicate.
- A **coronavirus vaccine based on mRNA**, once injected into the body, will **instruct the body's cells to create copies of the spike protein**.
- In turn, this is expected to **prompt the immune cells to create antibodies to fight it**.
- These antibodies will **remain in the blood and fight the real virus** if and when it infects the human body.

10. IAF likely to induct Astra BVR air-to-air missile by year-end - The Hindu

Relevance: Defence

News:

- The **Indian Air Force (IAF)** has placed two contracts with Bharat Dynamics Limited (BDL) for the **indigenous Astra Beyond Visual Range (BVR) Air to Air Missile**.
- The first batch is expected to be **inducted by the end of 2023**.

Prelims Takeaway

- ASTRA Missile
- LCA Tejas

ASTRA

- It is a **state-of-the-art Beyond Visual Range (BVR) air-to-air missile to engage and destroy highly manoeuvring supersonic aerial targets**.
 - BVM missiles are capable of engaging beyond the range of 20 nautical miles or 37 kilometres.
- It is designed and developed by **Defence Research and Development Laboratory (DRDL), Research Centre Imarat (RCI) and other laboratories of DRDO**.
- It will be **deployed on fighter jets** like Sukhoi-30 MKI and Tejas of the IAF and the Mig-29K of the Navy.

Strategic Significance

- The missile has been designed based on **requirements specified by the IAF for BVR as well as close-combat engagement**.
- It reduces the **dependency on foreign sources**.
- AAMs with BVR capability provide **large stand-off ranges to own fighter aircraft**.
- It can **neutralise adversary airborne assets** without exposing adversary air defence measures.

- The missile can **travel at speeds more than four times that of sound** and can reach a **maximum altitude of 20 km**, making it **extremely flexible for air combat**.

11. Senescent immune cells promote lung tumor growth: Study - The Print

Relevance: Science and Technology- developments and their applications and effects in everyday life.

News:

- According to a recent Cancer Cell study, researchers detected **senescent macrophages** in the lung that **supported tumour growth**.

Prelims Takeaway

- Macrophages
- Cellular Senescence

Macrophages

- They are a **type of white blood cell** that plays an important role in the human immune system.
- They are **involved in the detection, phagocytosis and destruction of bacteria and other harmful organisms**.
- They are **essential for the maintenance and defence of host tissues**.
 - They do so by sensing and engulfing particulate matter.
 - When necessary, they initiate a pro-inflammatory response.
- They can **modify themselves to form different structures** in order to fight various different microbes and invaders.
- They provide the **first line of defence in protecting the host from infection**.
- They are also involved in the **development of non-specific or innate immunity**.
- They **produce a variety of cytokines** that **play a role in inflammation, tissue repair, and the adaptive immune response**.
- They migrate to and circulate within almost every tissue, **patrolling for pathogens or eliminating dead cells**.

Cellular Senescence

- It refers to a **state of stable cell cycle arrest** in which **proliferating cells become resistant to growth-promoting stimuli**, typically in response to DNA damage.
- During this phase, the **cell undergoes numerous phenotypic and metabolic changes**.
- Cellular senescence can **compromise tissue repair and regeneration**, thereby contributing towards ageing.
- Removal of senescent cells can **attenuate age-related tissue dysfunction and extend the health span**.
- Senescence can also act as a **potent anti-tumour mechanism** by preventing the proliferation of potentially cancerous cells.

12. Gross GST revenue growth slowed to 10.2% in Sept. - The Hindu

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

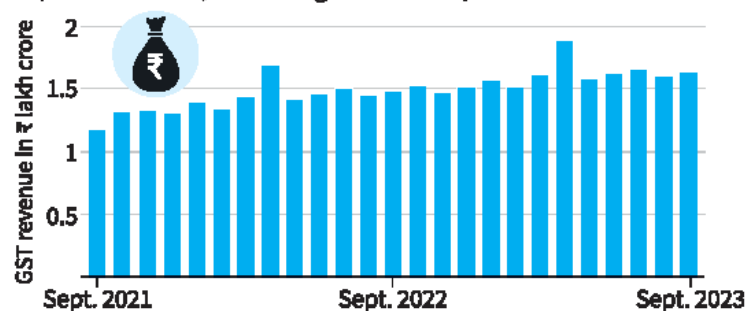
- The **growth in India's gross Goods and Services Tax (GST) revenues slowed to a 27-month low** of 10.2% in September.
- However, the **collections improved 2.3% over August revenues** to touch ₹1,62,712 crore.
- According to experts, these revenues could have been spurred by **businesses settling pending tax dues since the start of the GST regime in 2017-18**.

Prelims Takeaway

- Goods and Services Tax
- GST Council

Revenue check

Goods and Services Tax collections rose to ₹1.63 lakh crore in September 2023, 10.2% higher than September 2022



Goods and Services Tax (GST)

- A **value-added tax** levied on most **goods** and **services** sold for **domestic consumption**.
- **Paid by consumers**, but it is **remitted** to the **government** by the **businesses** selling the goods and services.

Key Features

- Applicable on '**supply**' of **goods or services** as against the old concept on the manufacture of goods or on sale of goods or on provision of services.
- Based on the principle of **destination-based consumption taxation** as against the present principle of origin-based taxation.
- India has **dual GST** with the **Centre and the States simultaneously levying tax on a common base**.
- **Import of goods or services** are treated as **inter-state supplies** and subject to **Integrated Goods & Services Tax (IGST)** in addition to the applicable customs duties.
- GST rates are **mutually agreed** upon by the Centre and the States.
- The **rates** are notified on the recommendation of the **GST Council**.

GST Council - Article 279A

- Formed by the **President** to **administer & govern GST**.
- **Chairman:** Union Finance Minister of India
- **Members:** Ministers nominated by the state governments
- The **centre** has **1/3rd voting power** and the **states** have **2/3rd**.
- The **decisions** are taken by **3/4th majority**.

Editorials, Gists and Explainers

1. An ageing India needs age-responsive TB care - The Hindu

Relevance: Health

Context:

- The elderly represent a storehouse of wisdom, and respect for their rights and freedoms benefits society.
- On International Day of Older Persons (October 1), one must resolve to invest in the health of its elderly population.
- This is especially true in the case of tuberculosis (TB), which affects over 25 lakh Indians every year and kills at least 1,000 every day.

Important Facts

- India is moving towards a future where the elderly will make up a significant proportion of society.
- In 2011, about 9% of India's population were over the age of 60 which is expected to increase to 12.5% by 2030.
- This is primarily due to advances in health care and increased life expectancy.

Tuberculosis

- It is an **infectious disease** usually caused by **Mycobacterium tuberculosis (MTB) bacteria**.
- It **generally affects the lungs (pulmonary TB)**, but it can also affect other parts of the body (**extra-pulmonary TB**).
- India's **National TB Prevalence Survey, 2021**, revealed that the **prevalence of TB in people over the age of 55 was 588** (per one lakh population).
 - This is much higher than the overall national prevalence of 316.
- These findings were the **starting point for a first of its kind rapid assessment report on TB among the elderly** published earlier this year.
 - The report highlighted TB's impact on the elderly and the need for age specific TB guidelines.

How TB impacts the Elderly?

- Symptoms of TB including cough, fatigue and weight loss are mistaken as signs of other diseases or dismissed as signs of old age.
- The risk of having a TB diagnosis delayed or missed altogether is higher for the elderly compared to other adults.
- Once diagnosed, management of TB among the elderly is often complicated by multiple comorbidities, particularly diabetes.
 - At an individual level, this means a higher pill count and an increased likelihood of side effects.
- Older people, and older women in particular, also face specific challenges in accessing health services.
 - For instance, in rural and hilly areas, they struggle to travel to health facilities by themselves.
- Their access to reliable information on health is also limited - social networks inevitably shrink for the elderly.
- Older persons also experience infrastructure related challenges such as lack of adequate seating.
- Crucially, they may not have access to high quality nutritious food, which is critical for recovery.
- All of this is augmented by a loss of economic independence.
 - Most people over the age of 60 are no longer working.
 - They are living off savings or they are completely dependent on families.
 - There are some social welfare schemes for the elderly but these are limited in scope and difficult to access.
- Many older people refer to their fragile mental health, accentuated by
 - the loss of purpose and connection
 - the loneliness from losing spouses or family
 - the anxiety of not being 'useful'

Building Age-responsive Care

- We must move to holistic care models that reduce the need for the elderly to interact with multiple providers and facilities.
- We must build capacity among health professionals at all levels
 - For an improved clinical understanding of TB in the elderly
 - For better management of multiple morbidities.
- Case finding among the elderly can be improved through
 - effective sputum collection and transportation systems
 - access to mobile diagnostic vans
 - active case finding at geriatric OPDs
 - residential homes for the elderly and other institutional settings.
- Technical and operational protocols that provide clear guidance on diagnosing and treating TB in the elderly need to be developed.
 - For example, sample extraction protocols, comprehensive assessment of co-morbidities and drug dosage adjustments
- To address socioeconomic needs, we must have support protocols, with inputs from elderly people with TB.
- Examples include
 - an elder focused community care model with linkages to local caregivers
 - doorstep delivery of medicines
 - age responsive peer support and counselling for older people and their families
 - special help desks for the elderly at facilities
 - support with documentation to access social support schemes
- At a macro level, we must ensure rigorous gender and age disaggregated collection and analysis of data.
 - to identify TB trends across age groups
 - to make sure that the elderly is included as a separate age category in all TB reports.
- An important step towards building elderly friendly systems is strengthening collaboration within the health system.
- We need a stronger research agenda focused on TB in the elderly to better understand
 - State-specific trends in case finding and outcomes among elderly people with TB
 - substance use
 - drug-resistance and co-morbidity patterns across geographies
 - uptake of TB preventive therapy in the elderly
 - intersectionality with other aspects of equity such as gender, disability, class, and caste.

2. The largest climate action lawsuit against 32 countries - The Hindu

Relevance: Conservation, environmental pollution and degradation

Context:

- Recently, **six young people** from Portugal sued 32 **European governments** at the European Court of Human Rights.
- They argue that their **governments have failed to take sufficient action against the climate crisis.**
- They thus **violate their human rights** and discriminate against young people globally.

What is the lawsuit?

- They claim that **European nations have faltered in their climate emission goals**, blowing past their global carbon budgets consistent with the Paris Agreement target of limiting global warming under 1.5°C.
- The nations have thus **violated people's fundamental rights protected under the European Convention on Human Rights**, including
 - the right to life
 - the right to be free from inhuman or degrading treatment
 - the right to privacy and family life
 - the right to be free from discrimination
- The nations must **rapidly escalate their emissions reductions** and aim higher in curbing **domestic emissions.**
- Other measures include **cutting the production of fossil fuels** and **cleaning up global supply chains.**

European Scientific Advisory Board on Climate Change (ESABCC)

- A body which provides scientific advice to EU countries, said countries will have to **target an emissions reduction of 75% below 1990 levels** (as opposed to the EU's current 55%).
- Under some of these principles, the **EU has already exhausted its fair share of the global emissions budget.**
- The EU at present is the **sixth largest emitter with 7.2 tonnes of CO2 per capita**, while the world averages **6.3 tonnes per capita.**

UNICEF's Views

- It has **dubbed the climate crisis as a "child rights crisis".**
- Unhindered carbon emissions and extreme weather **threaten access to education, health, nutrition and the future.**
- **Air pollution** is already linked to **poor birth outcomes** and **increased risk of cardiovascular and respiratory diseases.**
- **Heat waves** are triggering **mental health issues.**
- Both are translating into **lowering academic performance** as well as the **wider disruption of missed school days.**
- Water scarcity, food insecurity, physical trauma of sudden and slow-onset events, vector-borne and water-borne diseases **hastened by climate change** are **disproportionately borne by children.**

Government's Response

- The countries so far have **rejected any relationship between climate change and its impact on human health.**
- **Greece:** The effects of climate change do not seem to directly affect human life or human health.
- **Portuguese and Irish governments**
 - Dismissed these concerns as 'future fears'.
 - They argue that there is no evidence to show climate change poses an immediate risk to their lives.
- Other nations have argued that they are **on track to achieve climate targets** formulated to safeguard the interests of their citizens.

3. Building BRICS for the future - The Hindu

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Context:

- Recently, **in August 2023, six new members were inducted into the BRICS** grouping, in South Africa.
- While many believe that this **meeting did not have productive results**, we need to look at BRICS from the perspective of **how it has evolved**.

BRICS

- BRICS is an acronym for the grouping of the world's leading emerging economies, namely **Brazil, Russia, India, China, and South Africa**.
- The grouping was formalised during the **first meeting of BRIC Foreign Ministers' in 2006**.
- **South Africa was invited to join BRIC in December 2010**, after which the group adopted the acronym BRICS.
- The **chairmanship** of the forum is **rotated annually** among the **members**, in accordance with the acronym B-R-I-C-S.
- It brings together **five of the largest developing countries** of the world, representing **41% of the global population, 24% of the global GDP and 16% of the global trade**.

Economic Significance

- It is important to note that BRICS emerged out of an economic compulsion.
 - It does not provide military or security support to various countries.
 - It is not involved in the policing of nations.
 - It does not provide peacekeepers.
- It is important to look at the long-term opportunities that it presents.
 - The GDP of BRICS is now 36% of the global GDP.
 - The population of its members will be 47% of the world population by 2050.
- More members could be inducted, which means that BRICS could pose a serious challenge to the dominance of the G7.
 - G7 comprises Canada, France, Germany, Italy, Japan, the U.K., and the U.S.

India and China

- Two members of BRICS viz. China and India together contain one third of the world's population.
- The two countries are the fastest growing economies and are expected to be among the top three economies of the world by 2030.
- Both countries understand that globally, bilateral ties have seen a transformation following the formation of economic blocs.
- Such economic blocs like the European Union or ASEAN accelerate trade and investment.
- Despite both countries having bilateral challenges at the political and diplomatic levels, the trade between the two countries has continued to grow significantly.

Search for an Alternative

1. Polarisation between US and World

- There has been some polarisation between the U.S. and other parts of the world.
- Many countries have issues with the US's stance against China.
 - The U.S. seems keen to impose tariffs and create other barriers to restrict China's expansion in trade and investment.
 - China has made strides in certain areas like communication infrastructure and electric mobility, too, which the US would like to contain.
- As this is expected to get worse, countries want to be part of a grouping that involves China too.
- In the BRICS grouping, China is not a dominant player; democratic countries such as India, South Africa and Brazil provide the counterweight.

2. Refugee Issue

- The way refugees are being treated in Europe do not give a positive perspective of a world that is getting increasingly globalised.
- Countries such as the US have flouted WTO rules and have not penalised for the same implying countries have to look for other arrangements.

3. Trade and Investment

- As BRICS grows, there will be many trade business and investment protocols created.
- This would be similar to what we see in different free trade arrangements or economic blocs.

Global Currency and De-dollarisation

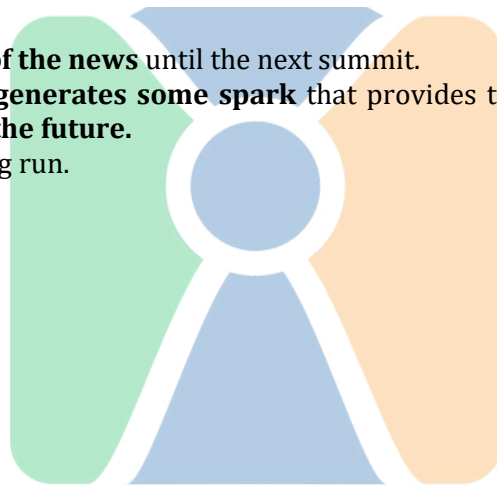
- The U.S. dollar has been the dominant global currency all this time.
- With digital platforms making inroads into many countries, digital currency is clearly the future.
- Both India and China have made great progress in this field and are far ahead of the US and Europe.
- Both India and China are pushing for more trade, investment, and business in their currencies.
- Together, through BRICS, they can push their own currencies as alternative currencies to the dollar.
- Freedom from the U.S. dollar is a big reason for convergence of India and China's interests.

Continent of the future

- The continent that promises economic growth this century is Africa.
- The way France has intervened in Niger or the manner in which migrants have been treated in Europe provide Africans with a negative image about Europe.
- Visa restrictions have pushed Africans to travel to China and see its development more closely than to Europe or the US.
- This makes them believe in China's potential.
- India is trying to push its own reach within Africa.
- It proposed full membership for the African Union at the G20 summit in New Delhi.

Conclusion

- BRICS will **again be out of the news** until the next summit.
- However, **each summit generates some spark** that provides the **building blocks for different networks of people for the future.**
- This is a group for the long run.



Mentorship
India

Quick Look

1. Kaimur Wildlife Sanctuary

- It is the largest sanctuary located in the Kaimur District of Bihar nestled in the Vindhya hill ranges.
- It forms a very important catchment for the Kav, Sone and Durgawati river systems with important tributaries.
- Vegetation: This region has a thick covering of mosaic prairie, tropical dry deciduous backwoods, and swampy bogs.
- Fauna: The main animals found are Bengal tigers, Indian leopards, Indian boars, sloth bears, sambar deers, chitals, four-horned antelope and nilgais.
- Flora: The plants found here include Salai (*Boswellia Serrata*), Siddha, Indian Rosewood (*Sheesham*), Jamun, Teak, Koraiya, Saal, and Jheengarare some species of plant life.

2. Kalakkad-Mundanthurai Tiger Reserve

- It is located in the Southern Western Ghats in the Tirunelveli and Kanyakumari districts of Tamil Nadu.
- This reserve is a mixture of three main sanctuaries viz. Kalakkad Sanctuary, Mundanthurai Sanctuary and a part of Kanyakumari Sanctuary.
- It is also known as the "River Sanctuary", with as many as 14 rivers originating from this Tiger Reserve.
- Terrain: Undulating with several valleys and porous rocks.
- Its vegetation varies from thorny shrub jungles to lush evergreen forests.
- In addition to forests, savannah woodlands, and grasslands, there are tea and coffee plantations within the reserve.
- Flora: Important species include *Sarcandra*, *Paphiopedulum*, *druryi*, *Hopea parviflora*, *Hopea utilis*, *Calophyllum elatum*, *Cullenia exarillata*, etc.
- Fauna: Tiger, leopard, rusty spotted cat, wild dog, sloth bear, elephant, gaur, sambar, spotted deer, mouse deer, nilgiri langur, slender loris, bonnet macaque, lion tailed macaque, etc.

3. Badis limaakumi

- It is a new badis fish species discovered in Nagaland.
- It is locally known by many names, like "Tepdang" or "Aknghashi (Chungli)" or "Aokngatsu (Mongsen)" or "Sempi" etc.
- It appears black in its natural habitat but undergoes a remarkable colour change when placed in an aquarium or different environments.
- Key Features
 - It has a comparatively large and slender body.
 - Absence of blotches on the sides and fins, as well as on the cleithrum.
 - Large number of lateral-line scales.

4. Sela Tunnel Project

- It is located in the West Kameng district of Arunachal Pradesh.
- Once completed, the Sela tunnel will be the world's longest bi-lane tunnel at an altitude above 13,000 feet.
- It will ensure all-weather connectivity between Guwahati in Assam and Tawang in Arunachal Pradesh.
- It is being excavated below the Sela Pass on the NH-13 component of the Trans-Arunachal Highway system.
- It is being built by the Border Roads Organisation (BRO) under Project Vartak and the tunnel's construction commenced on April 1, 2019.

5. Pygmy Hog

- It is the smallest and rarest species of wild pig in the world.
- It is one of the very few mammals that build its own home, or nest, complete with a 'roof'.
- It is an indicator species as its presence reflects the health of its primary habitat, tall and wet grasslands.
- It prefers undisturbed patches of grassland dominated by early succession riverine communities, typically comprising dense tall grass intermixed with a wide variety of herbs, shrubs and young trees.
- Currently, the viable population of this pig in the wild is in the Manas Tiger Reserve in Assam.
- Conservation status
 - IUCN: Critically Endangered
 - The Wildlife Protection Act, 1972: Schedule I

6. Seamount

- It is an underwater mountain formed through volcanic activity recognised as hotspots for marine life.
- Like volcanoes on land, seamounts can be active, extinct, or dormant volcanoes.
- These are formed near mid-ocean ridges, where the earth's tectonic plates are moving apart, allowing molten rock to rise to the seafloor.
- Some seamounts have also been found near intraplate hotspots and oceanic island chains with volcanic and seismic activity called island arcs.
- These are formed when molten rock comes up from below the tectonic plate.

7. National Service Scheme

- It is a Central Sector Scheme of the Government of India.
- It provides an opportunity to the student youth of the 11th & 12th Class of schools at +2 Board level and student youth of Technical Institution, Graduate & Post Graduate at colleges and University level of India to take part in various Government led community service activities & programmes.
- Nodal Ministry: Ministry of Youth Affairs & Sports.

8. Sanwariya Seth Temple

- The temple is dedicated to Lord Krishna, specifically to his beloved child form known as "Sanwariya Seth" or "Shyam Seth."
- It is located in the village of Mandaphia in the Chittorgarh district of Rajasthan.
- The temple follows the traditional architecture of Rajasthan, known for its intricate carvings, domes, and vibrant colours.
- The main structure of the temple is built using white marble.
- The temple is adorned with intricate carvings on the walls, pillars, and ceilings.
- The temple features multiple domes that are adorned with decorative elements.
- The temple has a prominent spire, or shikhar, which is a tall, tapering structure that rises above the main sanctum.

9. United Nations Conference on Trade and Development (UNCTAD)

- It is the UN's leading institution dealing with trade and development.
- It is a permanent intergovernmental body established by the United Nations General Assembly in 1964.
- It supports developing countries to access the benefits of a globalised economy more fairly and effectively.
- It provides economic and trade analysis, facilitates consensus-building and offers technical assistance to help developing countries use trade, investment, finance, and technology for inclusive and sustainable development.
- Its Headquarter is located in Geneva, Switzerland.

10. Green Ammonia

- It is produced by using hydrogen from water electrolysis and nitrogen separated from the air.
- These are then fed into the Haber process (also known as Haber-Bosch) which is powered by sustainable electricity.
- In the Haber process, hydrogen and nitrogen are reacted together at high temperatures and pressures to produce ammonia, NH₃.
- Green ammonia production is where the process of making ammonia is 100% renewable and carbon-free.
- Uses: Fuel for engines such as locomotives and shipping, replacing diesel and marine fuel oil.



Mentorship
India

Prelims Track Question

Q1. Consider the following statements with reference to Article 29

1. it provides that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.
2. It grants protection to both religious minorities as well as linguistic minorities.
3. The scope of this article includes minorities as well as the majority.

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

- A. Only one
- B. Only two
- C. All three
- D. None

Q2. Consider the following statements about Socio-Economic and Caste Census

1. Socio-Economic and Caste Census was conducted for the first time in 1931.
2. It is meant to canvas every Indian family, both in rural and urban India,
3. It gives economic status and specific caste name of the citizen

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

- A. Only one
- B. Only two
- C. All three
- D. None

Q3. Consider the following statements about Centralised Public Grievance Redress and Monitoring System (CPGRAMS)

1. It is an online platform available to the citizens to lodge their grievances to the public authorities on any subject related to service delivery.
2. It is a single portal connected to all the Ministries/Departments of Government of India and States.

Which of the statements given above is/are correct?

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

Q4. Consider the following statements about Project Udbhav.

1. the initiative was started by Ministry of education
2. Its objective is to rediscover the profound Indic heritage of statecraft and strategic thoughts

Which of the statements given above is/are correct?

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

Q5. The remnants of planetary formation that failed to coalesce because of the gravitational interference of Jupiter are called

- A. Meteors
- B. comets
- C. meteorites
- D. asteroids

Q6. Consider the following statements with reference to L1.

1. These are positions in space where the combined gravitational pull of two large masses roughly balance each other.
2. These can be used by spacecraft to reduce fuel consumption needed to remain in position.

Which of the statements given above is/are incorrect?

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

Q7. Consider the following statements about mRNA Vaccines

1. Such vaccines make use of the messenger RNA molecules that tell the body's cells what proteins to build.
2. The mRNA is coded to tell the cells to recreate the spike protein of the coronavirus SARS-CoV-2, which causes Covid-19.

Which of the statements given above is/are correct?

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

Q8. Consider the following statements with reference to ASTRA

1. It is a state-of-the-art Beyond Visual Range (BVR) air-to-air missile to engage and destroy highly manoeuvring supersonic aerial targets.
2. These are indigenously developed and are capable of engaging beyond the range of 20 nautical miles or 37 kilometres.

Which of the statements given above is/are correct?

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

Q9. Consider the following statements with reference to Cellular Senescence

1. It refers to a state of stable cell cycle arrest in which proliferating cells become resistant to growth-promoting stimuli, typically in response to DNA damage.

2. During this phase, the cell undergoes numerous phenotypic and metabolic changes.

Which of the statements given above is/are correct?

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

Q10. Consider the following statements with reference to New Development Bank:

1. India, Russia, and China are the founding members of the New Development Bank.
2. The members of BRICS are eligible only on the condition that the voting power should not be less than 55%.

Which of the statements given above is/are correct?

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

Prelims Track Answer

Ans. 1 Option C is correct

Explanation

- Article 29 provides that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same. **Hence, statement 1 is correct.**
- It grants protection to both religious minorities as well as linguistic minorities. **Hence, statement 2 is correct.**
- However, the SC held that the scope of this article is not necessarily restricted to minorities only, as use of the word 'section of citizens' in the Article includes minorities as well as the majority. **Hence, statement 3 is correct.**

Ans.2 Option D is correct

Explanation

- Socio-Economic and Caste Census was conducted for the first time in 1931. **Hence, statement 1 is correct.**
- It is meant to canvas every Indian family, both in rural and urban India, and ask about their economic status and specific caste name. **Hence, statements 2 and 3 are correct.**
- It has the potential to allow for a mapping of inequalities at a broader level.

Ans.3 Option C is correct

Explanation

- CPGRAMS is an online platform available to the citizens 24x7 to lodge their grievances to the public authorities on any subject related to service delivery. **Hence, statement 1 is correct.**
- It is a single portal connected to all the Ministries/Departments of Government of India and States. **Hence, statement 2 is correct.**
- Every Ministry and States has role-based access to this system.
- The status of the grievance can be tracked with the unique registration ID provided at the time of registration of the complainant.

Ans. 4 Option B is correct

Explanation

- The Indian Army recently started an initiative, named Project Udbhav. **Hence, statement 1 is incorrect.**

- A study to compile Indian stratagems based on ancient texts has been ongoing since 2021.
- A book has been released listing 75 aphorisms selected from ancient texts
- Objective: To rediscover the "profound Indic heritage of statecraft and strategic thoughts" derived from ancient Indian texts of "statecraft, warcraft, diplomacy and grand strategy". **Hence, statement 2 is correct.**
- It endeavours to explore India's rich historical narratives in the realms of statecraft and strategic thoughts.

Ans.5 Option D is correct

Explanation

- Asteroids are remnants of planetary formation that failed to coalesce because of the gravitational interference of Jupiter. **Hence, Option D is correct.**
- They circle the Sun in a zone lying between Mars and Jupiter. The circular chain of asteroids is called the asteroid belt. It lies between 2.3 and 3.3 AU from the Sun.
- Asteroids (planetoids – another term for an asteroid) are composed mainly of refractory rocky and metallic minerals, with some ice.
- They range in size from hundreds of kilometres across to microscopic.

Ans.6 Option D is correct

Explanation

- It refers to Lagrangian/Lagrange Point 1, one of the five points in the orbital plane of the Earth-Sun system.
- These are positions in space where the combined gravitational pull of two large masses roughly balance each other. **Hence, statement 1 is correct.**
- These can be used by spacecraft to reduce fuel consumption needed to remain in position. **Hence, statement 2 is correct.**

Ans. 7 Option C is correct

Explanation

- These vaccines make use of the messenger RNA molecules that tell the body's cells what proteins to build. **Hence, statement 1 is correct.**
- Here, the mRNA is coded to tell the cells to recreate the spike protein of the coronavirus SARS-CoV-2, which causes Covid-19. **Hence, statement 2 is correct.**

- It is the spike protein which appears as spikes on the surface of the coronavirus.
- It initiates the process of infection and allows the virus to penetrate cells after which it goes on to replicate.

Ans. 8 Option C is correct

Explanation

- It is a state-of-the-art Beyond Visual Range (BVR) air-to-air missile to engage and destroy highly manoeuvring supersonic aerial targets.
- **Hence, statement 1 is correct**
- BVM missiles are capable of engaging beyond the range of 20 nautical miles or 37 kilometres.
- It is designed and developed by Defence Research and Development Laboratory (DRDL), Research Centre Imarat (RCI) and other laboratories of DRDO. **Hence, statement 2 is correct**
- It will be deployed on fighter jets like Sukhoi-30 MKI and Tejas of the IAF and the Mig-29K of the Navy.

Ans. 9 Option C is correct

Explanation

- It refers to a state of stable cell cycle arrest in which proliferating cells become resistant to growth-promoting stimuli, typically in

response to DNA damage. **Hence, statement 1 is correct.**

- During this phase, the cell undergoes numerous phenotypic and metabolic changes. **Hence, statement 2 is correct.**
- Cellular senescence can compromise tissue repair and regeneration, thereby contributing towards ageing.
- Removal of senescent cells can attenuate age-related tissue dysfunction and extend the health span.
- Senescence can also act as a potent anti-tumour mechanism by preventing the proliferation of potentially cancerous cells.

Ans. 10 Option B is correct

Explanation

- Brazil, India, Russia, South Africa, and China are the founding members of the New Development Bank. **Hence, statement 1 is incorrect.**
- This new development bank came into existence in July 2015.
- The New Development Bank has an agreement that says that every member of the United Nations is eligible to join the membership of the New Development Bank, but the members of BRICS are eligible only on the condition that the voting power should not be less than 55%. **Hence, statement 2 is correct.**

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