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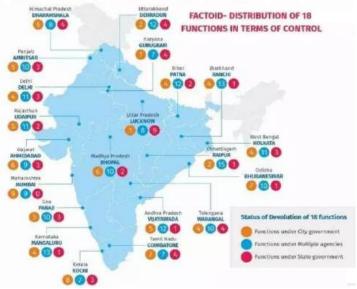
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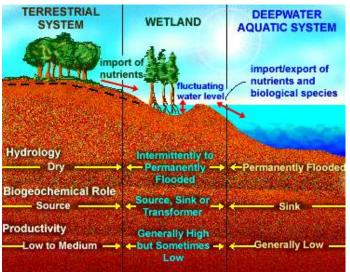
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Indian culture

'VICTORY CITY': VIJAYANAGARA

Context:

Salman Rushdie released a new novel "Victory City" - a fictionalized story of the Vijayanagara Kingdom.

About <u>Vijaynagara</u> Kingdom: 1336 AD - 1646 AD

- Founded by Harihara I of the Sangama dynasty,
 Vijayanagara expanded from a strategic position
 on the banks of the Tungabhadra River with
 Hampi as its capital.
- The kingdom reached its peak under <u>Krishna</u>
 <u>Deva Raya</u> (reign 1509-1529), a period in which
 it enjoyed military superiority to its rival kingdoms such as the <u>Bahmani Sultanate</u>, the Golconda Sultanate, and the Gajapatis of Odisha.

Economy:

- Largely dependent on agriculture, trade thrived in its many ports on either coast.
- Traveller Abd al-Razzaq Samarqandi chronicled how "the ports of Mangalore, Honavar, Bhatkal, Barkur, Cochin, Cannanore, Machilipatnam, and Dharmadam saw traders from Africa, Arabia, Aden, the Red Sea, China and Bengal and also served as shipbuilding centers".
- The empire's principal exports were pepper, ginger, cinnamon, cardamom, myrobalan, tamarind, timber, anafistula, precious and semi-precious stones, pearls, musk, ambergris, rhubarb, aloe, cotton cloth, and porcelain.
- Coins were minted by the state as well as by merchant guilds using gold, silver, copper, and brass, and their value depended on material weight.

Architecture and Literature:

- Literature in Tamil, Telugu, Kannada, as well as Sanskrit, was produced in the kingdom, with new writing styles and methods emerging.
- Vijayanagara architecture is "a vibrant combi-

- nation and blossoming of the <u>Chalukya</u>, <u>Hoysala</u>, Pandya and <u>Chola styles</u>,"
- The Prasanna Virupaksha temple of Bukka I and the Hazara Rama temple of Krishna Deva Raya are striking examples of Vijayanagara's characteristic style and intricate artistry.

Vijayanagara's capital <u>Hampi</u> is a UNESCO World Heritage Site known for its sophisticated fortifications as well as innumerable temples and other architectural marvels. From accounts of foreign travellers, by the beginning of the 16th century, Hampi-Vijayanagara was probably the second-largest urban settlement on the planet (after Beijing).

Insta Link: Vijayanagar Kingdom

Prelims Link: UPSC 2019

- Q. Building 'Kalyaana Mandapas' was a notable feature in the temple construction in the kingdom of
- (a) Chalukya
- (b) Chandela
- (c) Rashtrakuta
- (d) Vijayanagara

Answer: D

Mains Link:

Q. Krishnadeva Raya, the King of Vijayanagar, was not only an accomplished scholar himself but was also a great patron of learning and literature. Discuss. UPSC 2016

Modern Indian history

TREATY OF ALINAGAR

Context:

The Treaty of Alinagar strengthened the position of the British in Bengal and laid foundations for the Battle of Plassey.

 The treaty was the prelude to the British seizure of Bengal.

The Treaty of Alinagar:

 It was signed on 9 February 1757 between the British East India Company (Robert Clive) and



the Nawab of Bengal (Siraj ud-Daulah).

- Alinagar was the short-lived name given to Calcutta by the Nawab after it was captured by him.
- Although the Nawab had taken control of the English fort in Calcutta, he signed the pact in response to the English military might and the threat posed by Afghans (under Ahmad Shah Abdali).

Terms of the treaty:

 The Nawab would recognize all the provisions of Mughal Emperor Farrukhsiyar's farman of 1717

 exempt from paying duties on goods passed through Bengal, can fortify Calcutta, mint coins in Calcutta, etc.

Significance of the treaty:

The signing of the treaty was one of the events leading up to the famous Battle of Plassey, which set the stage for British colonial expansion in India.

Timeline of the initial phase of British Imperialism in India:

- **1600** The English East India Company was formed by a royal charter A monopoly of all trade from England in the East.
- **1613** A royal Farman from Mughal emperor **Jehangir** allowed the Company to open its factories and warehouses.
 - The Company worked subservient to local rulers and established a thriving business.
 - The three primary trading towns where the British trade thrived were Bombay, Madras, and Calcutta (which account for 60% of all English imports from Asia).
- After 1707 (the death of Aurangzeb) The Mughal emperor remained the symbolic head, however, his actual power was fast diminishing.
- **1717** The Mughal emperor Farrukhsiyar's farman gave favourable terms to the Company to trade in Bengal, this was met with local opposition.
- 1717 -1727 Nawab Murshid Quli Khan, the new autonomous ruler of Bengal, refused to extend the 1917 farmaan.
- 1755 Worried about French competition, the English began renovating the fortifications in Calcutta without Nawab's permission.
- 1756 Nawab Siraj ud Daula's forces captured Fort William, Calcutta, and renamed it Alinagar.
- **February 9, 1757:** Treaty of Alinagar the eventual rise of the East India Company as a political force to be reckoned with.
- June 23, 1757 Battle of Plassey. The Company began territorial control that would serve its economic interests.

Insta Links: Rise of East India Company

Mains Links:

Q. Why did the armies of the British East India Company – mostly comprising of Indian Soldiers – win consistently against the more numerous and better-equipped armies of the then-Indian rulers? Give reasons. (UPSC 2022)

Prelims Links:

Q. Economically, one of the results of British rule in India in the 19th century was the

- 1. Increase in the export of Indian handicrafts
- 2. Growth in the number of Indian-owned factories
- 3. Commercialization of Indian agriculture
- 4. The rapid increase in the urban population

Ans: 3

Population and associated issues

DECODING INDIA'S POPULATION CONUNDRUM



Context:

2023 is set to be a landmark year for India's <u>population</u> trajectory, as the country is predicted to overtake China to become the world's most populous nation.

Background:

- According to the UN World Population Prospects 2022, India is projected to overtake China as the world's most populous country in 2023.
- India's population stands at 1.412 billion in 2022 and is projected to have a population of 1.668 billion in 2050.
- India is expected to reach 1,428.6 million in 2023. On the other hand, China's population fell to 1,411.8 million in 2022 (from 1,412.6 million in 2021).

Implications for India:

Positive

India will continue to have one of the world's youngest populations until 2030.

- In a demographic window of opportunity a "youth bulge," that will last until 2025 (median age in India 28.7 years, 38.4 in China, 48.6 in Japan).
- Prospects to reap the demographic dividend
 share of the working-age population will peak at 57% towards the mid-2030s.
- More working-age population → more tax revenues → savings potential will increase → high growth rate.
- A relatively lower number of those needing care such as the elderly and young children.

Negative

- Lack of policies for education, skilling and health in place.
- Vast underemployment among educated vouths.
- In the absence of meaningful opportunities for the youth, the demographic dividend → demographic nightmare.
- Uneven population growth. For example, some Southern states have populations that age faster than some northern States.

trol' to 'population development'.

 For this, India must frame policies and strategies to effectively unleash the full potential of its young people.

Conclusion:

India is not fully utilizing its <u>demographic dividend</u>, which refers to the economic advantage of having a large working-age population. To fully reap the benefits, India must create high-quality jobs and equip its young, skilled workforce to fill them.

Insta Links:

China's population drops for the first time in 60 years: How this happened, road ahead The Population Paradox

Distribution of key natural resources

LITHIUM DEPOSITS IN J&K

Context:

Geological Survey of India (GSI) has for the **first time** established <u>Lithium</u> inferred resources of about **6 million tonnes** in the **Salal-Haimana area** of the Reasi District of Jammu & Kashmir (UT)

• 51 Mineral Blocks including Lithium and Gold were handed over to State Governments

Significance of the find:

- Reduce the need for imports
- Improve employment opportunities
- Reduce major boost to the manufacture of rechargeable batteries
- Boost to the Economy
- Push for India's Clean Energy targets: Lithium is a key component in batteries for electric vehicles and renewable energy storage systems

Way ahead:

India must shift its lens from 'population con-





Map: Reasi District of Jammu & Kashmir (UT)
Other Potential Sites in India:

- Mica belts in Rajasthan, Bihar, and Andhra Pradesh
- Pegmatite (igneous rocks) belts in Odisha and Chhattisgarh.
- Brines of Sambhar and Pachpadra in Rajasthan, and Rann of Kachchh in Gujarat.

Status of India with respect to these critical mineral resources

- India imports almost all of its need for rare earth metals and of lithium, Cobalt (mostly from China)
- India's demand for these critical resources has risen 6- fold in the last five years as it tries to be the electronic and solar manufacturing hub.
- Recently, India's first-ever Lithium deposit site was found in the igneous rocks located in the Marlagalla-Allapatna region of <u>Southern</u> <u>Karnataka's Mandya district.</u>
- The thermonuclear application makes Lithium
 a "Prescribed substance" under the Atomic Energy Act, of 1962 which permits AMD to
 the exploration of Lithium in various geological
 domains of the country.

To know about India's initiative for securing Lithium: Click here

About Lithium:

Lithium is a **soft, silvery metal**. It has the lowest density of all metals. It reacts vigorously with water.

- Greenbushes mine in Western Australia is the largest hard-rock lithium mine in the world and Australia is the global leader in Lithium production.
- Lithium is primarily extracted from brine pools ('Salar' in Chile) and rock minerals such as spodumene (in Australia)
- Countries with Largest Reserves: Chile> Australia> Argentina



Applications of Lithium:

- Batteries: Lithium is widely used in batteries due to its high electrochemical potential and low weight.
- Glass and Ceramics: Lithium is added to glass and ceramics to improve their thermal stability, transparency, and strength.
- Aerospace: Lithium is used in the production of lightweight alloys for the aerospace industry.
- Pharmaceuticals: Lithium is used in the treatment of bipolar disorder due to its ability to stabilize mood swings.
- Lubricants: Lithium is used as a lubricant in high-temperature and high-vacuum environments.

Lithium Production in Stars: Lithium (Li) production is common among low-mass Sun-like stars during their Helium (He) core burning phase.

About GSI

It is an attached office to the **Ministry of Mines** (HQ: Kolkata; set up in 1851 to find coal deposits for Rail-



ways). It is a **scientific agency in India** to carry out geoscientific activities.

Mains Links:

Q. Lithium-ion batteries are the edifice of the wireless technology revolution. In this context discuss the significance and challenges facing these rechargeable Lithium Batteries. (250 words)

Prelims Links:

- Q. Which one of the following pairs of metals constitutes the lightest metal and the heaviest metal, respectively? (UPSC 2008)
- (a) Lithium and mercury
- (b) Lithium and osmium
- (c) Aluminium and osmium
- (d) Aluminium and mercury

Ans: B

Osmium is a hard metallic element which has the greatest density of all known elements. Lithium has an atomic number of 3 and is the lightest known metal.

Geophysical phenomena

WHY TURKEY IS PRONE TO DEV-ASTATING EARTHQUAKES?

Context:

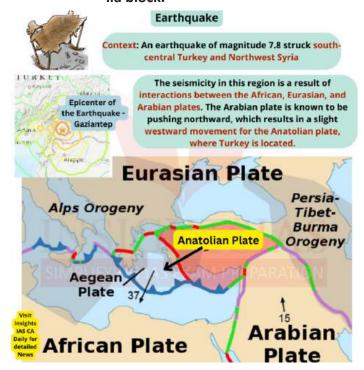
Three <u>earthquakes</u> measuring -- **7.8, 7.6, and 6.0** -- magnitude on the **Richter scale have devastated Turkey and Syria,** while impacting regions as far away as Cyprus, Lebanon, Israel, and Egypt.

Turkey has announced a Level 4 alert calling for international aid; U.S., European Union, Russia, and Azerbaijan have reportedly dispatched aid.

Why is Turkey prone to **Earthquakes**?

- In the region of Turkey, Syria, and Jordan, tectonics are dominated by complex interactions between the African, Arabian, and Eurasian tectonic plates, and the Anatolian tectonic block.
- Other factors:
 - Red Sea Rift, the spreading centre between the African and Arabian plates;

- Dead Sea Transform, a major strikeslip fault that also accommodates Africa-Arabia relative motions;
- North Anatolia Fault, a right-lateral strike-slip structure in northern Turkey accommodating much of the translational motion of the Anatolia block westwards with respect to Eurasia and Africa;
- Cyprian Arc, a convergent boundary between the African plate and the Anatolia block.



What are aftershocks and why do they occur?

- Aftershocks are a sequence of earthquakes that happen after a larger main shock on a fault. They occur near the fault zone where the main shock rupture occurred and are part of the "readjustment process" after the main slip on the fault.
- They become less frequent with time, they can continue for days, weeks, months, or even years for a very large main shock.

Why have the buildings collapsed in the "pancake mode" (like a pack of cards)?

- Shallow Earthquake: The centre of the quake was just around 18 Km beneath the Earth's surface, making it one of the most damaging earthquakes.
 - Shallower earthquakes can be more destructive.
- Non-enforcement of safe building construction



and non-adherence to seismic building codes

Seismic retrofitting for older buildings may be expensive or not considered a priority compared to other socio-economic challenges of Turkey and Syria.

How do Satellites help in Rescue and Recovery efforts during an **Earthquake**?

- Satellite imaging enables humanitarian aid by mapping the condition of roads, bridges, and buildings, and – most crucially – identifying populations trying to escape potential aftershocks.
- Radar satellites will complement the imaging information, as they also operate at night and through clouds, image landslides and even very small changes in altitude.
- Generating Maps for rescue workers, flood alert maps for the public, and mapping of burnt or flooded areas with damage estimates for decision-makers.
- Reconstruction after disasters: Satellite technologies help residents benefit from earthquake-resistant construction, the creation of safe gathering places or relocating living areas to safe locations.

India's Proactiveness in Disaster Relief:

- Turkey (2023): India has sent an Army medical team, National Disaster Relief Force (NDRF) personnel, and medical supplies
- Nepal (2015): The NDRF deployed 16 of its urban search and rescue (USAR) teams, which comprised more than 700 rescuers in the country
- Japan (2011): In the aftermath of the 2011 Tsunami, India also sent 46 members of the National Disaster Response Force (NDRF) to search and rescue in the town of Onagawa. It was their first overseas operation
- Sri Lanka (2004, Operation Rainbow): Despite being the victim of the 2004 Tsunami itself, India sent its forces to carry out rescue operations, called "Operation Rainbow", in Sri Lanka hours after the Tsunami struck the country.

Conclusion

"It is not the disaster, but the lack of preparedness for the disaster that kills". Thus, disaster preparedness is one of the most vital components of disaster management.

Related news:

Turkey invoked the International Charter on "Space and Major Disasters", just after the Earthquake.

About the International Charter on "Space and Major Disasters":

The charter was created by the National Space Research Centre and the European Space Agency in 1999, (now has 17-member space agencies). It aims to provide **free** satellite imagery as quickly as possible over the disaster area.

Insta Links:

Know all the basics about Earthquake: Here

Insta Mains:

Q. Examine the vulnerability of India to earthquakes and propose short, medium and long-term actions to alleviate the risks associated. (250 words)

Q. Discuss the factors that cause earthquakes. Why are Earthquakes more common in certain parts of the world than others? Discuss the role of disaster planning in its management. (15M)

Prelims Links:

Q. Turkey is located between

- (a) Black Sea and Caspian Sea
- (b) Black Sea and Mediterranean Sea
- (c) Gulf of Suez and Mediterranean Sea
- (d) Gulf of Agaba and Dead Sea



Insta Links: Earthquakes in India

Mains Link:

Q. Discuss about the vulnerability of India to earth-



quake-related hazards. Give examples including the salient features of major disasters caused by earth-quakes in different parts of India during the last three decades. – UPSC 2021

Q. The frequency of earthquakes appears to have increased in the Indian subcontinent. However, India's preparedness for mitigating its impact has significant gaps. Discuss various aspects. – UPSC 2015

Prelim Links

- Q. Consider the following (UPSC 2013)
- 1. Electromagnetic radiation
- 2. Geothermal energy
- 3. Gravitational force
- 4. Plate movements
- 5. Rotation of the earth
- 6. Revolution of the earth

Which of the above is responsible for bringing dynamic changes on the surface of the earth?

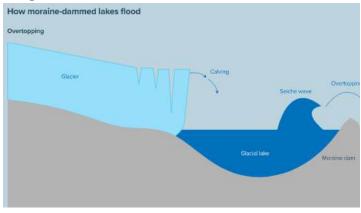
- (a) 1, 2, 3 and 4 only
- (b) 1, 3, 5 and 6 only
- (c) 2, 4, 5 and 6 only
- (d) 1, 2, 3, 4, 5 and 6

Answer: D

HIMALAYAN PLUNDER

Context:

The article highlights GLOF, associated risks and risk mitigation.



What is a GLOF?

- A GLOF is a sudden release of water from a lake fed by glacier melt
- Threatens people's lives, livelihoods and regional infrastructure.

- In the Hindu Kush Himalaya (HKH), GLOF events can be traced back to the failure of moraine-dammed glacial lakes.
- The pressure on the dam, water seeping through the structure, fragmentation of the source glacier, landslides, etc., can trigger a GLOF.
- The frequency of GLOFs is expected to increase due to <u>climate change</u>.

Recent findings:

- The majority of the globally exposed population is located in the region of high mountain Asia and more than 50% in India, Pakistan, Peru and China.
- The population exposed to <u>GLOFs</u> increases with distance from a glacial lake.
- **Rapid deglaciation** over the last 20 years has led to the growth of many large glacial lakes.
- **Increase in the population** living in close proximity to glacial lakes between 2002 to 2022.

Situation in India:

- According to the ICIMOD, Himalayan glacial lakes increased by about 9% in number, and 14% in the area.
- The best-studied glacier is north India's Chhota Shigri, which has lost three times its mass.
- The rapid onset of GLOFs means there is insufficient time to effectively warn downstream populations.

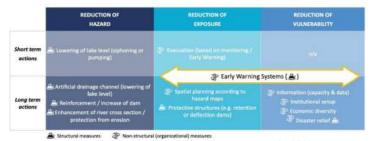
Way ahead:

- Studying glaciers through satellite observations.
- Learning past events and their dynamics will help in <u>disaster risk reduction</u> and <u>climate</u> <u>change adaptation</u> in the region.

Conclusion:

Improvements are urgently needed in designing early warning systems alongside evacuation drills and other forms of community outreach.





Overview of options for the risk management of glacial lakes

Insta Links: Tackling glacial burst

Mains Links:

Q. What is Glacial Lake Outburst Flooding? Examine the vulnerabilities of hydropower projects in the Himalayan eco-sensitive region and suggest measures to overcome the same.

GS2

Local Self Government

MUNICIPAL MESS

Context:

For the third time in a month the Municipal Corporation of Delhi (MCD) failed to elect its mayor after AAP and BJP councillors again engaged in a row over the election process.

Background:

- This MCD conflict is an extension of the yearslong tussle between the two parties over the administration of the national capital.
- Given the complex governance system in place in Delhi, the state and the central coordination has proven challenging in the era of intense political competition.

What's the ongoing issue in the MCD?

- The Presiding Officer (a BJP councillor) for the mayoral election said that aldermen (nominated members) are allowed to vote in the House and elect the Mayor, Deputy Mayor, and members of the Standing Committee.
- However, the AAP had expressed apprehension, as they claim that aldermen do not have voting

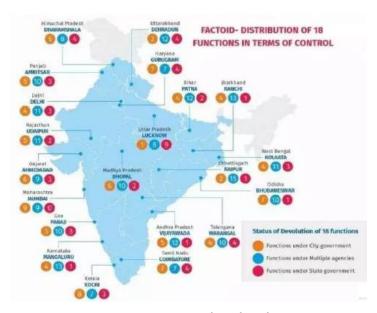
- rights under the Delhi Municipal Corporation Act, 1957.
- In the absence of a mayor, major decisions related to policy matters, development works and projects that require big financial investment are delayed.

Case of Brihanmumbai Municipal Corporation (BMC): An astonishing 22 of 28 municipal corporations in Maharashtra have seen their terms expire with fresh polls nowhere in sight.

Examining urban local governance in India:

- The Constitution (74th Amendment) Act, 1992
 has introduced (Part IX A Article 243 P to ZG]
 and Schedule XII) in the Constitution, which
 provides for the establishment of urban local
 bodies (ULBs) as institutions of local self-government.
- It has empowered state governments to devolve the responsibility of 18 functions including urban planning, regulation of land use, water supply, etc., and made periodic elections compulsory for them.
- Urban governance is part of the state list under the Constitution. Thus, the administrative framework and regulation of ULBs vary across states.
- Experts have highlighted that ULBs across India face similar challenges. For instance, lacking autonomy, city-level functions are managed by parastatals, devolution of powers is incomplete (lacks taxation powers - stressed municipal finances), irregular elections, etc.
- These challenges have led to poor service delivery, severely curtailing urban governance at a time when 675 million Indians are slated to live in urban centres by 2035.





Key suggestions to improve urban local governance in India:

- Constitutional amendments (for making devolution of powers mandatory and setting the accountability of state governments ULBs) to achieve objectives of urban decentralisation.
- Supporting reform-linked investments (on asset creation as well as management) based on the level of urbanisation.
- Inter-government transfers should have in-built incentives to improve performance.
- Integrate various urban development programs (including capacity building) at local, state and national levels to develop sustainable city or metropolitan regions.
- Strengthen urban institutions and clarify the roles of different organisations.
- The second generation of urban reforms should further focus on regulation, innovative financing and PPP, and climate change initiatives.

Conclusion:

In order to establish smarter cities, empowered instead of stalled local bodies are needed. Therefore, Mumbai needs municipal elections, while Delhi needs a mayor.

Insta Links: 74th Constitutional Amendment

Mains Links:

Q. "The reservation of seats for women in the institution of local self-government has had a limited impact on the patriarchal character of the Indian political process". Comment. (UPSC 2019)

Prelims Links: (UPSC 2015)

The fundamental object of the <u>Panchayati Raj</u> system is to ensure which among the following?

- 1. People's participation in development
- 2. Political accountability
- 3. Democratic decentralisation
- 4. Financial mobilisation

Select the correct answer using the code given below

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

Ans: 3

Parliament

WHAT IS ARTICLE 356

Context:

Recently Prime Minister mentioned the **misuse of Arti**cle 356 in the parliament.

Commonly known as <u>President's Rule</u>, <u>Article</u>
 356 allows the president to assume any and all functions of the state.

About Article 356:

- Section 93 of the <u>Government of India Act,</u>
 1935
- Also called a 'State Emergency' or 'Constitutional Emergency'.
- It deals with the 'failure of constitutional machinery in the state' and allows the president to assume any and all functions of the state.
- It can be imposed for six months at a time for a maximum duration of three years.
- After six months, Parliament's approval is needed to reimpose President's Rule.
- In 1978, the **44th Amendment to the Constitution (1978)** was made.
- This stated that President's Rule cannot be extended beyond one year unless:
 - In case of a national emergency
 - The Election Commission of India certifies that it is necessary due to difficulties in conducting Assembly polls.

After President's Rule is imposed, the governor of the



state continues administering the state on behalf of the president. The governor can also take aid from the chief secretary and any other officials.

Issues with the use of Article 356:

- Overuse and abuse in a politically motivated manner, especially by the central government to dismiss state governments run by opposition
- **Subversion of democracy**: It suspends the democratic process in a state
- Lack of accountability: The frequent use of Article 356 has been seen as an infringement on the federal principles of the Indian Constitution and a diminution of the powers of the states.
- Negative impact on governance: It can lead to administrative and governance breakdowns in a state

Recommendations to avoid misuse:

- The Sarkaria Commission in 1983 recommended it only be used in extreme cases.
- The Supreme Court in the landmark 1994 Bommai vs Union of India case, dealing with Article 356 outlined strict guidelines on dealing with the dismissal of a state government.
- For one, it made it mandatory for a no-confidence motion to be passed in the House.
- It also made President's Rule subject to judicial review.
- The court held that Article 356 can be invoked in situations of the physical breakdown of the government or when there is a 'hung assembly', but that it cannot be used without giving the state government a chance to either prove its majority in the House or without instances of a violent breakdown of the constitutional machinery.

Judiciary

THE DISCRIMINATORY INCOME TAX ORDER IN SIKKIM

Context:

A review petition has been filed in the Supreme Court for rectification of the court's observation on Sikkimese Nepalis.

Section 10 (26AAA)

- The section intends to reduce the taxpayer's burden by providing exemptions.
- It describes the income that does not form a part of the total income while calculating the tax for an individual/ exempted income.
- It was inserted into the IT Act 1961 by the Finance Act 2008 with retrospective effect from April 1, 1990, the date on which the IT Act was made applicable in Sikkim.
- Before 1990, the Sikkim Income Tax Manual (SITM), promulgated by the Ruler of Sikkim in 1948, was applicable.

Why was it challenged?

- The petitioners challenged the -
 - Proviso excluding Sikkimese women married to non-Sikkimese men from the benefit of tax exemption.
 - Explanation, which elaborated on the type of income falling under the category, along with a definition of 'Sikkimese'
- Under the Explanation to Section 10 (26AAA), the definition of 'Sikkimese' is confined to -
 - Individuals whose name is recorded in the register maintained under the Sikkim Subjects Regulation 1961, immediately before the 26th day of April 1975;
 - Individuals whose names were included in the Register of Sikkim Subjects by virtue of Government of India Orders 1990 and 1991; and
 - Any individual whose name does not appear in the Register, but the name of such individual's father/husband, etc., has been in the register.
- The constitutional validity of the definition was challenged as it excluded Indians (from tax exemption benefits) who settled in Sikkim before April 26, 1975 - the day Parliament approved the merger of Sikkim with India.

What is the SC's ruling?

- The benefit of tax exemption provided in Section 10 (26AAA) shall be extended to all Indian citizens domiciled in Sikkim on or before April 26, 1975.
- The court struck down the provision excluding Sikkimese women as violative of Articles 14, 15, and 21 of the Constitution.
- A woman is not a commodity and has an iden-



tity of her own that cannot be taken away by marriage.

This is in line with what the SC had earlier ruled in G. Sekar vs. Geetha & Ors (2009).

The court's observations:

- Under the Sikkim Income Tax Manual 1948, all persons engaged in business were subjected to tax irrespective of their origin.
- Therefore, there was no difference made out between the original inhabitants of Sikkim (the Bhutia-Lepchas) and the persons of foreign origin who settled in Sikkim (Nepalis) or persons of Indian origin who had settled down in Sikkim generations back.
- The judgement also recorded that the "Nepalese migrants", were benefiting from Section 10(26AAA) of the IT Act 1961, while arbitrarily excluding settlers of Indian origin.

Insta Links: How did Sikkim become a part of India?

SUPREME COURT TURNS 73

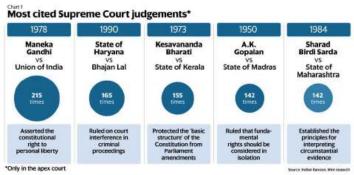
Context:

The court is hosting the **first-ever celebration of its anniversary** with Singapore Chief Justice Sundaresh Menon as chief guest. The Supreme Court was established on **January 28, 1950**, two days after the Constitution.

A brief overview of India's Supreme court:

The Supreme Court of India is the **highest judicial body** in the country and was established in 1950 after India gained independence from British rule. It evolved from the Federal Court of India, which was established in 1937.

Most important judgements of <u>SC</u>:



How has the **Supreme Court** changed over the

years?

- The number of judges: The original Constitution envisaged a Supreme Court with a Chief Justice and 7 puisne judges – leaving it to Parliament to increase this number.
 - Currently, there are 32 judges (including the Chief Justice) (maximum possible strength is 34).
- Sittings: In the early years, all the judges of the Supreme Court sat together to hear the cases presented before them.
 - As the number of cases has increased, the SC sit in smaller benches of two and three – coming together in larger benches of 5 and more only when required to do so.
- Expansion of its jurisdiction: Over the years, the Supreme Court has expanded its jurisdiction, taking on an increasingly active role in public interest litigation and providing judicial remedies for a wide range of social and economic issues.

Significance of SC:

- Final appellate court
- Defender of the Constitution: The Supreme Court is the ultimate interpreter of the Indian Constitution
- Leader in the development of <u>public interest</u>
 <u>litigation</u> in India, allowing citizens to bring cases to the court to address issues of public concern.
- Political Stability: It serves as a check on the power of the government and other institutions, helping to ensure political stability and the rule of law in the country
- Defender of rights: It has also established itself as a defender of the rights of marginalized groups, including women, children, and religious and ethnic minorities.

Limitations of SC:

<u>Case backlog</u>, <u>shortage of judges</u>, staff, and funding, Political pressure, and Difficulty in enforcing judgments.

Top of Form

Conclusion:

Today, the Supreme Court of India continues to play a vital role in the development of Indian law and the protection of human rights. It remains one of the most respected and influential courts in the world.



Insta Links

- **Supreme Court Basics**
- **Indian Judiciary Basics**
- The Supreme Failure

Mains Links:

Q. Supreme Court of India has been at the centre of the evolution of environmental jurisprudence in India. Discuss with the help of important case laws. (10M).

Prelims Links

With reference to Indian Judiciary, consider the following statements: (UPSC 2021)

- 1. Any retired judge of the Supreme Court of India can be called back to sit and act as a Supreme Court judge by the Chief Justice of India with the prior permission of the President of India.
- 2. A High Court in India has the power to review its own judgement as the Supreme Court does.

Which of the statements given above is/are correct?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: C

Constitutional Bodies.

NCST FUNCTIONING WITH LESS **THAN 50% OF SANCTIONED STRENGTH**

Context:

Data from the Ministry of Tribal Affairs (MoTA) revealed that the National Commission for Scheduled Tribes (NCST) is currently functioning with less than 50% of its sanctioned strength

Issues with the staffing in the commission:

- The sanctioned strength of the ST panel is one Chairperson+ one Vice-Chairperson+ three Members= total of Five members (two among V-C and Members must be from the ST community and one member must be a woman).
 - However, currently, it just has a Chairperson (Harsh Chouhan) and one Member (Ananta Nayak) with all other posi-

tions, including that of the mandatory ST Member, vacant for the last three vears

- Posts under Group A, B and C: Against total sanctioned posts of 124; 70 posts are vacant
 - Among the group A posts: Sanctioned posts of one Superintendent of Police, one Law Officer and one Accounts Officer are vacant since 2004.
 - While Group A posts in the NCST are filled by the Ministry, Groups B and C posts are the NCST's responsibility
 - The recruitment rules for the posts are yet to be framed
- Posts of Research Officers, Investigators and Directors are vacant
- Lack of applicants: The Ministry claimed that the **eligibility bar** was set too high for the entry of applicants

Other concerns:

- Fewer meetings: In the financial year 2021-22, it has met only four times.
- High rate of pendency of cases: Its rate of pendency of resolution of complaints and cases that it receives is also close to 50%

About NCST:

NCST is a constitutional body set up by amending Article 338 and by inserting a new article 338A in the Constitution (89th Constitution Amendment Act, 2003) in 2004.

Erstwhile National Commission for Scheduled Castes and Scheduled Tribes was replaced by two separate Commissions namely:

- The National Commission for Scheduled Castes (NCSC)
- The National Commission for Scheduled Tribes (NCST)

For Composition, power, and Reporting: Click on this

For the process of inclusion or exclusion from the Scheduled Tribes list: Click on this link

About Scheduled Tribes:

Schedule tribes are termed "backward tribes" living in the "Excluded" and "Partially Excluded" areas (as per Census-1931).

Article 366 of the Constitution only provides a



process to define Scheduled Tribes: Tribal communities as are deemed under Article 342

- 342(1): The President may specify the tribe as Scheduled Tribe in relation to that State or Union Territory.
- Among the 700 tribes notified, the largest number of tribal communities (62) are found in Odisha and no Tribe was identified in Haryana, Punjab, Chandigarh, Delhi, and Pondicherry.

Few Related Committees

- Lokur Committee (1965): It set the criteria for defining Schedule Tribes
- Bhuria Commission (2002-2004): It focused on issues such as the 5th Schedule to tribal land, forests, health and education, the working of Panchayats and the status of tribal women.
- Xaxa Committee (2013): To study 5 critical issues related to tribal communities: (1) livelihood and employment, (2) education, (3) health, (4) involuntary displacement and migration, (5) and legal and constitutional matters.

Initiatives taken:

Eklavya Model Schools, TRIFED, Pradhan Mantri Van Dhan Yojana

Development of PVTGs, Pradhan Mantri PVTG Development Mission (announced in the recent budget) (<u>check</u> yesterday's CA FFP)

Insta Links: NCST

Mains Links: Q. What are the two major legal initiatives by the State since Independence addressing discrimination against Scheduled Tribes (STs)? (UPSC 2017)

Prelims Links:

- Q. At the national level, which ministry is the nodal agency to ensure effective implementation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006? (UPSC 2021)
- (a) Ministry of Environment, Forest and Climate Change
- (b) Ministry of Panchayati Raj
- (c) Ministry of Rural Development
- (d) Ministry of Tribal Affairs

Ans: D

Government policies and interventions

KERALA HAS A DRUG PROBLEM

Context:

In 2022, Kerala saw a high increase in cases involving drugs, liquor, and prohibited tobacco items, suggesting that drugs have become a new problem for the state.

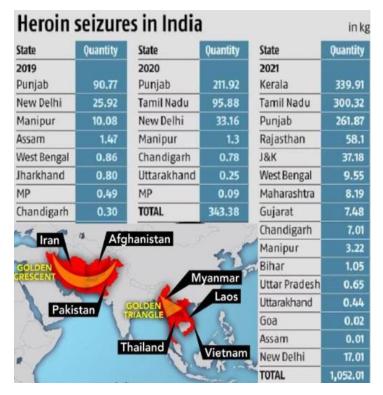
Background:

- Data show that the police registered 26,629 cases under the <u>Narcotic Drugs and Psychotropic Substances (NDPS) Act</u> in 2022 a jump of over 300% when compared to 2016.
- While there was a fall in the quantity of ganja seized in 2022 over the previous year, seizures of heroin, charas and hashish have gone up.
- Bengaluru and Goa remain major hubs from where the drugs are sourced and cannabis is the main drug used by teenagers.
- The steady rise in drug-related cases in Kerala is a factor of both strict enforcement and raids and easier access to contraband.
- Youngsters are now aware of the availability of synthetic/recreational drugs (MDMA and LSD).
 There is also peer pressure to explore these drugs.

Scale of the Drug Addiction problem in India:

- The UNODC's World Drug Report 2022 estimates that around 284 million people use drugs worldwide.
- The report also claims India is one of the world's single-largest opiate markets and most addicts are between the age group of 15 and 35 and many are unemployed.
- More than 60% of all illicit drugs seized in India are from Punjab.





Impact on individual, economy, society and national security:

- Poses a high risk of unintentional injuries, accidents, domestic violence incidents, medical problems and death.
- Impacts on Mental Health: leads to low self-esteem, and hopelessness and can lead to criminal activities/law and order challenges and even suicidal tendencies.
- Drug abusers' economic potential gets severely impacted. For example, they fail to become part of the workforce.
- Money earned from the illegal drug trade is used to aid terrorist organisations, which threatens the defence and security of many countries.

Measures taken by the government:

- The NDPS Act, 1985: Under the act, the Narcotics Control Bureau (NCB) was constituted in 1986 with the prime responsibility of fighting drug trafficking and drug abuse.
- Nasha Mukt Bharat Abhiyaan (NMBA): In 2020, the Ministry of Social Justice and Empowerment launched NMBA in 272 most vulnerable districts of India to address the problem.
- The MoSJ&E has begun the implementation of a <u>National Action Plan for Drug Demand Reduc-</u> tion (NAPDDR) for 2018-2025.
- The government constituted the Narco-Coordination Centre (NCORD) in 2016.

 The government has constituted a fund called the "National Fund for Control of Drug Abuse" to meet the expenditure incurred in combating illicit traffic in Narcotic Drugs, rehabilitating addicts, educating the public against drug abuse, etc.

Best Practice:

The Portuguese model:

- In 2001, Portugal became the first country in the world to decriminalise the possession and use of all illegal drugs.
- Instead of sending people to court for drug possession, its model focuses on education, treatment and harm reduction.

Operation "Gear Box" was started by the Directorate of Revenue Intelligence (DRI) to combat the smuggling of heroin by detecting the hidden drugs in the gearboxes.

Insta Links:

- The 'war on drugs'
- Spurious Drug Menace

Mains Links:

Q. India's proximity to two of the world's biggest illicit opium-growing states has enhanced her internal security concerns. Explain the linkages between drug trafficking and other illicit activities such as gunrunning, money laundering and human trafficking. What countermeasures should be taken to prevent the same? (UPSC 2018)

Welfare schemes for vulnerable sections

ASSAM CRACKDOWN ON CHILD MARRIAGE

Context:

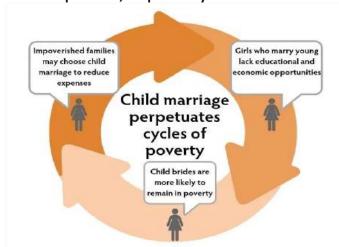
More than 2,000 people have been arrested in a statewide crackdown on child marriages that have taken place in the **state of Assam**.

Data on **child Marriage**:

- UN estimates suggest that 1.5 million girls get married before they turn 18 in India.
- According to the 2011 census, 44 per cent of



women in Assam were married before the age of 18. The figures for Rajasthan, Bihar, and Madhya Pradesh were 47 per cent, 46 per cent, and 43 per cent, respectively.



Historical Perspective on Child Marriage:

- Ancient India
 - Manusmriti: It says that if the father fails to marry off his daughter within three years of her attaining puberty, she can find a spouse on her own.
 - Medhatithi, one of the oldest and earliest commentators on the Manusmriti, eight years is the right age for a girl to be given in marriage
 - The Rig Veda mentions garbhadhan attaining the wealth of the womb. It is the first of the 16 samskaras a Hindu is expected to perform.
 - The Greek traveller Megasthenes (350-290 BC)
 has written that he was told that the women of
 the Pandian kingdom in South India bear children at six years of age. About seven centuries
 later, the Persian polymath, Al Biruni, wrote
 that child marriages were rampant in India.
- Modern India:
 - The colonial state: The Age of Consent Acts of 1861 and 1891 brought in reform in conjugal rights. The 1861 Act laid down 10 years as the minimum age for sexual intercourse. The Hindu intelligentsia opposed raising this age to 12 on the grounds that it violated norms related to garbhadhan.
 - Rukmabai case gave new impetus to the campaign of social reformers like M G Ranade and Behramji Merwanji Malabari. Rukmabai had refused to solemnize her marriage, which had taken place when she was 11.

• Post-Independence:

- At the time of India's independence, the minimum marriageable age stood at 15 years for females and 18 years for men.
- In 1978, the government increased it to 18 for girls and 21 for men.
- Years later, in 2008, the Law Commission came out with a report which stated that the minimum marriageable age for both men and women should be 18 years of age, as both are considered eligible to vote as citizens at the time.

Laws present to prevent Child Marriage:

- The <u>POCSO</u> Act, of 2012 criminalizes sex between a minor and an adult. The law does not recognize a minor's consent as valid. Sexual assault under POCSO is a non-bailable, cognizable offence.
 - Section 19 of, the POCSO Act imposes a "mandatory reporting obligation" which requires every person who suspects or has knowledge of a sexual offence being committed against a child must report it to the police or the Special Juvenile Police Unit.
- The Prohibition of Child Marriage Act 2006, says that child marriages are illegal but not void. Instead, they are voidable at the option of the minor party, in the scenario that the minor petitions the court to declare the marriage void. The Act stipulates 18 years as the minimum marriageable age for women, while for men it is 21 years.
 - The punishment also extends to anyone who performs, conducts, directs, or abets any child marriage.

Central government's stand:

- In 2021, the Central government sought to introduce the <u>Prevention of Child Marriage</u> (<u>Amendment</u>) <u>Bill 2021</u>, to raise the manageable age for women across all religions, from 18 to 21 years. However, the Parliament panel examining this is yet to submit its report.
- The establishment of the Jaya Jaitly Committee in June 2020, by the Ministry of Women & Child Development, submitted a report stating that the marriageable age for women should be increased from 18 to 21 years of age, in light of factors like reproductive health, education, etc.



Modern international laws and conventions on Child Marriage:

- The UN Convention on Consent to Marriage,
- Minimum Age for Marriage and Registration of Marriages (1962),
- The UN Convention on the Elimination of All Forms of Discrimination against Women (1979)
- Beijing Declaration (1995)

Insta Links: How is India planning to end child marriage

Prelims Link: UPSC 2020

Q. In the context of Indian history, the Rakhmabai case of (1884) revolved around?

- 1. Women's right to gain education
- 2. Age of consent
- 3. Restitution of conjugal rights

Select the correct answer using the code given below:

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

Answer: b

Mains Link:

Q. Examine the causes leading to the menace of child marriage in India. How can child marriage be prevented through a combination of Legislation, education, and government action?

Issues relating to Health

RISE OF AMR AND THE DEATH **BURDEN**

Context:

UNEP released a new report - Bracing for Superbugs: Strengthening environmental action in the One Health response to antimicrobial resistance.

It provides evidence that the environment plays a key role in the development, transmission, and spread of Anti-Microbial Resistance (AMR).

About AMR:

Antimicrobials are agents intended to kill or inhibit the growth of microorganisms. They

- include antibiotics, fungicides, antiviral agents, and parasiticides.
- AMR occurs when microorganisms such as bacteria, viruses, parasites, or fungi become resistant to antimicrobial treatments to which they were previously susceptible.

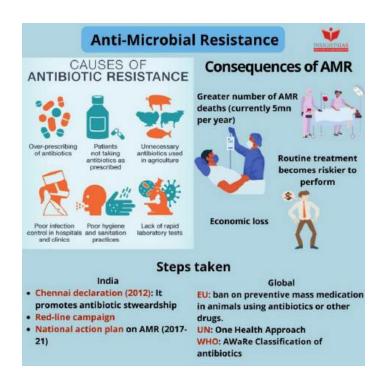
Key findings of the report:

- Up to 10 million deaths could occur annually by 2050 due to antimicrobial resistance.
- Pollution in key sectors of the economy contributes to the development, transmission, and spread of AMR.
- AMR's could result in a GDP drop of at least USD **3.4 trillion annually by 2030,** pushing 24 million more people into extreme poverty
- Microorganisms (particularly bacteria) can acquire resistance following contact with resistant microorganisms.
- AMR challenges are linked to the triple planetary crisis of climate change, biodiversity loss, and pollution and waste.
- Three key sectors of AMR development and spread in the environment: Pharmaceuticals and other chemical manufacturing, agriculture and food production, and Healthcare.

Suggestions in the report:

- Create robust and coherent national-level governance, planning, regulatory and legal frameworks.
- Increase global efforts to improve integrated water management and promote water, sanitation, and hygiene to limit the development and spread of AMR.
- Increase integration of environmental considerations into AMR National Action Plans.
- Establish international standards for what constitutes a good microbiological indicator of AMR
- **Environmental monitoring and surveillance**
- AMR requires a **One Health** response that recognizes that the health of people, animals, plants, and the environment are closely linked and interdependent.





Insta Links: Tackling antimicrobial resistance

Mains Link:

Q. What is anti-microbial resistance (AMR)? What are the factors that lead to AMR? Evaluate India's preparedness in dealing with it. Do you think one health approach is a better way forward to deal with it?

Bilateral Relations

30 YEARS OF INDO-RUSSIAN FRIENDSHIP TREATY 1993

Direction:

The article highlights the major dimensions of <u>India-Russia relations</u> to mark the **30th anniversary of the Indo-Russian Friendship Treaty of 1993**

Context:

The Russian ambassador expressed doubt about the US's reliability as a partner for India and emphasized the **trusted relationship between Russia and India** at an event marking the **30th anniversary of the Indo-Russian Friendship Treaty 1993**

Highlights of the Russian ambassador's speech:

- India and Russia had "always been on the same page", which contrasted with the US approach to India (during the Cold war era).
- Russia has very close cooperation with China, but this will never overshadow the close ties that India-Russia enjoys.
- Russia would like to see the normalisation of <u>India-China relations</u> as this will benefit global and Asian security.
- Russia wants to expand its economic presence in Pakistan, however, it will never do anything detrimental to India.
 - Russia has a limited defence relationship with Pakistan that is directed towards counter-terrorism. A weak Pakistan would not be a better choice for the region, for India or for Afghanistan.

Important dimensions of India-Russia relations				
Political Relations				
International/ Multilateral Organisations and Connectiv- ity Projects	 BRICS, SCO, NSG, UNSG International North-South Transport Corridor (INSTC) - the key connectivity link between Russia and India via Iran 			



INSIGHT SIMPLIPYING IAS EXAM	WEEKLY CURRENT AFFAIRS MAGAZINE		
Defence and Security Coop- eration	 India-Russia military-technical cooperation has evolved from a buyer-seller framework to one involving joint research, development and production of advanced defence technologies and systems. For example, the BrahMos Missile System licensed the production of SU-30 aircraft and T-90 tanks. Both signed the \$5.4-billion deal for five S-400 batteries in 2018, and all deliveries were to be completed in a five-year period. Tri-Services exercise - 'INDRA' 		
Trade and Eco- nomic Rela- tions	A key priority, as is clear by the revised targets of increasing bilateral investment to US \$ 50 billion and bilateral trade to US \$ 30 billion by 2025.		
Nuclear Energy	In 2014, both signed the Strategic Vision for strengthening cooperation in peaceful uses of atomic energy. Kudankulam Nuclear Power Plant (KKNPP) is being built in India with Russian cooperation.		
Space Cooperation	Both sides cooperate in the peaceful uses of outer space. An MoU ISRO and ROSCOSMOS on Joint Activities in the field of Human Spaceflight Programme (Gaganyaan) was signed		
Science & Technology	 The Working Group on S&T functioning under IRIGC-TEC, the Integrated Long-term Programme (ILTP) and the Basic Science Cooperation Programme are the three main institutional mechanisms. Initiatives - <u>Traditional Knowledge Digital Library</u> (TKDL), <u>GIAN</u>, and the Russia-India Network (RIN) of Universities. 		
Cultural Coop- eration	There is a strong tradition of Indian studies in Russia. There is strong interest among Russian people in Indian dance, music, yoga and Ayurveda.		

Timeline of India-Russia Relations:

1468	Russian traveller Afanasy Nikitin began his journey to India
1947	Diplomatic relations between India and Russia began even before India achieved independence
1965	The Soviet Union served successfully as peace broker between India and Pakistan after an Indian- Pakistani border war
1971	Watershed moment in relations between India and the Soviet Union with the signing of the Treaty of Peace and Friendship
1993	After the dissolution of the Soviet Union, India and Russia entered into a new Treaty of Friendship and Cooperation
1994	India and Russia entered into a bilateral Military-Technical Cooperation agreement
2000	Since the signing of "Declaration on the India-Russia Strategic Partnership" in 2000, India-Russia ties have acquired a qualitatively new character with enhanced levels of cooperation
2010	The Strategic Partnership was elevated to the level of a "Special and Privileged Strategic Partnership"



Insta Links: India-Russia relations

Mains Links:

Q. What is the significance of Indo-US defence deals over Indo-Russian defence deals? Discuss with reference to stability in the Indo-Pacific region. (UPSC 2020)

50 YEARS OF BILATERAL TIES (INDIA-QATAR AND INDIA-SOUTH KO-REA)

Direction:

We had already <u>covered India-Qatar ties</u>, here we have presented the basic facts in tabular format and added new points

Context:

The year 2023 marks 50 years (ties established in 1973) of the establishment of full diplomatic relations between **India and Qatar** as well as **India-South Korea**

Mnemonics:

You may remember areas of Cooperation using the keyword: **PEDCAP** - Political, Economic, Defence, Cultural, Arts and People

Area of Coop- eration	India-Qatar Status	Examples
Political Relations	Strong and friendly	 Regular high-level visits, Joint Commission Meetings
Economic & Commercial	Strong trade ties	 Qatar's key exports to India include LNG, LPG, chemicals and petrochemicals, fertilisers, plastics, and aluminium articles, India's key exports to Qatar include cereals, copper articles, iron and steel articles, vegetables, fruits In 2021, India was among the top four largest export destinations for Qatar and is also among the top three sources of Qatar's imports India-Qatar Start-up bridge is a joint initiative to link the start-up ecosystems of two countries
Energy	Major energy partner	 Qatar is one of the largest suppliers of LNG to India, Investment by Qatar in the Indian energy sector
Defence & Security	Defence cooperation	 Joint military exercises: Za'ir-Al-Bahr (Roar of Sea) is a naval exercise between the Indian and Qatar Navy Defence equipment procurement Maritime relations: Interaction between Indian Ports and Qatari Ports
Cultural Ex- changes	Vibrant cultural ex- changes	 Cultural festivals showcasing Indian and Qatari arts and heritage, Exchange programs for artists and intellectuals



Area of Coop- eration	India-Qatar Status	Examples
	The significant Indian ex-pat community in Qatar	 Large Indian community in Qatar (over 8 lakh), and close ties between the two countries through expatriates Qatar Fund for Development (QFFD) sent Covid medical relief material to India 14 Indian schools in Qatar are offering CBSE curricula

India-South Korea Ties: Bilateral consular relations were established in 1962 & upgraded to diplomatic ties (Ambassador-level) in 1973.

On this occasion, a walking pilgrimage (by a group of 108 Buddhist monks from South Korea) will begin from Sarnath in Varanasi and culminate at Shravasti after traversing through Nepal to mark 50 years of India-South Korea diplomatic ties and trace the path Lord Budhha followed.



Area of Coop- eration	India-South Korea Status	Examples
Political Relations	Strong and friendly	 Regular high-level visits: E.g. 2+2 dialogue Joint Commission Meetings: by coordinating India's 'Act East Policy' with South Korea's 'New Southern Policy Strategic Partnership (Strategic Partnership in 2010 which was upgraded to 'special strategic partnership' in 2015 and defence cooperation)
Economic & Commercial	Growing trade ties	 2022 bilateral trade: over USD 27 bn (Target is to reach USD 50 bn by 2030) India-South Korea Comprehensive Economic Partnership Agreement (CEPA) (2010) 'Korea Plus' initiative to promote and facilitate Korean Investments in India such as joint ventures in electronics, automobiles and shipbuilding
Energy	Growing energy cooperation	Civil Nuclear energy Cooperation (2011)
Defence & Security	Defence coop- eration	Joint military exercises, Defence equipment procurement



Area of Coop- eration	India-South Korea Status	Examples
Cultural Ex- changes	Vibrant cultural exchanges	 Buddhist Connection "SamgukYusa" text (13th CE) says that a Princess from Ayodhya married a Korean Prince and became Queen Hur(Heo) Hwang-ok in 48 AD Cultural festivals showcasing Indian and Korean arts and heritage
P e o - ple-to-People Ties	Growing	 The significant Korean ex-pat community in India, Growing Indian community in South Korea

Insta Links

- More about India-South Korea ties
- India a stakeholder in Korean peace: Modi

Mains Links:

Q. India's old ties are being reinvigorated in West Asia in recent times. Comment. What is its impact on India? (10M)

GS₃

Indian Economy

SC CALLS FOR PROTECTING INDI-AN INVESTORS FROM SUDDEN MARKET VOLATILITY

Context:

The SC asked the SEBI and the government about the existing regulatory framework in place to protect Indian middle-class investors.

Background:

- This comes after the Adani Group was accused of stock manipulation and accounting fraud by the American firm Hindenburg Research.
- Earlier, a number of small investors lost lakhs of crores due to rapid market volatility following a collapse in the value of the shares of the Adani Group.

based on | Investing styles

Types of Stock Market Investors

Investor protection measures by the SEBI:

- Investor Education and Protection Fund (IEPF)
- Investor Protection Fund (IPF)
- Investor Awareness Programme
- Simplification of Share Transfer and Allotment Procedure, etc

Investment Type	Description	Risk	Reward	
	These include a share of ownership of a listed company. You earn through stock price increases and dividends.	High	High	
Bonds	These are investment options where your money is invested with a government or institution, and you receive a fixed interest rate at regular intervals or maturity.	Low	Low	
	A well-diversified portfolio of equity, bonds, and money market securities. You can invest in individual funds or hybrid funds.	Medium	Mediun	
United Linked Insurance Plan (ULIP)	ULIPs offer you a venue to invest in multiple equities and debt funds at the same time and manage the portfolio manually or in auto mode.	As per your Portfolio	High	
	You can invest in gold through mutual funds or Exchange Trade Funds (ETFs).	Medium	Low	



Banking and Related Problems

RBI HIKES REPO RATE

Context:

The <u>Monetary Policy Committee</u> (MPC) hiked the **Repo** rate (or the rate at which the RBI lends funds to banks), by 25 basis points to **6.50 per cent** in a bid to rein in retail inflation.

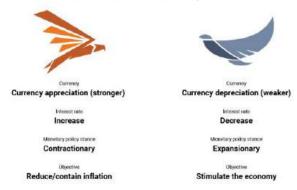
 RBI has projected GDP growth for the next fiscal (FY2024) at 6.4%

Impact of raising the Repo rate:

- Lending rates of banks are expected to go up, leading to a rise in EMIs on vehicles, homes, and personal loans.
 - Over 43% of the total loans are linked to the Repo rate and are expected to rise now
- Lower Inflation: The hike in the Repo rate is expected to help moderate <u>inflation</u> in the country as the cost of borrowing will increase and the demand of people will thus decrease.

What is a hawkish stance?

Hawkish vs Dovish Monetary Policies



Reason for RBI's hawkish stance: It could be due to its outlook on India's slower economic growth and higher inflation in 2023-24.

About Monetary policy and its significance:

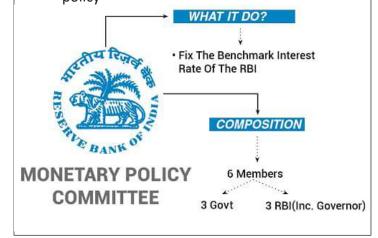
- Monetary policy deals with the supply and cost of money in an economy.
- The primary objective of the RBI's monetary policy is to maintain price stability while keeping in mind the objective of growth.
- The amended <u>RBI</u> Act, 1934 provides for the inflation target (4% +-2%) to be set by the

- Government of India, in consultation with the Reserve Bank, **once every five years**.
- The latest monetary policy review was significant because it was made to bring inflation back to the target level of 4%.

About Monetary Policy Committee (MPC)

As per the Amended (in 2016) RBI Act, 1934: The central government is empowered to constitute a six-member Monetary Policy Committee (MPC) to determine the Policy Rate required to achieve the inflation target".

- Its decisions are binding on the Bank.
- Eligibility criteria to be a member: Must be from "persons of ability, integrity and standing, having knowledge and experience in the field of economics or banking or finance or monetary policy"



Insta Links

- Basics of Monetary Policy
- Analysis of the efficacy of monetary policy

Prelims Links

Q. Which of the following statements is/are correct regarding the Monetary Policy Committee (MPC)? (UPSC 2017)

- 1. It decides the RBI's benchmark interest rates.
- 2. It is a 12-member body including the Governor of RBI and is reconstituted every year.
- 3. It functions under the chairmanship of the Union Finance Minister.

Select the correct answer using the code given below:

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

Answer: A

Q. If the RBI decides to adopt an expansionist mon-



etary policy, which of the following would it not do? (UPSC 2020)

- 1. Cut and optimize the Statutory Liquidity Ratio
- 2. Increase the Marginal Standing Facility Rate
- 3. Cut the Bank Rate and Repo Rate

Select the correct answer using the code given below:

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

Answer: B

Government Budgeting.

IS GOVT. ON TRACK WITH FISCAL DEFICIT TARGETS?

Direction:

The article highlights how the <u>Union Budget 2023-24</u> has tried to achieve <u>fiscal consolidation on one hand</u> and economic recovery on another.

Context:

- In the Union Budget for 2023-24, the Finance Minister chose the path of relative fiscal prudence and projected a decline in fiscal deficit to 5.9% of GDP in FY24, compared with 6.4% in FY23.
- The government is planning to continue on the path of fiscal consolidation (reducing deficits) and reach a fiscal deficit below 4.5% by 2025-26.

Budget Deficit	Difference between total expenditure and total receipts.	
Fiscal Deficit	Total expenditure – (Revenue receipts + Capital receipts which are no debt imposing)	
Revenue Deficit	Difference between revenue expenditure and revenue receipts.	
Primary Deficit	The part of Fiscal Deficit that excludes interest payment amount.	
Effective Revenue Deficit	Revenue Deficit - Grants for creation of capital assets	

The fiscal deficit road map (as a % of GDP)



Years	Budget estimates	Actua	
2017-18	3.2	3.5	
2018-19	3.3	3.4	
2019-20	3.3	4.6	
2020-21	3.5	9.2	
2021-22	6.8	6.7	
2022-23	6.4		

The Union Budget 2023-24:

Different deficits:

- The fiscal deficit (FD) is pegged at 5.9% of GDP in FY24, down from 6.4% in 2022-23 (Revised Estimates RE) and 6.7% in 2021-22 (actual).
 - To finance the FD in 2023-24, the net market borrowings from dated securities are estimated at ₹11.8 lakh crore.
 - The balance financing is expected to come from small savings and other sources and gross market borrowings are estimated at ₹15.4 lakh crore.
 - It is also stated that the states will have to maintain a fiscal deficit of 3.5% of GSDP of which 0.5% will be tied to power sector reforms.
- The revenue deficit is pegged at 2.9% of GDP, down from 4.1% of GDP in 2022-23 (RE).
- The **primary deficit** is pegged at 2.3% of GDP, down from 3% of GDP in 2022-23 (RE).

External debt:

India's external debt is pegged at ₹22,118 crore of the total fiscal deficit of ₹17,86,816 crore in 2023-24 (Budget estimate - BE), which is approximately about 1%.

Fiscal consolidation - Lowering food, fertiliser and petroleum subsidies:

- The food subsidy has been reduced to ₹1,97,350 crore (BE) (from ₹2,87,194 crore in 2022-23 (RE)).
- The fertiliser subsidy has been reduced to ₹1,75,100 crore for FY24 (from ₹2,25,220 crore (RE)).
- The petroleum subsidy has declined to ₹2,257 crore in 2023-24 (from ₹9,171 crore (RE)).
- The rationalisation of subsidies is important so that the government can move towards reaching a fiscal deficit target of 4.5% by 2025-26.

What needs to be done for reviving growth?

- Inflation targeting alone is not sufficient: Given the supply-side shocks, the RBI's interest rate management through inflation targeting is insufficient to successfully control inflation.
 - Also, a high-interest rate regime can hurt the economic growth process.
 - Therefore, <u>fiscal policy</u> measures are crucial to tackling mounting inflation.



- Fiscal policy needs to remain "accommodative":
 - This will go along with a focus on gross capital formation in the economy with enhanced capital spending, especially infrastructure investment.
 - In Budget 23-24, capital spending is expected to rise to 3.3% of GDP.
 - Infrastructure investment has a larger multiplier effect on economic growth and employment.
 - The interest-free loan of ₹1.3 lakh crore for 50 years provided to States should help them spend and boost growth.
- Policy coordination: Between RBI and the govt. is crucial for a sustained growth recovery process.

Can the govt. stick to fiscal consolidation?

- According to Moody, the goal to reduce the deficit to 4.5% of GDP by FY26 is unlikely to be met, even when ongoing-gradual fiscal consolidation helps to stabilise the government's debt burden and protects credit quality.
- According to Fitch Ratings, the slow fiscal consolidation process in the wake of the pandemic could leave public finances exposed in the event of further major economic shocks geopolitical risks, mounting inflation, energy price volatility, etc.

What lies ahead?

- Focusing on economic growth recovery through capex, as the infrastructure investment will boost private investment.
- In the fiscal deficit-GDP ratio, if the denominator GDP expands, it will reduce the overall fiscal deficit-GDP ratio.
- The government is trying to maintain a Goldilocks balance (whereby the economy is not expanding/contracting by too much) between fiscal consolidation (reducing deficits) and economic growth recovery.

Insta Links:

- Union Budget 2023-24
- A budget that signals growth with stability

Mains Links:

Q. What were the reasons for the introduction of the

Fiscal Responsibility and Budget Management (FRBM) Act, 2013? Discuss critically its salient features and their effectiveness. (UPSC 2013)

Prelims Links: (UPSC 2021)

With reference to the Indian economy, demand-pull inflation can be caused/increased by which of the following?

- 1. Expansionary policies
- 2. Fiscal stimulus
- 3. Inflation-indexing wages
- 4. Higher purchasing power
- 5. Rising interest rates

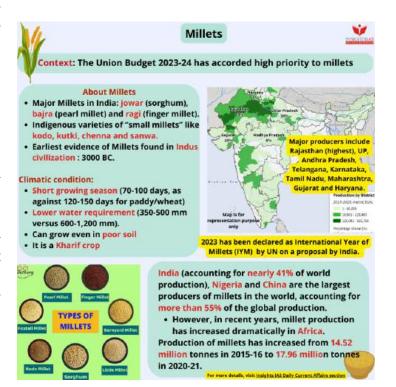
Select the correct answer using the code given below.

- 1. 1, 2 and 4 only
- 2. 3, 4 and 5 only
- 3. 1, 2, 3 and 5 only
- 4. 1, 2, 3, 4 and 5

Ans: 1

Irrigation

INDIA'S BIG MILLETS PUSH



India's efforts in pushing millets:

 FSSAI: It will formulate guidelines to include millets in the food menu of schools, hospitals,



and government canteens.

- "Millet's canteen" to produce millets-based foods (in hospitals)
- The Youth Affairs Ministry: Webinars and conferences with leading athletes, nutritionists, and dieticians on millets through the Fit India app
- Ministry of Food Processing Industries: It has organized millet fair-cum-exhibitions in different states.

What are the benefits of millet?

- Eco-friendly: They require much less water than rice or wheat and can be grown in rain-fed areas without irrigation. They belong to the grass family & tend to be more tolerant to drought and extreme weather and can grow in poor soil and hilly areas.
- Healthy: Millets can be a healthier option to keep lifestyle diseases such as obesity and diabetes at bay.
- Lower glycemic index a measure of how much blood sugar levels spike after consuming a food item — than processed rice or wheat.
- High in fibre content which is known to improve gut microbiota.
- They are rich in micronutrients such as iron and zinc, which can help reduce the country's burden of anemia.
- Millets also contain niacin, which is linked to lowering triglycerides and increasing HDL or good cholesterol.
- Millets contain no gluten and suit people with gluten allergy and irritable bowel syndrome.

Farms - Technology missions

FARM MACHINERY INDUSTRY IN INDIA

Context:

NCAER (National Council of Applied Economic Research) has released a report on "Making India a Global Power House on Farm Machinery Industry".

 The report analyzed the non-tractor farm machinery industry from both demand and supply side perspectives and provides recommendations for reforms based on global practices.

Farm Mechanization:

It refers to the use of machinery and equipment in agricultural operations. It involves the integration of various tools and technologies to automate and streamline various farming processes, including planting, tilling, harvesting, and transporting crops.

Key highlights of the report:

- Recommends measures and reforms for India to become a production and export hub for non-tractor farm machinery in the next 15 years.
- The farm power availability in India is much lower compared to other countries like Korea, Japan, and the USA.

Issues with Farm Mechanization:

- Power supply availability is very crucial for timely farm operations for increasing production and productivity and reducing losses.
- Uneven distribution
- A mismatch between the needs of Indian farmers and what the farm machinery sector is producing.
- Banks are reluctant to lend to farmers.

Steps taken by the Government to promote <u>Farm</u> <u>Mechanization</u>:

- Sub-Mission on Agricultural Mechanization (SMAM), Drones promotion, etc.
- Training and testing by FMTTIs of agricultural machines including tractors, power tillers, combine harvesters, etc.
- The institutes have provided a pool of over 2.3 lakh skilled professionals in the area of farm mechanization

1. INCREASED CROPPING INTENSITY AND PRODUCTION 2. INCREASED PRODUCTIVITY OF LABOR 3. FULL UTILIZATION OF FARM PRODUCTS AND BY PRODUCTS 4. REDUCTION OF LOSSES 5. INCREASED VALUE ADDED OF FARM PRODUCTS 6. EMPLOYMENT AND LIVELIHOOD GENERATION 7. IMPORT SUBSTITUTION 8. EMPLOYMENT AND LIVELIHOOD GENERATIO



Infrastructure: Energy

A NORDIC-INDIA CONNECTION TO POWER A GREEN TRANSITION

Context:

The Nordic countries are ready to offer their technologies and expertise to India as it moves towards a green, digital, and innovative future.

The Nordic countries include the sovereign states of Denmark, Finland, Iceland, Norway and Sweden.



Recent developments in India-Nordic countries' relations:

- The 2nd Nordic-India Summit (Copenhagen)
 2022: Both agreed to intensify cooperation on digitalisation, renewable energy, maritime industries, and the circular economy.
- Trade links: Trade between Norway and India
 has doubled (to \$2 billion) in the last three
 years and it is likely to become one of India's
 largest single foreign investors (around \$17.6
 billion).
- Investment in renewable energy: Norway's new Climate Investment Fund (for investments in renewables abroad) has invested almost ₹1,500 crores in India so far.
- Leadership Group for Industry Transition (LeadIT): Launched by Sweden and India at the UN Climate Action Summit in 2019 and supported by the WEF, it gathers countries and companies that are committed to action to achieve the Paris Agreement.

Untapped potential:

 Trade in services: tourism, education, IT, energy, maritime and financial services.

Way ahead:

- Finalising a fair, equitable and balanced **Free Trade Agreement** (FTA).
 - Finland, as a member of the EU, is a part of the <u>EU-India FTA negotiations</u>, and Norway is negotiating through the European Free Trade Association.

Conclusion:

 Nordic countries have been pioneering green technologies and with their help, India can power the green transition such as hydrogen, offshore wind, batteries and carbon capture and storage to stop climate change and boost green growth.



Insta Links:

Diplomatic Dispatch- 2nd India-NORDIC Summit

Awareness in the Field of IT

GENERATIVE AI

Direction:

We had already covered <u>Generative AI previously</u>; the points given here are only the unique points that we didn't cover previously.



What is Generative AI:

- Generative Artificial Intelligence refers to the capability of artificial intelligence-enabled machines to use existing text, audio files, or images to create new content.
- The software uses complex machine learning models to predict the next word based on previous word sequences, or the next image based on words describing previous images.
- Since then, large language and text-to-image models have proliferated at leading tech firms including Google (BERT and LaMDA), Facebook (OPT-175B, BlenderBot), and OpenAl, a nonprofit in which Microsoft is the dominant investor (GPT-3 for text, DALL-E2 for images, and Whisper for speech).

Benefits of Generative AI:

- Automated content generation
- Improved content quality
- Increased content variety
- Personalized content

Generative Adversarial Network:

A generative adversarial network (GAN) is a machine learning (ML) model in which two neural networks compete with each other to become more accurate in their predictions. GANs typically run unsupervised and use a cooperative zero-sum game framework to learn.

Ethical concerns associated with Generative AI:

- Bias and Discrimination: Al models can perpetuate and amplify biases in their training data, leading to discriminatory outcomes and unjust decisions.
- Responsibility and accountability
- Privacy: Generative AI models have the potential to collect and generate vast amounts of personal data, which can raise privacy concerns.

- Ownership and control
- Fairness and transparency: Al models can make decisions that lack transparency and fairness.
- Job displacement
- Misuse: Al models can be used for malicious purposes, such as creating fake news or deep fakes, or spreading hate speech.
 - Top of Form

Indian Initiatives for Generative AI:

- The Government has published the <u>National</u> <u>Strategy for Artificial Intelligence</u> with the objective of developing an ecosystem for the research and adoption of <u>Artificial Intelligence</u>.
- Subsequently with a vision to 'Make AI in India and Make AI work for India', MeitY has approved the implementation of the 'National Program on Artificial Intelligence' for the development of AI-based solutions and ensure responsible and transformational use of #AI for AII.
- The Department of Science & Technology is implementing the <u>National Mission on Interdisciplinary Cyber-Physical Systems</u> (NM-ICPS).

Insta Links:

Generative Al

A New Global Standard for AI Ethics

Environmental Conservation

PROGRESS REPORT OF MOES

Context:

According to a Parliamentary committee report, the Ministry of Earth Sciences (MoES) made progress but has been 'sluggish' on a few counts.

Progress report of MoES:

Initiatives	Note	Progress
Establishing District Agro-meteorological Field Units (DAMU)		 In 2021-22, 3 DAMUs were established (at Kupwara in J&K, Almora, and Pithoragarh in the UK), however, the target was 20.



Installing and commissioning Doppler Weather Radars (DWR)	 Can predict extreme weather events The entire country will be covered by DWR Network by 2025 	So far, only six DWRs have been installed in Uttarakhand, Himachal Pradesh, Jammu, Leh, and Aya Nagar in Delhi
Installing Automatic Weather Stations (AWS), Climate Reference stations, and X-band radars	Study cloud development and light precipitation	Currently, 727 AWSs exist and the ministry is procuring more to realise its target
Polar studies	 Need to replace or upgrade the Maitri Station in Antarctica, which was set up in 1988. The committee hopes the proposed new Station - Maitri-II, will be completed on time. 	

Major schemes of MoES:

- The atmosphere and Climate Research-Modelling Observing Systems and Services (ACROSS)
- Ocean-Services, Modelling, Application, Resources, and Technology (O-SMART)
- POLAR SCIENCE AND CRYOSPHERE RESEARCH (PACER)
- Seismology and Geosciences (SAGE)
- Research, Education, Training, and Outreach (REACHOUT)
- Deep Ocean Mission (DOM)

Way ahead:

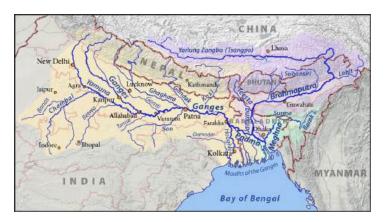
- To revisit its performance in terms of the realization of physical targets set under various schemes.
- As acquiring the funds has been challenging, getting in-principal approval from the Department of Expenditure for different initiatives.

Environmental pollution and degradation

LONG-TERM GROUNDWATER STORAGE IN GANGA BASIN DECLINES

Context:

- According to new estimates, groundwater storage levels have been declining by 2.6 centimetres per year in the Ganga basin.
- The impacts were more pronounced in Rajasthan, Haryana and Delhi, with average storage declines of roughly 14 cm/year, 1, 7.5 cm/year and 7.2 cm year-1, respectively.



Background:

- A recent Central Groundwater Board yearbook, which monitors groundwater levels four times a year, found that the water levels in 2021-2022 rose compared to the 2011-2020 average.
- The Brahmaputra basin, which was not a part of the study, shows more groundwater level reduction than the Ganga and Indus basins.

Findings of the study:

- The Ganga Basin's aquifers are one of the largest reservoirs of groundwater in the world.
- Researchers **used three different methods** to



study long-term groundwater storage across six states.

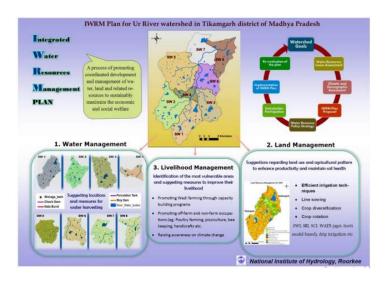
- Data between 1996 and 2017 from the Central Groundwater Board.
- Data from the Gravity Recovery and Climate Experiment (GRACE) satellites launched in 2002 to assess Earth's water reservoirs over land, ice and ocean.
- A model to study groundwater dynamics and storage changes.
- All three analyses depicted that groundwater in the Ganga basin is declining. The new study included western Delhi, Haryana and Rajasthan under the Ganga basin.
- Rajasthan, whose groundwater reserves contribute about 90% of the drinking water and 60% of the irrigation, is showing an improvement in groundwater levels in the recent past.

Impacted Regions:

- Agriculturally intensive regions and urban areas (like Delhi and Agra) took the biggest hit.
- Delhi and Haryana have high groundwater abstraction rates (Groundwater abstraction refers to the process of removing water from underground aquifers for various purposes such as irrigation, drinking water supply, industrial use, or for recharging depleted aquifers.)

Reasons highlighted by the WMO's - first State of Global Water Resources 2021:

- The worsening impact of climate change/global warming - more water flowing in the river channels due to glacial melt, however, total water storage declined in 2021.
- Over-abstraction of groundwater for irrigation.



Insta Links:

- UN Groundwater Summit 2022 to help raise awareness on aquifer protection, sustainable use
- <u>Dynamic Ground Water Resource Assessment 2022 Report</u>

Mains Links:

Q. What are the salient features of the Jal Shakti Abhiyan launched by the Government of India for water conservation and water security? (UPSC 2020)

E-WASTE'S IMPACT ON POOR CHILDREN

Context:

Rising number of children in the extraction of the <u>e-waste</u> sector is a crude and hazardous process that goes unregulated.

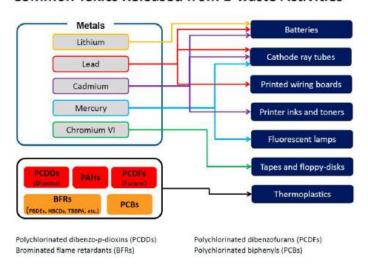
 According to the Global E-waste Monitor 2020, the world dumped 53.6 million metric tons of e-waste in 2019. India produced 3.2 million metric tons of e-waste, much of which is dumped for dismantling and recycling in Seelampur with no regulations.

About e-waste:

- The term electronic and electrical waste (e-waste) refers to "electrical or electronic equipment, which is waste, including all components, subassemblies, and consumables, which are part of the equipment at the time the equipment becomes waste"
- E-waste includes large, discarded appliances, such as refrigerators, air conditioners, and washing machines, as well as small personal items, including computers, televisions, mobile phones, and many other devices that are operated by electrical currents or batteries.



Common Toxics Released from E-waste Activities



What health risks are the children exposed to?

- Toxic substances: Toxic substances such as lead, cadmium, mercury, and flame retardants, can be harmful if not properly disposed of. Serious skin diseases and chronic lung infections due to continuous exposure to these chemical-laden toxins.
- Disabilities: Even relatively low lead exposure in children can result in a reduction in total intelligence quotient (IQ) and several behavioural abnormalities, including a decrease in attention span and an increase in frustration and disruptive behaviour.
- Exposure to hazardous waste: Like Nickel, Mercury can cause long-term incurable diseases.
- **Environmental contamination**: Contaminated soil and water potentially affect the health of local populations, including children.
- Loss of access to educational opportunities:
 In some developing countries, e-waste dumping has caused environmental degradation and health problems, leading to school closures and limiting children's access to education.

India's initiatives to tackle e-waste:

- Extended Producer Responsibility; Design for Environment; (3Rs) Reduce, Reuse, Recycle technology platform for linking the market facilitating the circular economy aim to encourage consumers to correctly dispose of the e-waste.
- E-waste (Management) rules 2022
- India has tried to tackle this unregulated industry and introduced a series of laws in 2011 and 2016 mandating the authorization and registration of all e-waste recycling facilities, along with directives for workers to use protective

- equipment while dismantling the waste.
- India's first e-waste clinic to be set up in Bhopal

Way Forward:

Recycling electronic devices through certified e-waste recycling programs or donating them to organizations that can reuse them can help reduce the issue of e-waste.

Mains link:

Q. Electronic waste, or e-waste, is becoming major a domestic and global issue. Discuss the steps that must be taken to ensure the safe disposal of e-waste in the country. (15M)

POOR OF A COUNTRY EMITS LESS, LOSE MORE

Context:

According to the **Climate Inequality Report 2023**, <u>low</u> and <u>middle-income countries are disproportionately impacted</u> by <u>climate change</u> even though they emit less GHGs than their richer counterparts.

Findings of the report:

- 48% of emissions are from the top 10% of emitters, having 76% capacity to finance and their relative loss is a mere 3% from climate change.
- The global bottom (50%) has only a 2% capacity to invest, with an emission of 12% and a massive relative loss of 75%.
- Climate change contributes to economic destitution in subtropical and tropical countries. For instance, it reduces agricultural productivity in poorer nations while increasing it in some temperate nations.
- Climate change also has adverse effects on mental health. For example, a 1-degree Celsius increase in monthly average temperatures increases suicide rates by 2.1% in Mexico.

Suggestions in the report:

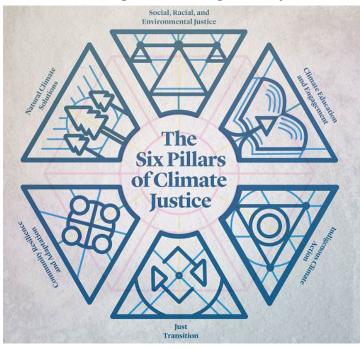
The wealthiest individuals (0.001% of the world's adult population) with over \$100 million should pay a 'progressive tax' ranging from 1.5-3% of their fortune to help less fortunate people adapt to global warming and crisis.



- Combating global poverty need not overshoot global carbon budgets to meet the <u>Paris Agree-</u> ment targets.
- Redistribution measures to combine poverty alleviation and climate change mitigation efforts.
- Emerging economies like China carry increased responsibility to produce transparent strategies for reaching <u>Net Zero emissions</u>.

Conclusion:

- The need for a just transition to a low-carbon economy reflects unequal responsibility for causing the climate crisis and uneven capacity to help address it.
- Not only countries but also individuals have different responsibilities (common but differentiated responsibilities) toward combating climate change and ensuring climate justice.



Insta Links:

Working towards climate justice in a non-ideal world

Mains Links:

Q. 'Climate Change' is a global problem. How will India be affected by climate change? How Himalayan and coastal states of India are affected by climate change? (UPSC 2017)

Disaster and disaster management.

BUDGET PUSH TO MANGROVE

Context:

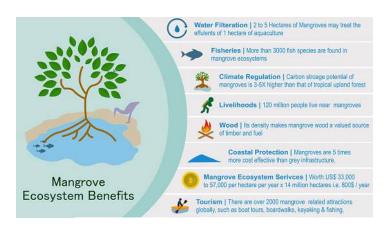
The <u>Union Budget for 2023-24</u> announced an initiative for mangrove plantation along the coastline and on saltpan lands, under **MISHTI** (Mangrove Initiative for Shoreline Habitats & Tangible Incomes).

About Mangroves:

- Mangroves are salt-tolerant plant communities found in tropical and subtropical intertidal regions. They are important refuges of coastal biodiversity and act as bio-shields against extreme climatic events.
- They are located in the intermediate zone between the land and the sea and represent one of the best examples of ecotone.

Threats to mangroves:

- Deforestation: Agriculture and aquaculture, urban development, and harvesting have caused the loss of more than a quarter of mangrove forests.
- Land reclamation for agriculture and industrial activities has occurred in areas, which are under the Coastal Regulation Zone.
- Increasing population in coastal areas



Mangroves in India

- The 'State of World Mangroves 2022' report by the Global Mangrove Alliance puts the total mangrove cover of the world at 1,47,000 sq km (14.7 million hectares).
- India has about 4,992 sq km (0.49 million hectares) of mangroves, according to the Indian State of Forest Report (IFSR) 2021.
- Mangroves in India are distributed across nine
 States and three Union Territories with West
 Bengal having the highest mangrove cover of



2,114 sq km.

The IFSR report also points out that there has been an increase in the mangrove cover from 4,046 sq km in 1987 to 4,992 sq km in 2021.

About MISHTI Scheme:

- MISHTI will be implemented through convergence between the MGNREGS (Mahatma **Gandhi National Rural Employment Guarantee** Scheme), **CAMPA** (Compensatory Afforestation Fund Management and Planning Authority) Fund, and other sources.
- Organizations that have been involved in mangrove plantations say that the initiative requires extensive work with local communities.

Insta Links:

- **Importance of Mangroves**
- Conservation of Mangroves

Prelims Link: UPSC 2011

- Q. The 2004 Tsunami made people realize that mangroves can serve as a reliable safety hedge against coastal calamities. How do mangroves function as a safety hedge?
- (a) The mangrove swamps separate the human settlements from the sea by a wide zone in which people neither live nor venture out.
- (b) The mangroves provide both food and medicines which people are in need of after any natural disaster.
- (c) The mangrove trees are tall with dense canopies and serve as an excellent shelter during a cyclone or Tsunami.
- (d) The mangrove trees do not get uprooted by storms and tides because of their extensive roots.

Solution: D

Mains Link:

Q. Discuss the causes of the depletion of mangroves and explain their importance in maintaining coastal ecology. UPSC 2019

TURKEY EARTHQUAKE: A RE-**MINDER OF TRAGEDIES AWAIT-ING INDIA**

Direction:

The article highlights how India should use the recent earthquake in Turkey as a lesson and get ready for the future.

Why is Indian terrain prone to great earthquakes?

- The political boundaries roughly follow the tectonic divides in the west, the north and the east.
- The 2,500-km-long **Himalayan** plate boundary from the northwest to the northeast.
- The historical release of geological tension doesn't fully account for the strain that has built
 - For instance, the Central Himalayas has been historically deficient in earthquakes.
- **New dams** at the foothills of the Himalayas.

The trend in annual losses from disasters: Has been markedly upward, mainly due to an increase in the aerial extent of habitation in vulnerable areas.

Way ahead:

- Undertake a comprehensive study of the vul**nerability** of buildings and structures.
- To ensure -
 - All new constructions (especially in high-risk zones) can resist shaking and
 - All existing buildings are protected by retrofitting.
- In areas where traditional structures are more common, bolster traditional earthquake resistance methods.
- Must overhaul town and municipal planning by-laws to accommodate hazard-safety measures.
- Use the appropriate building codes, developed by the Bureau of Indian Standards.
- Develop an environmental land zonation scheme for urban and rural areas.
- Translate detailed scientific knowledge on earthquake safety into a format that is easily available, accessible, and actionable
- **Real-time and free data-sharing** should become a norm.



Conclusion:

<u>The Turkey</u> and the <u>Joshimath</u> disaster must be an eye-opener for Indian authorities to **integrate development with <u>disaster mitigation</u> strategies,** through systematic, long-term, cost-effective and grassroots community-based initiatives.

Mains Links:

Q. Discuss about the vulnerability of India to earthquake-related hazards. Give examples including the salient features of major disasters caused by earthquakes in different parts of India during the last three decades. (UPSC 2021)

GS4

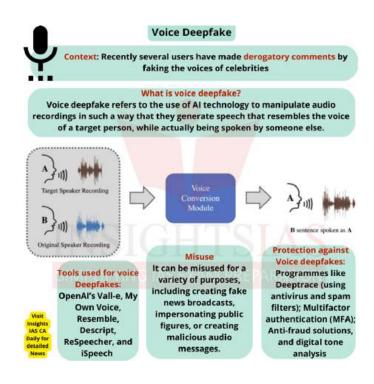
Technology v/s Issues concerned

WHAT ARE VOICE DEEPFAKES?

Context:

Recently several users of **ElevenLabs** ("speech synthesis" and "voice cloning" service provider) made voice deepfakes of celebrities like Emma Watson, Joe Rogan, and Ben Shapiro.

 Those deepfake audios made racist, abusive, and violent comments without consent.



Ethical concerns related to the use of voice deepfakes:

- Deception: Using false or misleading audio recordings
- Privacy invasion: Making deepfake voices to impersonate others without their consent
- Damage to reputation and credibility
- Lack of regulation: Currently no law regulates it
- Impact on public trust: It may lead to misinformation.
- Discriminatory uses: It can be used to create fake recordings of marginalized communities, amplifying harmful stereotypes and perpetuating discrimination.

Other Concerns:

- Cases of defrauding users: E.g. In 2020, a manager from a bank in the U.A.E., received a phone call from someone he believed was a company director to transfer \$35 million.
- Identity Theft: Morgan Neville's documentary film on the well-known late chef Anthony Bourdain used voice-cloning software to make Bourdain say words he never spoke. This sparked criticism.
- Phone scams
- Posting fake videos on social media platforms:
 To blackmail the target

To know about what countries are doing and what should be the solution for deepfakes: Refer to our last month's article on deepfakes

Insta Links: Countering Deepfakes

Mains Links:

Q. Use of the internet and social media by non-state actors for subversive activities is a major security concern. How have these been misused in the recent past? Suggest effective guidelines to curb the above threat. (UPSC 2016)

Corporate governance.

ALL GOVERNMENTS ARE CRONY CAPITALISTS

Context:



The recent Hindenburg report on the Adani group and instances of **business-political nexus** have highlighted the term 'crony capitalists'

What is **Crony capitalism?**

A political-economic system in which success in business depends on close relationships between **business people and government officials**, rather than on merit and competition

Examples of Crony capitalism:

- India: Adani Group (CAG report highlighted "undue benefits" that the Gujarat government gave to Adani Ports by waiving waterfront and other charges); The 2G spectrum scam; Coalgate Scandal etc.
- Russia: Privatization of state-owned assets in the 1990s resulted in a small group of oligarchs acquiring significant wealth and political power
- USA: The 2008 financial crisis: Several large banks received government bailouts
- **China**: State-owned enterprises (SOEs) receive preferential treatment

Reason for high crony capitalism in India:

- Weak governance and lack of transparency in the political and bureaucratic systems
- Corruption
- Lack of competition in the business sector dominated by a few large conglomerates
- Influence of money and power where financial resources shape government policies
- Weak legal and regulatory frameworks with slow and inefficient courts
- Weak enforcement of laws and regulations.
- Complex rules and regulations

Ethical issues with Crony Capitalism:

- Corruption: It undermines the integrity of public institutions and erodes trust in the democratic process.
- Inequality: It creates a two-tiered system and exacerbates income and wealth inequality, contributing to social injustice.
- Reduced Competition: It stifles innovation, reduces economic growth, and limits opportunities for small businesses and entrepreneurs.
- Lack of Social Responsibility: Crony capitalists often prioritize their own self-interest over the well-being of society.

 Not good for democracy: Crony capitalists influence the political results and undermine the democratic process and erode the separation of powers.

Safeguards:

Uday Kotak Committee recommendations against Crony Capitalism:

- Transparency in related-party transactions through complete disclosure
- Independent directors: Companies should have a minimum of 50% independent directors
- Enhanced role of audit committees
- Strengthening the corporate governance framework

Other measures needed:

- Transparency and disclosure of political contributions
- Regulation of lobbying activities
- Election Campaign finance reform
- Reform of government procurement practices e.g., the <u>GeMS portal</u>

Related news:

Ethics and Business

What is Business ethics?

It refers to a collection of values and concepts that guide how businesses should conduct themselves and engage with stakeholders.

The world today is facing numerous negative issues such as widespread corruption, greed, violence, poverty, and environmental destruction.

The root cause of these issues:

- Erosion of moral values and ethics, resulting in an unprecedented trust deficit.
- Globalization and technological developments have sped up this process

Businesses have enormous potential to contribute to society but are also capable of causing harm through exploitation, corruption, and unethical practices.

Some examples of unethical practices of corporates are:

- Accounting and Financial Information: Creative accounting, tax evasion, insider trading, securities fraud, forex scams, bribery, kickbacks, facilitation payments,
- Human Resource Development (HRD): discrimination ~ age, gender, race, religion; at-will employment, surveillance, sexual harassment and



- whistle-blowing.
- Sales and Marketing: Price fixing, anti-competitive practices, anti-trust laws, greenwashing, etc.
- Production: Addictive, defective, inherently dangerous products
- Intellectual Property: Patent infringement, bio-prospecting, bio-piracy, hijacking of traditional intellectual properties like Ayurvedic medicines
- International Trade: Unfair trade, dumping, outsourcing to the cheapest destinations, globalization, economic and cultural imperialism, child labour, etc.
- General Corporate Philosophy: Stockholder vs. stakeholder concept, corporate governance and corporate social responsibility, industrial espionage, political contributions, and corporate manslaughter.

Solutions:

- Develop a code of ethics
- Provide ethical decision-making training
- Cultivate an ethical environment
- Hold employees accountable for their actions

Case Study: Tata group prioritize ethics and integrity over profit and has earned the respect and trust of its stakeholders, increased its profitability, and continues to contribute to a more sustainable and prosperous future for all.

Mains Links:

Q. Corporate governance in India is in need of structural reforms which will promote transparency, fix accountability and reward efficiency. Analyse. (15M)

FACTS FOR PRELIMS

GS1

Indian Heritage and Culture

VISVA-BHARATI TO GET THE WORLD'S FIRST LIVING HERITAGE UNIVERSITY TAG

Context:

Founded by <u>Rabindranath Tagore</u> in 1921, Visva-Bharati University will soon get the 'heritage' tag from <u>UNE-SCO</u> to take the distinction of world's first living heritage university.

 Normally <u>heritage tag</u> is given to a dead monument. For the first time in the world, a living university, which is functioning, is going to get the heritage tag from UNESCO.

About Visva Bharati University:

- When founded in 1921 it was named after Nobel Laureate Rabindranath Tagore until the Visva-Bharati Society was registered as an organization in May 1922.
- In 1922, Visva-Bharati was inaugurated as a Centre for Culture with an exploration into the arts, language, humanities, and music and these are reflected in diverse institutes that continue in their educational programmes.
- The structures in these institutes constitute a myriad of architectural expressions: the Kalo Bari, a mud structure with coal tar finish and sculpture panels; Mastermoshai studio, a single-storied structure built for the first principal of Kala Bhavan, Nandalal Bose; murals and paintings on Cheena and Hindi Bhavan, created by the illustrious artists like Benodebehari Mukhopadhyay, Nandalal Bose, Surendranath Kar, Somnath Hore with the active involvement of students.

KEELADI REPORT PUSHES SAN-GAM AGE FURTHER BACK TO 800 BCE

Context:

<u>The Sangam age</u> has been **pushed to 800 BCE based** on the archaeological findings from an excavation carried out by the <u>Archaeological Survey of India</u>.

- Based on the results of stratigraphy of the cultural deposits, the period of the Sangam era archaeological site has been placed between the 8th century BCE to the 3rd century CE(800 BCE and 300 CE)
- Sangam age was believed to be between 300 BCE to 300 CE.
- It has been classified into three periods:



- The pre-early historic period between 800 BCE to 500 BCE
- The mature early history between 500 BCE to the end of 1st century BCE
- Post-early history from 1st century BCE to 300 CE

DHAMAAL

Context:

A new documentary — has focused on the music and dance performances of the Siddi community in Gujarat, called Dhamaals.

What are Dhamaals?

- Dhamaal is a mix of Sufi and African (mostly East African) musical and dance traditions. It refers particularly to the spiritual practices of the Siddis of Gujarat.
- The Siddis begin almost every Dhamaal song by blowing into a conch shell.
- **Instrument**: East African percussion instruments like the musindo and the slow thumping of feet
- Dhamaals are performed in memory of their spiritual leaders - Bava Gor, Mai Misra, Baba Habash and Sidi Nabi Sultan.
- They are performed in two ways Dance Dhamaal (sitting and dance position) and **Baithaaki Dhamaal** (only sitting position)

WHO ARE THE DAWOOD! **BOHRAS?**

Context:

A five-judge Constitution Bench of the Supreme Court referred the challenge to the constitutional validity of the practice of ex-communication in the Dawoodi Bohra community to the nine-judge Bench.

Who are the Dawoodi Bohras?

- The Dawoodi Bohras are Shia Muslims whose leader is known as the Al-Dai-Al-Mutlag.
- According to members of the community, there are around 1 million Dawoodi Bohras spread around the world.
- For over 400 years, the leader of the commu-

- nity has been based in India, including the current and the 53rd leader.
- The leader of the community is recognized by the members as having the right to excommunicate its members. In practical terms, ex-communication means not being allowed to access a mosque belonging to the community or a burial dedicated to the community.

Related News:

- An academy for religious and other education for the Dawoodi Bohra community, Aljamea-tus-Saifiyah was recently inaugurated in Mumbai.
- Also known as Jamea, this is an academic institute exclusively catering to the education of young boys and girls from the Dawoodi Bohra community.
- While the academy's focus will primarily be on spiritual and religious studies, the academy will also provide its students with mainstream education in association with an internationally recognized school board curriculum.

Geography

STONE-AGE CARVINGS FOUND IN **ARAVALIS**

Context:

Various Paleolithic paintings found in the Aravalli hills and the latest discovery of stone carvings in the Badshahpur area has widened the trove of history in the Gurugram region.

About the findings:

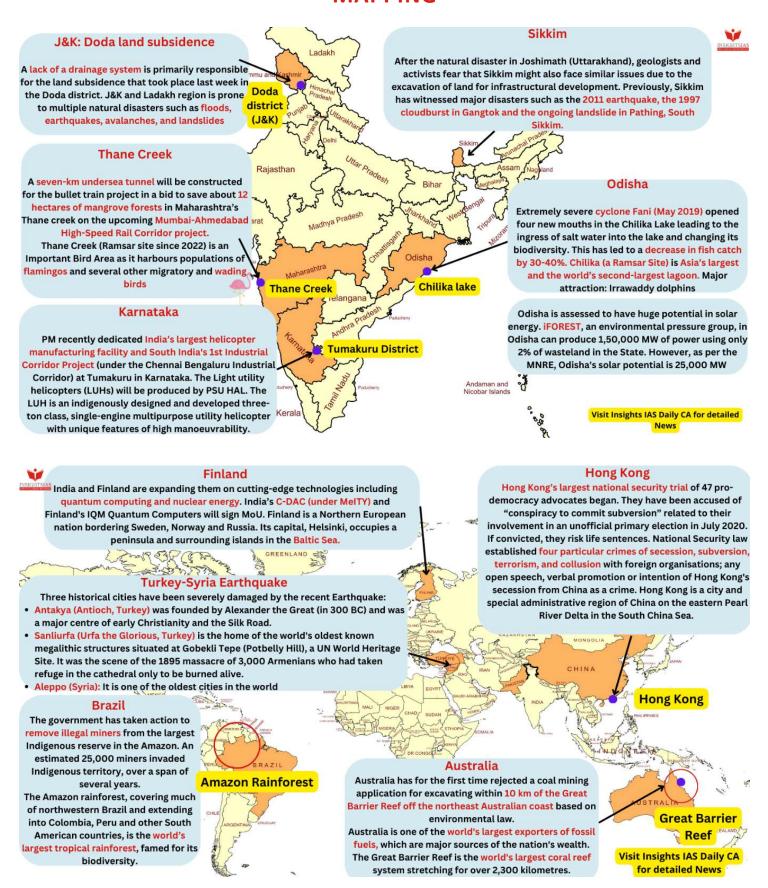
- The petroglyphs discovered in the area include graffiti and hand and footprints of humans and animals engraved on quartzite rocks.
- The Paleolithic era spans from about 25 lakh years to 10,000 BP (before the present, the carbon dating marker that archaeologists use with 1950 treated as the base year).
- It provides evidence of the beginning of Saraswati-Sindhu, Pre Vedic, and Vedic civilizations.
- Several tools and equipment like pebbles and flake-based tools used to make these petro-



glyphs were found at the site as well.

Places in News

MAPPING





GS2

Polity

EXISTING LIMIT TO FIX OBC NON-CREAMY LAYER ENOUGH

Context:

According to the Ministry of Social Justice & Empowerment, the existing income limit for determining the non-creamy layer among OBC "is considered sufficient" and there is no proposal to revise the said income limit.

Background:

- Currently, an annual income of both parents of ₹8 lakh or more excludes OBCs from availing reservation, putting them in the creamy layer category, leaving benefits only for those earning less than that.
- Several Backward Class associations and the <u>NCBC</u> have consistently demanded/recom- mended that the income limit should be raised to at least ₹10 lakh, so that more can avail of the quota system benefits.
- Ever since the OBC quota was introduced, the Union government has asked the NCBC to evaluate the need to raise this income limit based on current circumstances.
- The first time the limit was revised in 2004 (raised to ₹2.5 lakh in 2004, ₹4.5 lakh in 2008, ₹6 lakh in 2013, and ₹8 lakh in 2017), following which the NCBC would be entrusted to do the same every three years.
- An internal government task force (headed by B.P. Sharma - former DoPT Secy) had also concluded in its 2019 report that the income limit for determining the creamy layer among OBCs should be raised to ₹12 lakh.

<u>The Creamy Layer</u>: It is a concept that **sets a threshold** within which OBC reservation benefits are applicable.

Genesis of the concept:

The 2nd Backward Classes Commission/Mandal Commission report: The government provided 27% reservation in central government jobs for OBCs in 1990. This was challenged in

the SC by several writ petitions.

Indira Sawhney Case (1992): A nine-judge bench
of the SC had upheld reservations for OBCs, but
ruled that the creamy layer (to be decided by
the central government) among the backward
class of citizens must be excluded.



Image Credit: Hindustan Times

3 MONTHS DEADLINE FOR CASES OF REMISSION

Context:

Supreme Court has dismissed a plea by the **Uttar Pradesh government** to not bind the **governor with a three months deadline** to decide on remission pleas of convicts serving a life term

Previously, SC had directed the state government to decide on 2,248 cases of remission within three months.

SC observation:

- Even a constitutional authority cannot say that she or he is above the law
- The law obligates each and every authority equally, and the Constitution ascertains there is no vacuum even at the level of constitutional functionaries.

About Remission:

Remission is **releasing a convicted prisoner before the expiry of their sentence**. The concept of remission was introduced through the Prisons Act, 1894.

Constitutional:

 Article 72: The President of India has the power to grant pardons, reprieves, respites or remissions of punishment.



- Article 161: It empowers the Governor of the state to grant remission
- Prisons Act: Under this act, only state governments can frame rules for granting remission.

HOW ARE STATE POLICE CHIEFS APPOINTED?

Context:

The Nagaland government has appointed Rupin Sharma as Director General of the state police after SC's direction.

 Previously, Nagaland had challenged the Union Public Service Commission's (UPSC) recommendation of Sharma as the only candidate for the post.

The appointment process:

The appointment of DGP (based on the <u>SC 2006 judgment (Prakash Singh case)</u>:

- DGP is selected from the three senior-most officers who have been empaneled for promotion by the UPSC "on the basis of their length of service, very good record, and range of experience for heading the police force".
- The empanelment committee selects the panel of three officers based on merit.
- UPSC shall not put in the panel any officer with less than 6 months to retirement
- DGP should have a fixed tenure of two years in the post, irrespective of retirement date

UPSC guidelines on the appointment process:

- The list of eligible officers must have at least 30 years of service and be submitted to the UPSC six months before the incumbent DGP is to retire
- The 30-year rule may be relaxed to 25 years in certain states with the consent of the Centre

The Issue:

The process of appointment has faced challenges with at least four states having interim police chiefs and some cases of the Centre not following the Prakash Singh judgment.

Government Initiative and Policies

PRADHAN MANTRI PVTG DEVEL-

OPMENT MISSION

Context:

This mission was **proposed in <u>Budget 2023-24</u>** to improve the **socio-economic conditions of the <u>PVTGs</u>**.

- This will saturate PVTG families and habitations with basic facilities like safe housing, clean drinking water, improved access to education, health etc.
- The launch of the PM PVTG Development Mission is a step towards addressing the challenges faced by PVTGs and improving their standard of living.

Who are the Particularly Vulnerable Tribal Groups

The Particularly Vulnerable Tribal Groups (PVTGs) are a group of tribal community people in need of greater support and development. Out of the 705 Scheduled Tribes in India, 75 have been identified as PVTGs and are spread across 17 states and one Union Territory.

The government of India follows the **following criteria** for the identification of PVTGs

- Pre-agricultural level of technology
- Low level of literacy
- Economic backwardness
- A declining or stagnant population

MISSION ANTYODAYA SURVEY (MAS) 2022-23

Context:

Rural Development and Panchayati Raj Ministry will inaugurate the Mission Antyodaya Survey (MAS) 2022-23 including the launching of its portal and mobile application.

About Mission Antyodaya Survey:

The Department of Rural Development has been conducting Mission Antyodaya Survey across all Gram Panchayats in the country **since 2017-18** with the **purpose of transforming the lives and livelihoods** of people on measurable outcomes through the convergence of various schemes.

 The village-wise survey is expected to be conducted over a period of one month involving



Community Resource Persons (CRPs)

The benefit of the Survey:

- Support the process of participatory planning for the Gram Panchayat Development Plan (GPDP)
- Improve service delivery, enhance citizenship,
- Improve governance at the local level

INDIA RATED AMONG TOP FIVE ACCREDITATION SYSTEMS IN THE WORLD

Context:

India's national accreditation system under the Quality Council of India (QCI) has been ranked 5th in the world in the recent Global Quality Infrastructure Index (GQII) 2021.

- The GQII ranks **184 economies on the basis of** their quality infrastructure (QI)
- GQII is an initiative on metrology, standardization, accreditation, and related services, supported by Physikalisch-Technische Bundesanstalt (PTB) and the Federal Ministry for Economic Cooperation and Development (BMZ), Germany
- India's overall QI system ranking continues to be in the Top 10 at the 10th position, with the standardization system (under BIS) at 9th and the metrology system (under NPL-CSIR) at the 21st position in the world

International News and Organization

NORD STREAM GAS PIPELINES

Context:

According to a Pulitzer Prize-winning journalist, the Central Intelligence Agency (CIA) carried out the bombing of the <u>Nord Stream pipelines</u> on orders from the United States.

Impact of the bombing:

It led to Energy supply disruption in the EU; heightened geopolitical tension between Russia and the USA & EU; and created environmental issues due to the gas leak

Nord Stream (literally 'North Stream'):

- It is a network of offshore natural gas pipelines in Europe which run under the Baltic Sea from Russia to Germany.
- It comprises two separate projects -
 - Nord Stream 1 ran from Vyborg, in northwestern Russia near Finland, and entered service in 2011.
 - Nord Stream 2 runs from Ust-Luga in northwestern Russia near Estonia. The pipeline (completed in 2021) was built in order to double annual capacity but has not yet entered service.

Nord Stream pipelines from Russia

Leaks detected on both pipelines near Bornholm



Tags: Nord Stream gas pipelines

GS3

Economy

LARGE EXPOSURE FRAMEWORK (LEF) GUIDELINES OF RBI

Context:

Reserve Bank of India has dismissed concerns about



the "exposure" of Indian banks to the Gautam Adaniled conglomerate.

RBI's observations:

- The RBI has a Central Repository of Information on Large Credits (CRILC) database system where the banks report their exposure of ₹5 crores and above for monitoring purposes.
- The banking sector remains resilient and stable: Various parameters relating to capital adequacy, asset quality, liquidity, provision coverage and profitability are healthy.
- Banks are also in compliance with the Large Exposure Framework (LEF) guidelines issued by the RBI.

Large Exposure Framework (LEF) guidelines

LEF are guidelines aimed to monitor and limit losses of a bank from a client or corporation. It is based on the 2014 Basel guidelines.

An exception to LEF: Banks need not report exposure if the loans are taken from RBI, is guaranteed by the Government of India or have Intra-day interbank exposures or deposits are maintained by NABARD (due to shortfall in target for Priority sector Lending)

SEBI TWEAKS OPERATIONAL FRAMEWORK ON CREDIT RATING AGENCIES

Context:

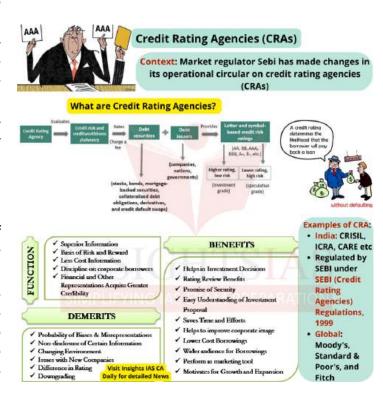
Market regulator Sebi has made changes in its operational circular on <u>credit rating agencies (CRAs)</u>.

 Previously, SEBI had released an operational circular on CRAs, which was to come into effect on February 1.

SEBI regulation for **CRAs**:

- At the time of withdrawal of any credit rating of securities that are listed on a stock exchange, the CRA would have to assign a rating to such security and issue a press release in a prescribed format
 - A Press release should also mention the reason for withdrawal.

- MD or CEO of a CRA and any person within a CRA who has business responsibility would not be a member of rating committees of the agency.
- CRAs should have a detailed policy by March end in respect of the non-submission of crucial information by the issuers.



About SEBI:

The Securities and Exchange Board of India (founded in 1988) is a statutory regulatory body for the securities and commodity market in India under the ownership of the Ministry of Finance.

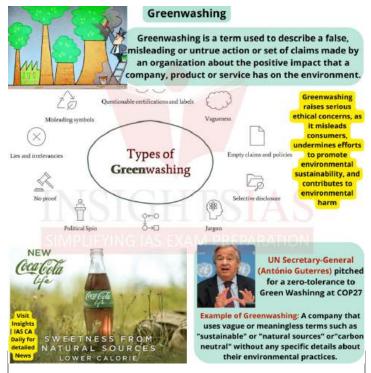
SEBI Related news

Dos and don'ts relating to green debt securities to avoid occurrences of greenwashing

Context: SEBI has notified that issuers of green bonds shall:

- Continuously monitor the environmental sustainability of the project
- Shall not be involved in Greenwashing
- Shall inform direct and indirect harms to the environment





What is a Green Bond?

A green bond is a debt security issued by an organization for the purpose of financing or refinancing projects that contribute positively to the environment and/or climate. A green bond is alternatively known as a climate bond.

SET UP A RUSSIAN FINANCIAL FIRM IN INDIA

Context:

Russia has flagged concerns over the lack of "progress" on the setting of a system to transact in local currencies and has proposed radical new initiatives to deepen financial co-operation

 Previously, RBI allowed the opening of nine "<u>Vostro" accounts</u> in two Indian banks to facilitate overseas trade in the rupee with sanctions-hit Russia.

Proposals:

- An "India-based financial institution with Russian ownership" that would not be subject to third-party sanctions
- An India-based specialized financial technology company that would enable Indian credit institutions to use Bank of Russia's Financial Messaging System (SPFS) the Russian financial messaging system which replaced the sanc-

tioned SWIFT.

What is Russia's Financial Messaging System (SPFS)?

SPFS is a Russian equivalent of the SWIFT financial transfer system, developed by the Central Bank of Russia. The system has been in development since 2014.

What is SWIFT? Read HERE

EU SETS UP TRADE & TECHNOLO-GY COUNCIL (TTC) WITH INDIA

Context:

The TTC with India is the **EU's second such technology partnership** after the first one with the US (in 2021).

What is TTC?

- According to the Ministry of External Affairs (MEA), TTC is a strategic coordination mechanism that will allow both partners to tackle challenges at the nexus of trade, trusted technology and security.
- Under the TTC, three working groups (on strategic technologies, digital governance and digital connectivity; green and clean energy technologies; trade, investment and resilient value chains) have been established.
- The TTC will be co-chaired on the Indian side by the ministers for external affairs, commerce and industry, communications, electronics and IT.

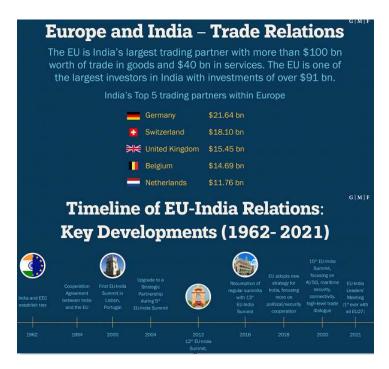
Significance of TTC:

- It is expected to facilitate the exchange of critical technologies relating to an array of domains, including AI, quantum computing, semiconductors and cybersecurity.
- Deepens cooperation between India and the EU.

Related news:

Context: India and the U.S. launched **iCET** to enhance their **strategic partnership**

Click here to know about iCET (FFP section of CA)



VARIOUS TYPES OF BONDS

Direction:

Continuation of <u>CA FFP (Sebi tweaks operational framework on credit rating agencies)</u>

Context:

Markets regulator Sebi has strengthened the **framework for green bonds** (green debt securities) by introducing the concept of 'blue' and 'yellow' bonds as new modes of sustainable finance.

What are Green debt securities?

Sebi broadly defines green debt security as one that is issued for the purpose of raising capital to be used for the cause of sustainable development or furthering energy efficiency

Under the sub-categories of green debt securities:

- Blue bonds: It is a debt instrument issued by governments, development banks or others to raise capital to finance marine and ocean-based projects that have positive environmental, economic and climate benefits
- Yellow bonds pertain to solar energy
- **Transition** bonds: To fund a firm's transition or to reduce their carbon emissions

These measures have been taken to align India's

framework for green debt securities with the updated Green Bond Principles (GBP) recognised by IOSCO.

About IOSCO:

The International Organization of Securities Commissions (Est. 1983, HQ: Madrid (Spain)) is an association of organizations that regulate the world's securities and futures markets. SEBI is a member of it.

PRIMARY STEEL PRODUCERS

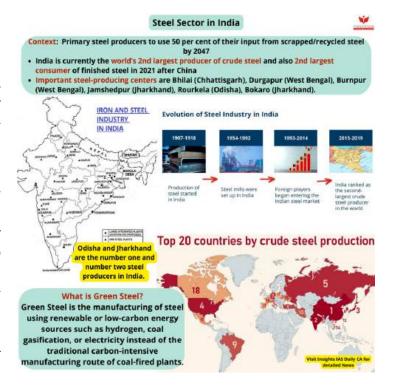
Context:

Steel Ministry will push primary steel producers to **use 50 per cent of their input** from scrapped/recycled steel by **2047** to help achieve the government target of moving into a **circular economy**.

- Currently, the level of recycled steel usage in primary steel production is only around 10 per cent
- India currently produces 25 million tonnes of scrap steel and annually imports 5 million tonnes of scrap steel with zero import duty

About Circular Economy: Click here

 The 6Rs philosophy of Circular Economy are: reduce (exploitation of natural resources), recycle, reuse, recover, re-design and reinforce





SOUTH INDIA'S 1ST INDUSTRIAL CORRIDOR PROJECT

Context:

Prime Minister, Shri Narendra Modi laid the foundation stone of **South India's 1st Industrial Corridor Project** to be implemented at **Tumakuru** under the **Chennai Bengaluru Industrial Corridor (CBIC)**

 CBIC project includes the development of industrial townships at three nodes: Krishnapatnam (Andhra Pradesh), Tumakuru (Karnataka), and Ponneri (Tamil Nadu)

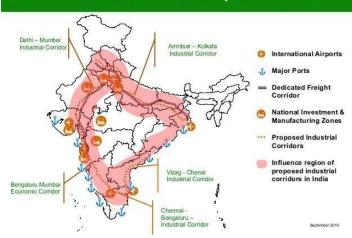
About Tumakuru Industrial Township

It has been planned with a holistic and integrated approach in line with the principles of PM-GatiShakti to address the issue of last-mile multi-modal connectivity to the economic zone

About National Industrial Corridor Development Programme:

- National Industrial Corridor Programme (NICP) (started in 2007) is an infrastructure programme of the Government of India aiming to develop industrial cities in the country
- Objective: Enhance India's competitiveness in manufacturing through the creation of worldclass infrastructure and reduced logistics costs
- Implementation: 32 greenfield industrial smart cities under 11 industrial corridors are being developed with world-class Plug-n-Play infrastructure.
- Mantra: "Reform, Perform and Transform"
- Progress: Four such smart industrial cities have already been completed at Dholera in Gujarat, Shendra Bidkin in Maharashtra, Vikram Udyogpuri in Madhya Pradesh, Integrated Industrial Township at Greater Noida in Uttar Pradesh
- Nodal Agency: DPIIT (Ministry of Commerce)

Presence of Industrial & Transport infrastructure



THE STATUS AND PROCEEDS OF DISINVESTMENT

The Indian government's <u>disinvestment</u> target for **2023-24** is **₹51,000** crore, down **21%** from the previous year and the lowest target in seven years.

Status of disinvestment:

- The government has met its disinvestment targets only six times in the last three decades.
 The last time the government met its target was in 2018-19
- In 2021-22, the government missed its high target of ₹1.75 lakh crore by a significant margin.
- The planned privatisation of the Shipping Corporation of India, Container Corporation of India, and NMDC Steel are among the state-owned companies that will be divested in 2023-24.

Definition:

Disinvestment refers to the sale of government assets or subsidiaries.

Need for disinvestment:

The government may disinvest to reduce fiscal burden, finance the fiscal deficit, or encourage private ownership of assets.

VIVAD SE VISHWAS 2 DRAFT RE-LEASED



Context: The finance ministry has circulated the draft scheme for a one-time settlement of contractual disputes—called Vivad se Vishwas 2—for stakeholder consultation.

About Vivad se Vishwas - 2:

- It was introduced in order to settle contractual disputes involving the government and government undertakings, where an arbitral award is under legal challenge.
- It will be applicable to organizations in which the central government has a shareholding of 50% and can opt out of the Scheme (Voluntarily) at its discretion with the approval of the Board of Directors.
 - Public sector banks
 - Public sector financial institutions
 - Central public sector enterprises
 - Union territories, National Capital Territory of Delhi.
- The scheme will only cover disputes where the claim for proceedings was on or before 30 September 2022
- It proposes a graded settlement term depending on the pendency level of the dispute.
- It is proposed to cover only domestic arbitration and not international arbitration.
- It will be implemented through Government e-Marketplace (GeM).

INDIA ENERGY WEEK 2023 CON-CLUDES

Context:

As the IEW concludes, we have summarized all the initiatives launched in the event

Initiatives launched at the event:

- Global International Biofuel Alliance (GIBA):
 This was launched by India to create a favourable ecosystem for promoting biofuels with key stakeholders including the US, Brazil, EU, IEA etc. as a clean mobility alternative under India's G20 Presidency.
- 'Unbottled' initiative of Indian Oil: Sustainable garments made of recycled PET bottles. Indi-

- anOil has adopted uniforms for retail customer attendants and LPG delivery personnel made from recycled polyester (rPET) & cotton.
- Net-Zero target: Budget 2023-24 has provided Rs 35,000 crore to the petroleum and natural gas ministry for achieving the net-zero target.
- Launch of 20% ethanol blend petrol, E20

Four major verticals for the strategy for the energy sector in India (announced by PM)

- Increasing domestic exploration and production: India is the fourth largest country for its refining capacity
- Diversifying the supply
- Expanding fuels like biofuel, ethanol, compressed biogas and solar: Asia's first 2G Ethanol Bio-Refinery of Indian Oil Corporation Ltd (IOCL) at Panipat Haryana launched last year
- De-carbonisation via electric vehicles and hydrogen.

Targets emphasized:

- Increase the consumption of natural gas in India's energy mix from 6% to 15% by 2030 (Under 'One Nation One Grid')
- National Green hydrogen mission (to produce 5 MMTPA green hydrogen by 2030)
- Increase the share of green hydrogen to 25 per cent by replacing grey hydrogen
- India is targeting to have 50% non-fossil fuel capacity by 2030.
- Total Renewable energy capacity currently is 170 gigawatts. India is number four in wind power capacity.

MORGAN STANLEY CAPITAL IN-TERNATIONAL (MSCI)

Context:

Global index provider MSCI has changed its weightage for four Adani Group stocks.

What is MSCI?

MSCI is an **investment research firm** that provides stock indexes, portfolio risk and performance analytics, and governance tools to institutional investors and hedge



funds.

- It is a leading provider of critical decision support tools, including stock indexes, and services for the global investment community. It has over 160,000 indexes in its portfolio.
- It is owned by the multinational investment management and financial services company Morgan Stanley.

Impact on India:

Lower foreign investment: MSCI indexes are widely tracked by foreign portfolio investors, hedge funds and other sovereign wealth funds which allocate funds to various markets

UPI PAYMENT FOR FOREIGN TRAVELLERS TO INDIA

Context:

<u>UPI</u> Payment for Foreign travellers' rule 2023: The RBI has decided to permit all inbound foreign travellers to use UPI payments for their merchant payments while they are in India.

- Initially, it will be limited to travellers from G20 countries arriving at select international airports
- They will be able to use UPI while carrying out P2M (person-to-merchant) transactions.

Benefits:

- It will scale up the use of digital payments in India
- It will improve their payment experience of foreigners (good for tourism)
- Ease the payment process for foreign tourists

About UPI:

UPI is an **instant payment system** developed by the **National Payments Corporation of India** (NPCI, RBI regulated entity). It is built over **IMPS** (Immediate Payment Service) **infrastructure** and allows **instant transfer** of money between any two parties' bank accounts.

Related News

Digital Payments Utsav

MeITY has launched the 'Digital Payments Utsav', a comprehensive campaign aimed at promoting digital

payments across India

 Showcase India's journey of digital transformation, with a series of events and initiatives

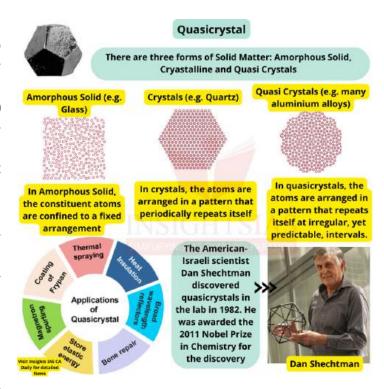
Also, Mission Bhashini – National Language Translation Mission and Digital Payments have come together to make UPI 123 Pay available in the local language. This will enable a common person to make payments in her local language interface through voice

General Science

QUASICRYSTALS

Direction:

The concept is technical and one needn't go into so many details of Material science. Here we have taken the bare minimum, one needs to know from the UPSC perspective.



More about Quasicrystals:

It is challenging to create quasicrystals in a laboratory, and the way they form has always been a mystery. Scientists have found natural quasicrystals in three different sources:

- Khatyrka meteorite (found in 2011 in Russia)
- In the remains of the first atomic bomb detonated (the Trinity test, part of the Manhattan Project)



 In a metallic fragment in the Sand Hills dunes in northern Nebraska (USA)

These three sources suggest that quasicrystals are formed under extreme conditions such as high pressure, high temperature, and heavy electric currents.

Usage: Quasicrystals have been used in surgical instruments, LED lights and nonstick frying pans. They have poor heat conductivity, which makes them good insulators

Technology

WHAT IS BARD, GOOGLE'S AN-SWER TO 'CHATGPT'

Context:

Google has finally decided to start public testing for a new AI chatbot of its own called Bard.

What is Bard:

- Bard is based on Language Model for Dialogue Application or LaMDA and Google's own conversational Al chatbot. It is termed an "experimental conversational Al service."
- The model is currently a "lightweight" version of LaMDA, and the one being "requires significantly less computing power, enabling us to scale to more users, allowing for more feedback."
- ChatGPT is powered by Microsoft's Azure Cloud services.

NOW, A SNIFFING ROBOT

Context:

A new sniffing robot equipped with a biological sensor that uses the antennae of locusts could help advance disease diagnosis and improve security checks.

Locusts have an **acute sense of smell**, which the researchers have managed to **harness into their bio-hybrid robot**, making it far more **sensitive than existing electronic sniffers**.

On the **four-wheeled robot**, the researchers placed the insect's antenna between two electrodes that send

electrical signals as a response to a nearby odour. Each scent has a unique signature which, with machine learning, the robot's electronic system can identify.

About Bio-Hybrid Robots:

- Bio-hybrid robots refer to robots that integrate biological components with artificial components, such as electronics and mechanics.
- These robots may use biological materials such as cells, tissues, or muscles as actuators, sensors, or energy sources.
- The use of biological components can provide advantages such as greater dexterity, adaptability, and energy efficiency compared to traditional robotic systems.

QR CODE-BASED COIN VENDING MACHINE (QCVM)

Context:

To improve the distribution of coins, the RBI is preparing a pilot project on QCVM in collaboration with a few leading banks

What is the QCVM?

- It is a cashless coin dispenser that dispenses coins in exchange for a bank account debit via the <u>Unified Payments Interface (UPI)</u>.
- Unlike traditional cash-based Coin Vending Machines, the QCVM would not require banknote tendering or validation.
- This will offer ease and ready access to coins for customers via the UPI facility.

Health

ZERO-DRAFT OF THE PANDEMIC TREATY

Context:

WHO's Intergovernmental Negotiating Body (INB) published a 'zero-draft' of the pandemic treaty on February 1.

Significance:



With this draft, negotiations will officially begin on what the final document, due to be presented at the World Health Assembly in 2024, will entail for global- and national-level pandemic preparedness.

The draft has given importance to intellectual property rights, transparency, benefit sharing and equity

ever, it is effective only against tumours that express these targets.

CAR T-Cell Therapy

What is Pandemic Treaty?

The International Treaty on Pandemic Prevention, Preparedness and Response or Pandemic Treaty is a proposed international agreement to strengthen pandemic

Aim: To ensure better preparedness and equitable response for future pandemics, and to advance the principles of equity, solidarity and health for all.

WHAT IS THE NORTH STAR?

Context:

Space

Recently 'North Star' has been in news from the political context

What is North Star?

Polaris, also known as the North Star or the Pole Star, is a very bright star (around 2500 times more luminous than our sun) placed less than 1° away from the north celestial pole.

- Its position and brightness have made humans use it for navigation since late antiquity.
- It is a part of the constellation **Ursa Minor and is** around 323 light-years away from Earth.
- Since Polaris lies nearly in a direct line with the Earth's rotational axis "above" the North Pole, it stands almost motionless in the night sky, with all the stars of the northern sky appearing to rotate around it.
- This makes it an excellent fixed point from which to draw measurements for celestial navigation.

prevention, preparedness and response.

What's the difference?

Endemic, epidemic and pandemic explained.

Pandemic

An epidemic that

spreads across regions

Endemic

A disease or condition

present among a

population at all times

CAR T-CELL THERAPY FOR CAN-CER TREATMENT

The three major forms of treatment for any cancer:

Surgery (removing cancer)

Epidemic or

Outbreak

Disease occurrence

among a population

that is more than what

is expected in a given time and place, usually a sudden increase

- Radiotherapy (delivering ionising radiation to the tumour)
- Systemic therapy (administering medicines that act on the tumour)
 - Chemotherapy (a medicine used to kill cancer cells): However, it has various side effects.
 - Immunotherapy (the drugs bind to specific targets on cancer and kill it): How-

Does the Northern Star "change"?

The northern celestial pole changes over time. Upon picturing a line connecting Earth's North and South Poles as the axis around which Earth rotates, that axis is slowly moving in its own circle. Over a period of around 26,000 years, the Earth's axis completes one full rotation.

By the end of the 21st century, the celestial pole will move away from Polaris - humans will need to identify a new 'North Star'

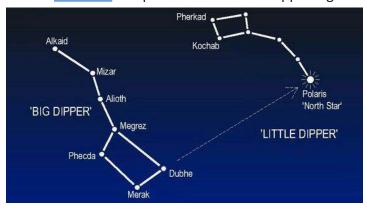
Meaning of "parliament is the North Star of democracy": It is the institution that guides democratic functioning, that dictates the direction a democracy takes.

Since it represents the 'will of the people', many political thinkers have always felt that as an institution, the parliament is the most funda-



mental in a democracy.

 For CJI Chandrachud, it is the <u>basic structure</u> doctrine that prevents this from happening.



MUONS

Context:

Researchers are using **muons** to study the fortress wall of Xi'an, an ancient city in China. **Muons have revealed small density anomalies, which may pose safety risks**, within the wall.

 Researchers deployed a technique called muon tomography or muography, which uses muons to generate three-dimensional images of such large structures.

What are <u>muons</u>?

Muons are <u>subatomic particles</u> raining from space. They are created when the particles in Earth's atmosphere collide with cosmic rays — clusters of high-energy particles that move through space at just below the speed of light. According to Scientific American magazine, "about 10,000 muons reach every square meter of the Earth's surface a minute".

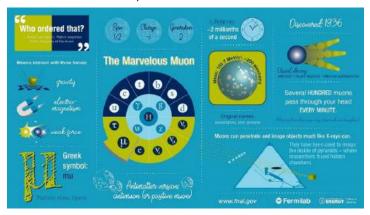
What is muon tomography or muography?

Muography is conceptually similar to X-ray but capable of scanning much larger and wider structures, owing to the penetration power of muons.

Applications of Muography:

- Muons and archaeology: In 2017, modern archaeologists repeated the experiment with more sophisticated and advanced muon detectors and stumbled upon a major finding.
- CORMIS (Cosmic Ray Muon Imaging System), to examine the wall of Xi'an city
- It is used in customs security, internal imaging

of volcanoes, and others



Related News:

Bengaluru outskirts have high levels of radioactive radon in groundwater' according to the IISc study.

- This radon emanates from radioactive granites.
 Radon when ingested over an extended period can increase the risk of lung cancer.
- Radon is found to be 50 to 100 times the permissible limit of 11.1 Bq per litre.

WHAT IS NISAR AND ITS MIS-SION?

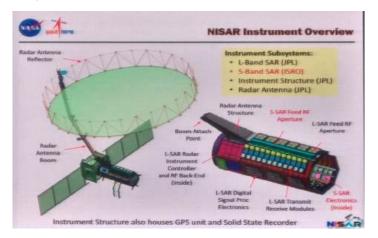
Context:

Jointly developed by NASA and the ISRO, an Earth-observation satellite, called NISAR (NASA-ISRO Synthetic Aperture Radar), got a send-off ceremony at the American space agency's Jet Propulsion Laboratory (JPL).

What is NISAR?

- The satellite consists of both L-band and S-band synthetic aperture radar (SAR) instruments, which makes it a dual-frequency imaging radar satellite.
- While NASA has provided the L-band radar, GPS, a high-capacity solid-state recorder to store data, and a payload data subsystem, ISRO has provided the S-band radar, the GSLV launch system, and spacecraft.
- It has a large 39-foot stationary antenna reflector made of a gold-plated wire mesh, the reflector will be used to focus "the radar signals emitted and received by the upward-facing feed on the instrument structure".





JUPITER BEATS SATURN TO BE-COME THE PLANET WITH THE **MOST MOONS**

Context:

Astronomers have discovered 12 new moons around Jupiter, putting the total count at a record-breaking 92.

- Jupiter and Saturn are loaded with small moons, believed to be fragments of once bigger moons that collided with one another or with comets or asteroids. The same goes for Uranus and Neptune, but they're so distant that it makes moon-spotting even harder.
- Uranus has 27 confirmed moons, Neptune 14, Mars two, and Earth one. Venus and Mercury come up empty.
- Jupiter's newly discovered moons have yet to be named.

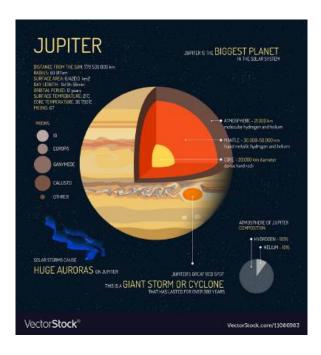


Image Credit: Vector Stock (Number of moons shown in fig has not increased to 92)

DWARF PLANET QUAOAR

Context:

A ring has been detected around Quaoar by the European Space Agency's Cheops telescope, similar to Saturn's ring.

Quaoar:

- Discovered in 2002, it is a dwarf planet in the Kuiper belt, a region of icy planetesimals beyond Neptune.
- Its diameter of about 700 miles is a third that of Earth's moon and half that of the dwarf planet Pluto. It has a small moon called Weywot.

Why is a ring around Quaoar unusual?

Quagar is located outside the Roche limit - where particles should readily come together (due to gravitational field) around a celestial body to form a moon.

Ring system in our solar system:

- The greatest ring system in our solar system is found on Saturn.
- The non-planetary bodies Chariklo and Haumea, as well as the other giant gas planets Jupiter, Uranus and Neptune.
- They all fall within the Roche limit.

ISRO SUCCESSFULLY LAUNCHES SSLV-D2

Context:

The second developmental flight of the Small Satellite Launch Vehicle (SSLV), SSLV-D2 was successfully launched from the first launch pad at Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota.

It injected EOS-07, Janus-1, and AzaadiSAT-2 satellites into a 450 km circular orbit.

About SSLV:

SSLV caters to the launch of up to 500 kg satellites to low earth orbits on a 'launch-on-de-



mand' basis. It provides low-cost access to space, offers low turn-around time and flexibility in accommodating multiple satellites, and demands minimal launch infrastructure.

- It is configured with three solid propulsion stages and a velocity terminal module.
- The EOS-07 is a 156.3 kg satellite designed, developed, and realized by ISRO. New experiments include mm-Wave Humidity Sounder and Spectrum Monitoring Payload.
- Janus-1, a 10.2 kg satellite, belongs to ANTARIS, US. Janus-1 is a technology demonstrator, smart satellite mission, based on the Antaris software platform.

ture to "give a structural answer to the investment needs".

- Enhancing skills: The plan aims to establish "Net-Zero Industry Academies" that will provide up-skilling and re-skilling programmes in strategic industries.
- Improving the trade network: The plan underlines the importance of open trade and seeks to further "develop the EU's network of Free Trade Agreements and other forms of cooperation with partners to support the green transition."

SAVE WETLANDS CAMPAIGN

Context:

Union Minister for Environment, Forest and Climate Change launched the 'Save Wetlands Campaign'.

Nanda Lake is Goa's first Ramsar Site

About the Campaign:

- Approach: This campaign is structured on a "whole of society" approach for wetlands conservation, enabling affirmative actions for wetlands conservation at all levels of society and involving all strata of society.
- Aim of the Campaign: Over the next one year, the campaign will include sensitizing people to the value of wetlands, increasing the coverage of wetland Mitras and building citizen partnerships for wetlands conservation.

Mission Sahbhagita:

Launched by the Ministry of Environment, Forest and Climate Change (MoEFCC) in 2022, it aims to effectively manage the **network of 75 wetlands of national and international** significance.

Other initiatives:

<u>Amrit Dharohar</u>, <u>MISHTI</u>, PM PRANAM, Green credit and Green Growth aligned with <u>Mission LiFE</u>

About Wetlands:

Wetlands are those areas where the soil is covered with water or can be present near the ground throughout the year.

World Wetlands Day is observed on 2nd Febru-

Environment

EUROPEAN UNION'S 'GREEN DEAL INDUSTRIAL PLAN'

Context:

To support and expand its green industry, the <u>European Union</u> revealed the "Green Deal Industrial Plan" that aims to cut red tape and provide massive subsidies.

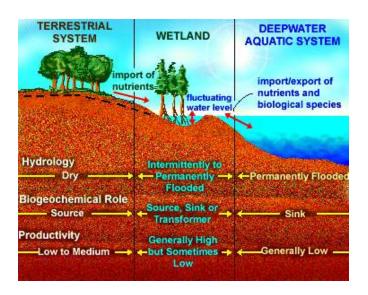
What is the 'Green Deal Industrial Plan'?

The proposal involves building a simpler regulatory framework, providing faster access to funds, enhancing skills, and improving the EU's trade network.

- Simpler regulatory framework: The plan seeks to formulate a "Net-Zero Industry Act", which will not only simplify rules but also speed up the issuance of permits for green projects, such as renewable energy generation arrays, carbon capture, and renewable hydrogen production facilities.
 - It also includes a "Critical Raw Materials Act", which will provide access to materials like <u>rare earth</u> that are crucial for developing <u>net-zero</u> technology.
- Providing faster access to funds: According to the proposal, state aid rules will be loosened in order to help the EU's 27 governments with investing in clean energy projects.
 - There is also a provision for setting up a "European Sovereignty Fund" in the fu-



- ary every year worldwide to commemorate the signing of the Ramsar Convention on Wetlands of International Importance in 1971.
- India has been a party to the Convention since 1982 and has so far declared 75 wetlands as Ramsar sites covering 23 states and Union Territories



20% ETHANOL-BLENDED PETROL IN 11 STATES/UTS INAUGURATED

Context:

Petrol blended with 20% ethanol was rolled out at select petrol pumps in 11 states and UTs as part of a programme to increase the use of <u>biofuels</u> to cut emissions as well as dependence on foreign exchange-draining imports.

Background:

- At present, 10% ethanol is blended in petrol (10% ethanol, 90% petrol) and the government is looking to double this quantity by 2025 (advanced by 5 years).
- Ethanol blending in petrol increased from 1.5% (in 2014) to 10% and is now progressing towards 20% blending.
- The PM launched the higher 20% <u>ethanol-blended petrol</u> (E20) at the India Energy Week (IEW)
 2023, two months ahead of the planned rollout.

Significance of rolling out E20:

 India currently is 85% (the world's third-largest oil consumer and importer) dependent on im-

- ports for meeting its oil needs.
- The use of ethanol will cut its imports and save forex. India spent USD 120.7 billion on the import of crude oil in the 2021-22 fiscal. In the current fiscal, USD 125 billion have been spent in the first nine months (April to December) alone.
- The use of ethanol, extracted from sugarcane as well as broken rice and other agri produce, will also be a boost to farmers.
- Also, it cuts carbon emissions. Estimated reduction of CO emissions by about 50% in 2-wheelers and about 30% in 4-wheelers compared to EO.

InstaLinks: National Policy on Biofuels
National Policy on Biofuels

MARINE PROTECTED AREAS (MPA)

Context:

The ongoing **fifth International MPA Congress** discusses solutions to address funding gaps that <u>marine protected areas (MPA)</u> are facing.

Background:

- Nations agreed to protect 30% of the planet's lands and oceans by 2030 at the COP15 to the CBD held in 2022.
- 70% of MPAs are underfunded.
- Most current MPAs are located in coastal areas,
 while only 1.2% of the high seas are protected.

MPAs in India:

- They are regarded as one of the most potent conservation tools for the protection of marine habitats and their resources.
 - Climate-smart MPAs can shield biota from global warming.
- There are a total of 31 major MPAs in India (as of Feb 2022) covering coastal areas that have been notified under <u>Wildlife Protection Act</u>, 1972.

Way ahead:

 Funding options like <u>UNEP</u> FI (Finance Initiative) can be accessed.



Founded in 1992, UNEP FI was the first organisation to engage the finance sector on sustainability and incubated the Principles for Responsible Investment.

Species in News

ZOO FOR DOLPHINS, AND RHI-NOS INSIDE BHARATPUR SANC-TUARY

Context:

The Rajasthan state Forest Department has proposed to construct a zoo inside Keoladeo National Park, a World Heritage Site popularly known as Bharatpur bird sanctuary, to display a range of wetland species, including rhinos, water buffaloes, crocs, dolphins, and exotic species.

Need:

- The purpose of this zoo is to rejuvenate the bio-diversity of Keoladeo National Park, thereby boosting its outstanding universal values.
- Agence Française de Développement (AFD), the overseas development arm of the French government, has agreed to fund up to Rs 1,200 crore over eight years.

Features:

- A breeding and re-introduction centre for locally extinct species, such as otters, fishing cats, blackbucks, hog deer, etc, "with a collateral provision as exhibits for tourists";
- An aquarium for indigenous species like <u>Gangetic Dolphin</u>, and crocodiles; enclosures for the display of large wetland species like Indian Rhino, Water Buffalo, and Barasingha (swamp deer);
- An aviary, a reptile house, and a veterinary care facility;



DICKINSONIA

Context:

The fossil of Dickinsonia discovered two years ago has now turned out to be an impression of a decayed beehive

 In 2019 researchers claimed to have discovered three fossils of the earliest known living animal

 the 550-million-year-old 'Dickinsonia' — on the roof of the Bhimbetka Rock Shelters, about 40 km from Bhopal.

About Dickinsonia:

- It is considered to be Earth's oldest animal
- It is an extinct genus of basal animal (animals which have radial symmetry in their body)
- The animal is considered a link between early simple organisms and then the explosion of life in the Cambrian Period
- Previously, fossils of Dickinsonia have been found in Australia, Russia, Ukraine, China

About Bhimbetka Rock Shelters caves

It is a UNESCO World Heritage Site with evidence of human habitation dating back to about 1 lakh years. It spans the Paleolithic and Mesolithic periods, as well as the historic period. It exhibits the earliest traces of human life in India and evidence of the Stone Age starting at the site in Acheulian times.



Defence

TARKASH

Context:

It is an ongoing Indo-US joint exercise (TARKASH) by the National Security Guard (NSG) and US Special Operations Forces (SOF) has for the first time included "Chemical, Biological, Radiological, and Nuclear (CBRN) terror response" in its drill

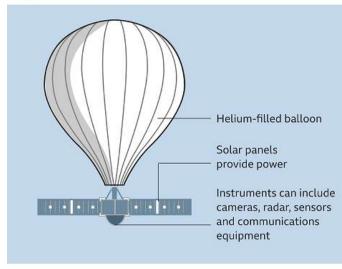
The exercise comes against the backdrop of Russian allegations against Ukraine last year that Kyiv had orchestrated a chemical attack in Kharkiv to blame Russia and get military aid from the West

About CBRN weapons:

- CBRN weapons, which are also classified as weapons of mass destruction, have been used by States and terror elements in the past.
- The most recent use of CBRN in the form of a sarin gas attack was witnessed in Syria in 2017 when more than 100 people died.

- Due to their proximity to Earth's surface, they can take **high-resolution images of the target**.
- Disadvantage: Not directly steered, but roughly guided.

High altitude surveillance balloons



How high do they fly?

120,000ft (37km)	111111111	Surveillance balloon
80,000ft (24km)	////////	Surveillance balloon
65,000ft (20km)		Fighter aircraft
40,000ft (12km)		Commercial airliners

Sports

Internal Security

THE SAGA OF A 'SPY' BALLOON IN **US AIRSPACE**

Context:

The US shot down a Chinese 'spy' balloon, days after the surveillance device was first spotted over American airspace.

What are spy balloons?

- Spy balloons are high-altitude surveillance tools that usually operate at 80,000-120,000 feet - well above the cruising altitude of commercial aircraft - to gather intelligence and carry out other military missions.
- During the cold war, the U.S. military used high-altitude balloons (Project Genetrix, Project Mogul) to spy on the Soviet Union.
- **Economically viable** unlike satellites

FORMULA E

Context:

Hyderabad will host the first-ever E-Prix race that will take place on India's first street circuit (located near the shores of Hussain Sagar Lake).

What is Formula E?

Formula E is an electric equivalent of the widely followed Formula 1 which was staged in India from 2011 to 2013.

- However, other than the 'Formula' prefix, there is no similarity between the two FIA world championship status events.
- Hyderabad has become the 30th location to host a Formula E race
- It is the first global sport to be certified with a net zero carbon footprint

Unique feature:

Gen3 technology has been introduced this season. Gen3 is the fastest, lightest, most powerful



- and most efficient car in its history.
- More than 40 per cent of the energy in the Gen3 will come from regenerative braking (energy recovery mechanism that slows down a moving vehicle)

CONTENT FOR MAINS ENRICHMENT (ETH-ICS/ESSAY):

Society

DEINFLUENCING

Usage:

The word can be used to show how social media can be used for positively influencing consumers to reduce their carbon footprint and incentivising them to use only good products.



Deinfluencing

Deinfluencing is a new trend on the social media, where influencers are telling their followers not to buy certain products, as opposed to promoting and marketing them.



Reason for such a trend: Minimize overconsumption, environmental destruction, and climate change.



The ethical values that can be extracted from 'Deinfluencing':

- Responsibility Influencers are taking responsibility for their actions
- Honesty Influencers are becoming more honest in their reviews
- Sustainability Desire to reduce excessive consumption
- Consumer protection Protection from buying low-quality products
- Transparency through 'tailored influencing'



Tailored influencing: Deinfluencing could result in tailored influencing, where influencers can be

more honest and critical in their reviews and offer product feedback that can benefit companies.

Counterview: Some experts question its long-term efficacy of 'Deinfluencing'.

Visit Insights IAS CA Daily for detailed News

FOUR-DAY WORKWEEK

Context:

In the US and Ireland, a six-month trial among 33 vol-

unteer companies in 2022 showed a positive impact on company performance, productivity and employee well-being.

Benefits:

- Increased Productivity: Employees who work a four-day week are more focused and productive in their work.
- Improved Employee Well-being: Less stress and fatigue
- **Financial Savings**: On employees on transport and childcare costs.
- Improved work-life Satisfaction: Increased job satisfaction and work-life balance
- Increased Flexibility: Companies can accommodate changing work patterns, such as remote work and hybrid work.

Counterview:

However, the four-day workweek is not a viable option for all employees, as some industries and work cultures are not suited for this change.

Usage: Such examples can be used in Ethics/Essay/Society questions on work culture/ work-life balance.

KNOWLEDGE REPUBLIC

What is a knowledge republic?

A "Knowledge Republic" refers to a society or community that places a high value on knowledge and education, and prioritizes the acquisition, dissemination, and application of knowledge as a key aspect of its functioning and growth.

It is a vision of a society in which

- Knowledge is freely available and accessible to all
- Individuals are empowered to pursue their own intellectual and educational goals
- India's civilizational heritage: Indian civilization always revered knowledge. E.g., India's richness of languages, the vastness of scriptures, and the ancient universities.

Benefits of India Pursuing 'Knowledge Republic':

 The pursuit of knowledge and education can lead to greater innovation, economic growth,



and social progress.

- India's young demographic profile presents a huge potential for becoming a 'Knowledge Republic'
- **Knowledge Republic is important**
 - In maintaining trust
 - Promoting equitable access to knowl-
 - Ensuring that the acquisition and dissemination of knowledge is done in a responsible and sustainable manner

What should be done to make India a "knowledge republic"?

- Make the domestic environment competitive for research and innovation
- Inculcate knowledge in governance: Indian society's reverence for knowledge should be acknowledged and leveraged in policymaking and nation-building.

Quote: "In a Knowledge Republic, education is the currency, and knowledge is the wealth that fuels progress."

Usage: The concept can be used in essays/ethics answers or as the conclusion for questions related to education.

Related Philosopher: Greek philosopher Socrates believed that the pursuit of knowledge was the highest calling of the individual, and that ignorance was the root of all evil.

Social Justice

ANDHRA'S GUARANTEED PEN-SION SCHEME MODEL

Direction:

For details about the Old and New Pension scheme: Click here

The issue with the **New Pension Scheme**: Employees who joined service post January 2004, and are part of the New Pension System have their contributions defined, but benefits depend on the market.

On the other hand, the old pension scheme is fiscally unsustainable

In the Andhra Pradesh model: This model is it combines the elements of both the OPS (defined benefit) and the NPS (defined contribution). It gives two options to employees:

- Option 1: Employees can get a guaranteed pension of 33 per cent of their last drawn salary if they contribute 10 per cent of their basic salary every month which is matched by a 10 per cent contribution by the state government.
- Option 2: Employees can get a guaranteed pension of 40 per cent of their last drawn salary if they are willing to contribute a higher 14 per cent of their salary every month, which will be matched by a 14 per cent government contri-

Usage: This can be used as an example in governance questions to give a solution to the Old Pension Vs New Pension debate.

PRISON REFORMS

Rajasthan Model of Open Prison: The open prison model adopted in Rajasthan, with convicts staying on community land without high walls or strict surveillance, has promoted a reformative form of punishment and succeeded in transforming the lives of inmates.

Benefits:

- Reformative form of punishment: It is premised on the humane concept that a wrongdoer does not simply cease to be a living human being just because he commits crimes. In contrast, Retributive justice focuses on punishing an offender
- Lower expenses: As minimum security facilities, the open prisons need 92% less staff than closed jails, and incur monthly costs of only ₹500 per prisoner; no reports of prisoner escapes or repeat offences
- Rajasthan has now proved the concept with 40 such open camps.

Overall, open prisons can offer a more ethical approach to imprisonment by promoting rehabilitation, reducing overcrowding, improving human rights, and potentially reducing costs.

Usage: These examples can be used as an example of prison reforms/way forward in Ethics/Governance/Internal Security Questions

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Related News:

Use of Technology for Prison:

Tihar jail is installing artificial intelligence (AI)-powered CCTV cameras to monitor inmates and fight crime. The premises will also have a real-time grievance redressal system and optical fibre network.

Women Empowerment

WOMEN-CENTRIC DEVELOPMENT

The concept of <u>Women-centric development</u> is based on a recognition of the importance of the roles and status of women in the development process

- Ela Ramesh Bhatt: She was an Indian cooperative organiser, activist and Gandhian, who founded the Self-Employed Women's Association of India in 1972, and served as its general secretary from 1972 to 1996.
 - She was involved in The Elders' work on gender equality, including on the issue of ending child marriage.
- Rosa Parks (US Civil Rights activist): Called "the mother of the civil rights movement," Rosa Parks invigorated the struggle for racial equality when she refused to give up her bus seat to a white man in Montgomery, Alabama.
- In the Film-making: Recent successful examples are: Puja Banerji (Conditions Apply), Kartiki
 Gonsalves (The Elephant Whisperers), Vijayeta Kumar (Sunny Side Upar: An episode in the show Zindagi in short), or Zoya Parvin (Clean)
 Gender-Equality Index in the Corporate world
- Bloomberg announced that 484 companies are included in the 2023 Bloomberg Gender-Equality Index (GEI).
 - GEI tracks the company's progress in gender inclusion and how the implementation of diversity policies shapes company performance.



Significance of women-centric development:

- By offering equal opportunity to women, the country could add an estimated \$770 billion to its GDP by 2025
- The <u>literacy rate of women</u> has been rising steadily since independence & India is bridging the gender literacy gap
- Ethical Perspective: Promoting women's development ensures social justice and human rights. It is a critical aspect of creating a more equitable and just world

Related News:

Global Climate Resilience Fund (GCRF)

Former U.S. Secretary of States Hillary Clinton announced the world's first global climate resilience fund (GCRF) in partnership with Self Employed Women's Association (SEWA)

Aim: It will work to tackle challenges faced due to rising temperatures on account of climate change.

Polity

DATA POINT: ELECTORATES IN INDIA

India has witnessed a nearly **six-fold increase** in the total number of voters since 1951 to over **94.50 crores** this year

- In the last Lok Sabha polls voter turnout was over 67 per cent – the highest ever, as well as the highest ever participation by women voters
- Missing Voters (almost 33%): Mostly people from urban areas, youth and migrants
- In 1951, India had 17.32 crore registered elec-



tors and nearly **45%** had turned up to exercise their franchise.

'G20 STAY SAFE ONLINE CAM-PAIGN'

Meta together with the IT Ministry has launched the Digital Suraksha campaign and G20 Stay Safe Online Campaign to educate the youth about misinformation.

 The campaign is aimed at offering a <u>safer</u> and more inclusive internet to Indians.

Under the program:

- Meta will create and distribute resources in multiple Indian languages via various channels to raise awareness about how to stay safe online.
- <u>Digital literacy</u> will be provided to 10,000 students across various Delhi schools and colleges on topics such as cyberbullying, sextortion, trolling, identity theft and how to safely browse the internet.

Ethics

WORLD'S BRIGHTEST" STUDENTS

Natasha Perianayagam, a 13-year-old Indian-American schoolgirl, has been named on the "world's brightest" students list for the second year in a row by the Johns Hopkins Center For Talented Youth

- Values to learn from her life:
 - Hard Work
 - Diversity and Inclusion (She was one of 15,300 students from 76 countries)
 - Balance (Despite her academic achievements, Natasha still finds time to engage in hobbies such as doodling and reading, demonstrating the importance of finding a balance between work and leisure)

Sports

QUOTES: ON SPORTS

- "Sports is finally being viewed from the athletes' perspective and not from the government's"
- "Sports is not just a genre, but an industry"

Initiatives in Sports:

TOPS (Target Olympic Podium Scheme); Sports Budget (tripled in last 7 years); Khelo India campaign; National Sports Development Fund; Mission Olympics 2024; Fit India Movement.



Our founder & director, Vinay Sir, with 120 toppers of UPSC CSE-2021 at the Felicitation Ceremony conducted at Bengaluru.





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