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GS 2 : Polity, Governance, International Relations

1. The Abraham Accords as India's West Asia bridge

Context

The recent visit by the Indian Air Force chief, to Israel offers a window to study how India is taking advantage of the Abraham Accords deal signed between Israel and a consortium of Arab States led by the United Arab Emirates (UAE) in 2020.

Increasing defence cooperation between India and West Asia region

- India's trajectory towards an increased strategic footprint in West Asia has been in development for some time now.
- Starting from the relatively low-key staging visit to Saudi Arabia conducted by the IAF in 2015.
- India hosted visiting Iranian naval warships in 2018.
- India takes an active part in the defence of the critical waterways in and around the Persian Gulf, the Arabian Sea and the extended Indian Ocean Region (IOR).
- An Indian contingent of the Indian Air Force (IAF) will visit Israel in October to take part in multilateral military exercises.
- India also conducted the '**Zayed Talwar**' naval exercises with the UAE off the coast of Abu Dhabi, further deepening the fast-developing strategic cooperation between the two countries.
- In December 2020, Indian Army chief visited the UAE and Saudi Arabia, becoming the first chief of the Indian Army to do so.
- In 2017, India signed a deal with Oman, the home to Duqm Port for access to the facility, including dry dock use by the Indian Navy.

How Abraham Accords accelerated India's engagement with West Asia region?

- **No need for balancing act:** The signing of the Accords has removed a significant strategic obstacle for India – delicate balancing act India has had to play out between the Arab Gulf and Israel over the decades.
- India had welcomed the Accords, highlighting its support for mechanisms that offer peace and stability in the region.

- From the UAE's perspective, Accords were to make sure the emirate along with its international centres of trade such as Dubai and Abu Dhabi do not become targets between Jerusalem and Tehran.
- However, not all Arab States have been on board with the geopolitical shifts the Accords have pushed through.
- Saudi Arabia has maintained a distance from this arrangement.

India's West Asia construct and relations with Iran

- Iran, as part of India's 'West Asia' construct, will also play a significant part in India's outreach in the months to come as the crisis in Afghanistan deepens.
- Connectivity projects such as **Chabahar Port and Chabahar-Zahedan rail project** (project discussions are still on) amongst others remain critical.
- Recently, strategic cooperation revitalised despite multiple obstacles in the bilateral relations, **led by U.S. sanctions against Tehran and the general tensions between Israel, the Gulf and Iran** via proxy battles in theatres such as Yemen, Syria and beyond.

Conclusion

India's strategic play in West Asia will be reflective of its economic growth, and by association, an increasingly important place in the global order.

2. Is a caste census desirable?

With the 2021 Census coming up, several political parties have demanded a nationwide caste census.

What is Caste Census?

- Every Census in independent India from 1951 to 2011 has published data on Scheduled Castes and Scheduled Tribes, but not on other castes.
- Before that, every Census until 1931 had data on caste.
- However, in 1941, caste-based data was collected but not published.
- In the absence of such a census, there is no proper estimate for the population of OBCs, various groups within the OBCs, and others.
- The Mandal Commission estimated the OBC population at 52%, some other estimates have been based on National Sample Survey data.
- Some political parties make their own estimates in states and Lok Sabha and Assembly seats during elections.

Arguments for caste census

A caste census is not merely geared to the reservation issue.

- **Enumerating the marginalized:** A caste census would actually bring to the particular the number of people who are at the margins, or who are deprived, or the kind of occupations they pursue, or the kind of hold that institutions like caste have on them.
- **Data for Policymaking:** This information is absolutely necessary for any democratic policymaking.
- **Judicial backing:** The courts in India have often emphatically said that it is important to have adequate data with regard to the reservation.
- **Caste offers privilege:** Caste is not only a source of disadvantage; it is also a very important source of privilege and advantage in our society.
- **Caste doesn't marginalize:** We need to do away with the idea of caste being applicable to only disadvantaged people, poor people, people who are somehow lacking.
- **Rids away caste rigidities:** Counting of caste doesn't necessarily perpetuate caste or the caste system. Myths of caste elitisms can be debunked through a caste census.

Arguments against caste census

- **50% breach:** It is argued that a Socio-Economic Caste Census is the only way to make a case to breach the 50% cap on reservation and rationalize the reservation matrix in the country.
- **Rising assertiveness:** More the State ignores out caste, the more is the tendency to preserve caste, protect it. This has been observed in many states.
- **Chaos:** Data gathering itself is a big problem because it can become very, very invasive. But we need to actually balance it with enabling people and asserting citizen equality.
- **Social friction:** Caste identification can lead to friction amongst various classes.

Breaching the 50% cap

- **Judicial Substantiation:** The 50% cap, as introduced by the court, has not really been argued through.
- **Questioning the sacrosanctity:** Some feel that nothing sacrosanct about the 50% limit – it can be exceeded, if necessary, but a clear argument should be given for why this is being done.

Inefficacy of reservations

- **Fractional benefits:** The way reservation is practiced has invariably led to elites among castes and communities.
- **Domination:** These elites within the castes have tended to exercise their dominance over their very communities and not let them exercise the kind of freedoms, or search for equality, which any democratic polity deserves.
- **Welfare isn't reservation:** The state has helped privileged communities far more, even though this help has not taken the explicit form of programs like reservation.

Why is a caste census always controversial?

- **Data manipulation:** This is a manifestation of the principle that those in power control data and information.
- **Censoring of data:** We have had instances where this data has been collected but has not been made public.
- **Relative deprivation:** Since a caste census is a necessity, it is not a happy thing, it is not a great achievement, it is just something that the State has to do circumstantially.
- **Vote bank politics:** Vested interests of particular state governments in hunt for vote banks are also visible these days.

SECC has the solution

- We have got locked into a mindset where we think only those communities which want welfare benefits from the state must be enumerated.
- Many have argued that a Socio-Economic Caste Census would be the best way to rationalize reservation based on data and make a strong case for breaching this gap.
- Earlier governments argued that counting caste will perpetuate it.

Conclusion

- Favoring one caste becomes a disfavor for others. This is an undeniable fact of Indian society.
- It seems that the caste census will happen unless something extraordinary happens in our polity.
- There are also important questions of demands coming up because of mismatches between the numbers that we come out with and the share in resources that different communities have.
- This is a kind of nightmare that all governments fear. So, they would much rather leave things vague.

- The Backward Classes are more than 50% of the population. And this dispensation knows that it cannot afford to lose the support of the Backward Class

3.Slow Pace of Criminal Justice System Reforms

Why in News

Recently, a group of experts under the **National Human Rights Commission (NHRC)** has expressed concerns over the slow pace of reforms in the criminal justice system to ensure speedy justice.

- NHRC of India is **an independent statutory body** established on 12th October, 1993 as per provisions of Protection of Human Rights Act, 1993, later amended in 2006.

Key Points

- **Criminal Justice System in India:**
 - Criminal Justice System **refers to the agencies of government charged with enforcing law, adjudicating crime, and correcting criminal conduct.**
 - It is essentially **an instrument of social control.**
 - Criminal justice system reforms broadly **comprises three sets of reforms viz. Judicial reforms, Prison reforms, Police reforms.**
 - **Objective:**
 - To prevent the occurrence of crime.
 - To punish the transgressors and the criminals.
 - To rehabilitate the transgressors and the criminals.
 - To compensate the victims as far as possible.
 - To maintain law and order in the society.
 - To deter offenders from committing any criminal act in the future.
- **Legal Framework for Criminal Jurisprudence in India:**
 - The **Indian Penal Code (IPC)** is the official criminal code of India drafted in 1860 on the recommendations of the first law commission of India established in 1834 under the Charter Act of 1833 under the Chairmanship of Lord Thomas Babington Macaulay.
 - The **Code of Criminal Procedure (CrPC)** is the main legislation on procedure for administration of substantive criminal law in India. It was enacted in 1973 and came into force on 1st April 1974.
- **Issues in Criminal Justice System:**
 - **Huge Pendency of Cases:** There were about 4.4 crore pending cases in the Supreme Court, High Courts and district courts.

- **High Number of Undertrials:** India has one of the world's largest number of undertrial prisoners. This delay in disposal of cases is leading to human rights violations of the undertrials and convicts.
- **Delay in Police Reforms:** Despite the Supreme Court's directions on police reforms, there had been hardly any changes on the ground.
 - Corruption, huge workload and accountability of police is a major hurdle in speedy and transparent delivery of justice.
- **Colonial Era Laws:** The codification of criminal laws in India was done during the British rule, which more or less remains the same even in the 21st century.

Suggestions

- Some provisions in IPC may be deleted and **left for redressal under the law of Torts**, as it is in England.
- **Digitisation of documents** would help in speeding up investigations and trials.
- Increasing **awareness of laws among police personnel**, increasing the number of police personnel and stations in proportion to the number of complaints in an area, and including social workers and psychologists in the criminal justice system.
- The focus also needs to be on the **victim's rights and smart policing**. There is a need to study the rate of conviction of police **officials and their non-compliance of law**.
- Implementation of **Malimath committee (2000) recommendations**.

Malimath Committee (2000) Recommendations

- **Rights of the Accused:** The Committee suggested that a Schedule to the Code be brought out in all regional languages so that the accused knows his/her rights, as well as how to enforce them and whom to approach when there is a denial of those rights.
- **Police Investigation:** The Committee suggested hiving off the investigation wing from Law and Order.
- **Court and Judges:** The report pointed out the judge-population ratio in India is 10.5 per million population as against 50 judges per million population in many parts of the world.
 - It suggested the increase in strength of judges and courts.
- **Witness Protection:** It suggested separate witness protection law so that safety and security of witnesses can be ensured and they can be treated with dignity.
- **Vacations of Court:** It recommended reducing the vacations of court on account of long pendency of cases.

4. Prevalence of Hydro-Meteorological Calamities

Why in News

Recently, the **Ministry of Home Affairs** has informed that nearly **6,800 people lost their lives** in the country (**West Bengal tops the list**) over the **past three years** due to **hydro-meteorological calamities** such as **flash floods, landslides and cyclones**.

Key Points

- **Hydro-Meteorological Calamities:**
 - **Natural hazards** are severe natural phenomena or events, broadly classified in **two categories: hydro-meteorological and geological hazards**.
 - **Tropical cyclones, heavy rainfall, severe thunderstorms, floods and drought** are hydro-meteorological hazards whereas **earthquakes and volcanic eruptions** are grouped under geological hazards.
 - **Landslides and avalanches** are caused by a combination of geological and hydro-meteorological factors.
- **India's Vulnerability:**
 - The basic reason for the **high vulnerability of the country** to natural disasters is its **unique geographical and geological situations**.
 - As far as the vulnerability to disaster is concerned, the four distinctive regions of the country i.e. **Himalayan region, the alluvial plains, the hilly part of the peninsula, and the coastal zone** have their own specific problems.
 - While on one hand the **Himalayan region is prone to disasters like earthquakes** and landslides, the **plain is affected by floods** almost every year.
 - The **desert part of the country is affected by droughts and famine** while the **coastal zone is susceptible to cyclones and storms**.
 - Various **human induced activities** like increasing demographic pressure, deteriorating environmental conditions, deforestation, unscientific development, faulty agricultural practices and grazing, unplanned urbanisation, construction of large dams on river channels etc. are also responsible for accelerated impact and increase in frequency of disasters in the country .
- **Impact of Disaster:**
 - **Physical and Psychological:**
 - Disaster impacts individuals physically (through loss of life, injury, health, disability) as well as psychologically.

- The disaster results in **displacement of people, and displaced populations often face several challenges in new settlements**, in this process the poor become more poor.
- **Alter Natural Environment:**
 - Disaster can alter the natural environment, **loss of habitat to many plants and animals** and cause ecological stress that can result in **biodiversity loss**.
- **Disaster Management:**
 - **National Disaster Management Authority of India (NDMA):** It was established in 2005, under the **Disaster Management (DM) Act 2005**.
 - **National Disaster Management Plan (NDMP): Released in 2016**, it is the first **ever national plan** prepared in the country for disaster management.
 - **State Disaster Management Authority (SDMA):** Headed by the **Chief Minister of the respective state**, SDMA lays down the policies and plans for disaster management in the state.
 - **District Disaster Management Authority (DDMA): Section 25 of the DM Act** provides for the **constitution of DDMA for every district of a state**.
 - Other measures include National Cyclone Risk Mitigation Project (NCRMP), National Disaster Response Reserve (NDRR), Aapda Mitra Scheme, ETC.
- **Challenges in Disaster Risk Reduction:**
 - **Poor Implementation of Monitored Activity:**
 - There are insufficient levels of implementation for each monitored activity. For example, Disaster risk management plans or risk sensitive building codes exist but they are not enforced because of a lack of government capacity or public awareness.
 - **Lack of Local Capacities:**
 - Weak capacity at the local levels undermines the implementation of Disaster preparedness plans.
 - **Climate Change:**
 - Absence of integration of climate change into Disaster risk management plans.
 - **Divergence in Commitments:**
 - There is divergence in obtaining political and economic commitments due to other competing needs and priorities such as poverty reduction, social welfare, education etc. requiring greater attention and funding.
 - **Lack of Coordination:**
 - Due to poor coordination between stakeholders, there is inadequate access with respect to risk assessment, monitoring,

early warning, disaster response and other Disaster related activities.

- **Insufficient Investment:**
 - Insufficient investment in building disaster resilient strategies, also private sector are least contributors in the share of investment.
- **Initiatives for Disaster Risk Reduction:**
 - **Sendai Framework for Disaster Risk Reduction 2015-2030:**
 - The present Framework applies to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters caused by natural or man-made hazards, as well as related environmental, technological and biological hazards and risks.
 - It is the **successor instrument to the Hyogo Framework for Action (HFA) 2005-2015.**
 - **United Nations Office for Disaster Risk Reduction (UNDRR):**
 - UNDRR (formerly UNISDR) is the **United Nations focal point for disaster risk reduction.**
 - It **oversees the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030**, supporting countries in its implementation, monitoring and sharing what works in reducing existing risk and preventing the creation of new risk.
 - **Coalition for Disaster Resilient Infrastructure (CDRI):**
 - **Established in 2019** under the leadership of India, it aims to **promote the resilience of new and existing infrastructure systems** to climate and disaster risks in support of sustainable development.

Way Forward

- Although the **DM Act has undoubtedly filled a huge gap** in the scheme of governmental actions towards dealing with disasters, laying down elaborate plans on paper doesn't serve the purpose unless they are translated into effective implementation.
- Civil society, private enterprises and **Non-governmental Organizations (NGOs)** can play a valuable role towards building a safer India.

GS 3 : Economy, Science and Technology, Environment

5. Sugarcane Pricing in India

Earlier this month, the Supreme Court issued notices to States and major sugar producers to develop a mechanism to ensure that farmers are paid on time.

Who determines Sugarcane prices?

Sugarcane prices are determined by the Centre as well as States.

1. The Centre announces Fair and Remunerative Prices which are determined on the recommendation of the Commission for Agricultural Costs and Prices (CACP) and are announced by the Cabinet Committee on Economic Affairs, which is chaired by Prime Minister.
2. The State Advised Prices (SAP) are announced by key sugarcane producing states which are generally higher than FRP.

Minimum Selling Price (MSP) for Sugar

- The price of sugar is market-driven & depends on the demand & supply of sugar.
- However, with a view to protecting the interests of farmers, the concept of MSP of sugar has been introduced since 2018.
- MSP of sugar has been fixed taking into account the components of Fair & Remunerative Price (FRP) of sugarcane and minimum conversion cost of the most efficient mills.

Basis of price determination

- With the amendment of the Sugarcane (Control) Order, 1966, the concept of Statutory Minimum Price (SMP) of sugarcane was replaced with the Fair and Remunerative Price (FRP) of sugarcane in 2009-10.
- The cane price announced by the Central Government is decided on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP).
- This is done in consultation with the State Governments and after taking feedback from associations of the sugar industry.

What is FRP?

- FRP is fixed under a sugarcane control order, 1966.
- It is the minimum price that sugar mills are supposed to pay to the farmers.
- However, states determine their own State Agreed Price (SAP) which is generally higher than the FRP.

Factors considered for FRP:

- The amended provisions of the Sugarcane (Control) Order, 1966 provides for fixation of FRP of sugarcane having regard to the following factors:

a) cost of production of sugarcane;

b) return to the growers from alternative crops and the general trend of prices of agricultural commodities;

c) availability of sugar to consumers at a fair price;

d) price at which sugar produced from sugarcane is sold by sugar producers;

e) recovery of sugar from sugarcane;

f) the realization made from sale of by-products viz. molasses, bagasse and press mud or their imputed value

g) reasonable margins for the growers of sugarcane on account of risk and profits

6. Places in news: Cattle Island on Hirakud Reservoir

The Odisha Forest and Environment Department is all set to begin 'Island Odyssey' and 'Hirakud Cruise' ecotourism packages for tourists to islands inside the reservoir.

Cattle Island

- 'Cattle island', one of three islands in the Hirakud reservoir, has been selected as a sight-seeing destination.
- When large numbers of people were displaced from their villages when the Hirakud dam was constructed on the Mahanadi river in 1950s, villagers could not take their cattle with them.
- They left their cattle behind in deserted villages.

- As the area started to submerge following the dam's construction, the cattle moved up to Bhujapahad, an elevated place in the Telia Panchayat under Lakhanpur block of Jharsuguda district.
- Subsequently named 'Cattle island', it's surrounded by a vast sheet of water.

Other islands

- Then there is an "island of bats", also within the reservoir, just 1 km away from the Debrigarh ecotourism project.
- It is the habitat of hundreds of bats.
- Tourists also get a magnificent view of the sunset from the reservoir. 'Sunset island' is one of the three stops on the unique boat ride.

7.G-sec Acquisition Programme 2.0

Why in News

Recently, the **Reserve Bank of India (RBI)** has announced that it will **conduct an open market purchase of government securities of Rs 25,000 crore under the G-sec Acquisition Programme (G-SAP 2.0)**.

- Earlier, under **G-SAP 1.0**, the first purchase of government securities for an aggregate amount of Rs. 25,000 crore was made.

Key Points

- **Government Securities Acquisition Programme (G-SAP):**
 - **About:** The G-Sec Acquisition Programme (G-SAP) is basically an **unconditional and a structured Open Market Operation (OMO)**, of a much larger scale and size.
 - RBI has called the G-SAP as an OMO with a '**distinct character**'.
 - The word 'unconditional' here connotes that RBI has committed upfront that it will buy G-Secs irrespective of the market sentiment.
 - **Objective:** To achieve a **stable and orderly evolution of the yield curve along with management of liquidity** in the economy.
 - **Significance:** The government will mainly benefit from the G-SAP.
 - By purchasing G-secs, the RBI **infuses money supply into the economy** which inturn keeps the **yield down and lower the borrowing cost of the Government**.
 - The government of India, with its massive borrowing programme (for example, **National infrastructure pipeline**

project), can now breathe a sigh of relief as long-term borrowing costs come down.

- **Issues:** Critics of the G-SAP say that the **rupee might get adversely affected**.
 - They are of the view that the G-SAP announcement has already led to **depreciation of the rupee** (a fall in the value of currency).
 - So, critics are pointing to the fact that there is a **trade-off between a tumbling rupee and lower borrowing costs/low yields**.
 - Further, too much liquidity will **drive up inflation**.
- **Open Market Operations:**
 - Open Market Operations (OMO) is one of the **quantitative (to regulate or control the total volume of money) monetary policy tools** which is employed by the central bank of a country to control the money supply in the economy.
 - OMOs are conducted by the RBI by way of **sale or purchase of government securities (g-secs)** to adjust money supply conditions.
 - The central bank **sells g-secs to remove liquidity from the system and buys back g-secs to infuse liquidity into the system**.
 - These operations are often conducted on a day-to-day basis in a manner that balances inflation while helping banks continue to lend.
 - RBI carries out the **OMO through commercial banks** and does not directly deal with the public.
 - The RBI uses OMO along with other monetary policy tools such as **repo rate, cash reserve ratio and statutory liquidity ratio** to adjust the quantum and price of money in the system.
- **Government Securities:**
 - A G-Sec is a **tradable instrument** issued by the Central Government or the State Governments.
 - It acknowledges the **Government's debt obligation**. Such securities are short term (usually called treasury bills, with original **maturities of less than one year**- presently issued in three tenors, namely, 91 day, 182 day and 364 day) or **long term (usually called Government bonds** or dated securities with original maturity of one year or more).
 - In India, the Central Government issues **both treasury bills and bonds or dated securities** while the State Governments **issue only bonds or dated securities**, which are called the **State Development Loans (SDLs)**.
 - G-Secs carry **practically no risk of default** and, hence, are called **risk-free gilt-edged instruments**.
 - Gilt-edged securities are **high-grade investment bonds** offered by governments and large corporations as a means of borrowing funds.

Yield Curve

- Bond yield is the **return an investor realizes on a bond**.
- The **mathematical formula** for calculating yield is the **annual coupon rate** (interest rate promised by the bond issuer) **divided by the current market price of the bond**.
- Movements in yields depend on trends in interest rates, it can result in capital gains or losses for investors.
 - A **rise in bond yields** in the market will **bring the price of the bond down**.
 - A **drop in bond yield** would benefit the investor as the **price of the bond will rise**, generating capital gains.
- A yield curve is a line that **plots yields (interest rates) of bonds having equal credit quality but differing maturity dates**.
- The slope of the yield curve gives an idea of future interest rate changes and economic activity.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. National Bio Entrepreneurship Competition

Why in News

Recently, the **Department of Biotechnology** has launched the **fifth edition of the National Bio Entrepreneurship Competition (NBEC)**.

- NBEC is conducted as a part of the **Biotechnology Industry Research Assistance Council (BIRAC) Regional Entrepreneurship Centre**, established at **Centre for Cellular and Molecular Platforms (C-CAMP)** in partnership with BIRAC.
 - BIRAC is a **Public Sector Enterprise**, set up by the **Department of Biotechnology (DBT)**.

Centre for Cellular and Molecular Platforms (C-CAMP)

- C-CAMP is one of the centers for technology-based innovation and entrepreneurship in the field of life sciences under the Department of Biotechnology (DBT).
- It intends to develop state-of-the-art technologies and to provide training on these technologies to academia and industry.

Key Points

- **About NBEC:**
 - It is India's largest and most prestigious national competition for bio-entrepreneurs.
 - First Launched in 2017, NBEC has emerged as a flagship platform for bio-entrepreneurs and innovators in India to showcase their deep science driven ideas and has created a great impact.
 - It is held annually to identify and nurture deep science-driven business ideas in the life sciences domain that have the potential to break new ground in addressing societal challenges.
- **Prize:**
 - It gives an unprecedented sum of Rs 8.5 crore in cash prizes and investment opportunities this year for winners.
- **Investment Partners:**
 - Over 30 industry and investment partners have come forward to encourage and support bio-entrepreneurship in India through this competition.
- **Achievements:**
 - NBEC in four years has created a repository of over 1,000 carefully vetted and expert hand-picked business ideas spanning all sub-domains of life Sciences.
 - Special focus was given on healthcare, agriculture and environment, with a special focus on emerging areas like digital health, maternal & child health, antimicrobial resistance, water and sanitation, green chemistry, and personal care.
 - This has built a steady pipeline of innovative technologies with demonstrated commercial viability.

2. Incel Movement

Why in News

Recently, the **Incel Movement** has been linked to serious violence around the world.

- The movement came into the spotlight yet again in the UK's Plymouth, where a 22-year-old man shot dead five people, including a toddler.

Key Points

- **About:**
 - It is a dangerous **online subculture comprising men who identify as 'involuntary celibates'** and regularly express deeply misogynistic views about women.
 - Men who are part of this movement harbour a **deep resentment towards both women and other men who are sexually active.**
 - They **blame women for their own lack of sexual and social status.** While views tend to vary, some believe that sex is their right – something that is owed to them by virtue of them being males.
 - An extreme section of Incels even advocate violence against women. However, not all members of the subculture are violent, experts say.
- **Red Pill & Black Pill Mentality:**
 - The **black pill** theory, often associated with incels, **promotes the defeatist idea that your fate is sealed at birth** and no matter what changes you try to make, **your sexual capital cannot be altered.**
 - **Red pillers**, on the other hand, believe the **world is biased toward women, and see feminism as female supremacy.** They believe there is a systemic bias in favour of women.
- **Concerns:**
 - The movement has been **identified as a strand of a broader trend of young white males being radicalised online.**
 - It **shares some similarities with the better known alt-right movement,** with both groups attributing society's ills to social liberalism, women and ethnic minorities.
 - The alt-right, an abbreviation of alternative right, is a loosely connected far-right, **white nationalist movement.**
 - So far, **incel-related attacks are not perceived as as much of a terror threat** in the US when compared to violent attacks by followers of other violent far-right ideologies, according to an analysis of domestic terror attacks by the New America Foundation.
 - But the same analysis found that **incel terrorism is deadlier than far-left terrorism.**

GS 3 : Economy, Science and Technology, Environment

3. To boost agricultural productivity, open up trade, lower tariffs on equipment

Context

On July 15, the Centre issued a notification moving power tillers (PT) and their components from the “free” to “restricted” category indicating a clear intent to provide protection to the domestic industry.

How heterodox opening policies affects farming

Heterodox opening policies, being open on the export side while being closed on the import side, have long-term unintended consequences.

- **Productivity loss:** One impact of heterodox policies is **subpar mechanisation and productivity loss** in agriculture.
- India’s **mechanisation coverage is around 40-45 per cent**, compared to 90 per cent in developed countries.
- At present, only Punjab, Haryana and western UP have mechanisation rates between 70 and 80 per cent whereas in eastern and southern states it is between 35 and 45 per cent, with even smaller coverage in North-Eastern states.
- Comparatively high tariffs on agricultural machinery, placement under restricted trade hits the cog in the wheel of mechanisation.
- **Uncertainty and lower trade:** A shift to restricted category and frequently changing tariffs **engenders uncertainty and lowers trade**.
- **Disincentivise innovation:** Such policies also disincentivises domestic machine manufacturers to invest and innovate – the perils of protection.

What India can learn from Bangladesh on farm mechanisation

- Starting lower, Bangladesh overtook India in mechanisation by 2006.
- A perfect example of orthodox opening in the late 1980s, Bangladesh removed import bans on Power Tiller and other machinery like diesel engines.
- By 1995, PT were made duty free and credit support was provided for purchases.
- Studies have credited PT in increasing the rice yield in Bangladesh, which grew 2.1 per cent annually from 1990, compared to 1.6 per cent between 1960 and 1989.

Way forward

If productivity in agriculture and incomes of farmers were to go up significantly, Indian **agriculture must hit the mechanisation frontier.**

- **Liberal and Stable trade policies:** Liberal and stable trade policies will increase access, competition will expand varieties and bring down the prices.
- New trade economics teaches us that farmers would be successful in trading or accessing markets only when highly productive, which beckons large scale and intensive mechanisation.
- **Credit support:** Bangladesh also shows the role of complementary policies such as credit support.
- Once the farmers achieve sufficiently high productivity, they can access markets and even integrate with global value chains (GVC) if allowed by policy as intended in the **Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020.**

Conclusion

Liberal trade in machinery presents an opportunity to access distant and international markets. The key is to be both ways open.

4. What India's informal sector needs right now

Context

Informal sector workers suffered far more from the national lockdown in 2020 than their formal sector counterparts.

Significance of informal sector

- India's large informal sector, which employs around **80 per cent of the labour force** and produces about **50 per cent of GDP.**
- **Of the 384 million employed in the informal sector,** half work in agriculture, living mostly in rural India, and the other half are in non-agricultural sectors.
- Of those, about half live in rural India and the remaining in urban areas.
- Ignoring problems in the informal sector can be costly as it can lead to job and wage losses, higher inflation and even risk the livelihood of migrant workers.

Impact of pandemic on informal sector workers

- Informal sector workers suffered far more from the national lockdown in 2020 than their formal sector counterparts.
- Such disruptions can be inflationary too.
- India was one of the few countries with high inflation throughout pandemic-stricken 2020.
- The 40 per cent in the informal non-agricultural sector is the most affected by the pandemic.
- These workers are most vulnerable as they have borne the brunt of the economic disruption that the pandemic has unleashed.

Impact on the informal sector

- Nominal GDP growth has been a good indicator of the formal sector corporate sales.
- But during the pandemic and also during events like demonetisation, formal corporate sales have exceeded nominal GDP growth.
- This means that some demand, which was previously supplied by the informal sector, **began to be supplied by the formal sector.**
- Several surveys over this time also show a rise in urban unemployment and self-employment, with the latter category seeing the highest earnings loss.

Way forward

- **Formalisation on the back of policy changes:** While traditionally **associated with efficiency gains**, if it comes at the cost of putting small informal firms out of business.
- Formalisation that comes only on the back of external pressure or leads to deep distress in the informal sector, may not be sustainable.
- By contrast, formalisation that happens on the back of policy changes that help small and informal firms grow over time into medium or larger formal sector firms is more sustainable.
- **Social welfare scheme:** We need protection for informal sector workers via social welfare schemes so that the disruption they are facing does not lead to a permanent fall in demand.
- There is a case for remaining generous with programmes such as the rural MGNREGA scheme for longer.
- India doesn't have an MGNREGA equivalent urban social welfare scheme.
- **Reforms:** Steps to promote reforms that are needed to help small businesses grow are critical.
- For example, lowering the regulatory burden associated with growing firms.

Conclusion

Bringing the informal sector to the forefront of policy decisions can lead to a significant payoff for the entire economy for years to come.

5. Fusion Ignition

Why in News

Recently, researchers at the **Lawrence Livermore National Laboratory** (which operates the National Ignition Facility in California, US) appeared to have **demonstrated “fusion ignition”** for the first time.

- This breakthrough has brought the world closer to the dream of **near-limitless clean energy through nuclear fusion**.

Key Points

- **About the Experiment:**
 - They applied **laser energy** on fuel pellets to heat and pressurise them at conditions similar to that at the centre of our Sun.
 - This **triggered the fusion** reactions.
 - These reactions **released positively charged particles called alpha particles (helium)**, which in turn heated the surrounding plasma.
 - The heated plasma also released alpha particles and a **self-sustaining reaction called ignition took place**.
 - Ignition helps amplify the energy output from the nuclear fusion reaction and this could help provide clean energy for the future.
- **Significance of the Experiment:** Reproducing the conditions at the centre of the Sun will allow studying:
 - **Plasma**, the state of matter that has never been created in the lab before.
 - **Gain insights into quantum states of matter**.
 - Conditions closer and closer to the **beginning of the Big Bang**.
- **About Nuclear Fusion:**
 - Nuclear fusion is defined as the **combining of several small nuclei into one large nucleus** with the subsequent release of huge amounts of energy.
 - It is the **opposite reaction of fission**, where heavy isotopes are split apart.
 - Harnessing fusion, **the process that powers the Sun**, could provide a limitless, clean energy source.
 - In the sun, the extreme pressure produced by its immense gravity creates the conditions for fusion to happen.

- Fusion reactions **take place in a state of matter called plasma**. Plasma is a hot, charged gas made of positive ions and free-moving electrons that has unique properties distinct from solids, liquids and gases.
- At high temperatures, electrons are ripped from atom's nuclei and become a plasma or an ionised state of matter. Plasma is also known as the **fourth state of matter**.
- **Advantages of Nuclear Fusion:**
 - **Abundant energy:** Fusing atoms together in a controlled way releases nearly four million times more energy than a chemical reaction such as the burning of coal, oil or gas and four times as much as nuclear fission reactions (at equal mass).
 - Fusion has the potential to provide the kind of baseload energy needed to provide electricity to the cities and the industries.
 - **Sustainability:** Fusion fuels are widely available and nearly inexhaustible. Deuterium can be distilled from all forms of water, while tritium will be produced during the fusion reaction as fusion neutrons interact with lithium.
 - **No CO₂:** Fusion doesn't emit harmful toxins like carbon dioxide or other greenhouse gases into the atmosphere. Its major by-product is helium: an inert, non-toxic gas.
 - **No long-lived radioactive waste:** Nuclear fusion reactors produce no high activity, long-lived nuclear waste.
 - **Limited risk of proliferation:** Fusion doesn't employ fissile materials like uranium and plutonium (Radioactive tritium is neither a fissile nor a fissionable material).
 - **No risk of meltdown:** It is difficult enough to reach and maintain the precise conditions necessary for fusion – if any disturbance occurs, the plasma cools within seconds and the reaction stops.
- **Other Related Initiatives:**
 - **International Thermonuclear Experimental Reactor (ITER) Assembly:** It aims to build the world's largest tokamak to prove the feasibility of fusion as a large-scale and carbon-free source of energy. The ITER members include China, the European Union, India, Japan, South Korea, Russia and the United States.
 - **China's Artificial Sun:** The Experimental Advanced Superconducting Tokamak (EAST) device designed by China replicates the nuclear fusion process carried out by the sun.

6. India Decides to Ratify the Kigali Amendment

Why in News

Recently, the Union Government approved the ratification of the **Kigali Amendment to the Montreal Protocol on phasing down climate-damaging refrigerant Hydrofluorocarbons (HFCs)**.

- It comes close on the heels of similar decisions by the United States and China, the world's largest producers and consumers of HFCs. 122 countries had ratified the Kigali Amendment by the end of July 2021.

Key Points

- **About:**
 - The United States, China and India are in separate groups of countries, with different time schedules to phase out their HFCs and replace them with climate-friendly alternatives.
 - India has to reduce its HFC use by 80% by the year 2047, while China and the United States have to achieve the same target by the year 2045 and 2034 respectively.
 - India will complete its phasedown of HFCs in four steps from 2032 onwards with a cumulative reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 80% in 2047.
 - **Amendments** to the existing legislation framework, the **Ozone Depleting Substances (Regulation and Control) Rules** to allow appropriate control of the production and consumption of hydrofluorocarbons to ensure compliance with the Kigali Amendment **will be done by mid-2024**.
- **Background:**
 - The **1989 Montreal Protocol** is not a climate agreement. It is instead **aimed at protecting the earth from Ozone-Depleting Substances (ODSs)** like the ChloroFluoroCarbons (CFCs), that were earlier used in the air-conditioning and refrigerant industry.
 - The widespread use of CFCs **had caused a hole in the Ozone layer of the atmosphere**, which allowed some harmful radiation to reach the earth. These radiations were considered potential health hazards.
 - The Montreal Protocol **led to the replacement of CFCs with Hydrofluorocarbons (HFCs)** which do not destroy the Ozone layer.
 - But they were **later found to be extremely potent in causing Global Warming**. So, the HFCs solved one problem, but were contributing in a major way to another.
 - But these could not be eliminated under the original provisions of Montreal Protocol which was meant to phase-out ODSs only.

- The **Kigali Amendment enabled the Montreal Protocol to mandate the elimination of HFCs** as well.
 - In October 2016, with the United States' leadership, 197 countries adopted an amendment to phase down HFCs under the Montreal Protocol in Kigali, Rwanda.
- **Kigali Amendment to Montreal Protocol:**
 - The Kigali Amendment aims for the **phase-down of hydrofluorocarbons (HFCs)** by cutting their production and consumption.
 - The goal is to achieve **over 80% reduction in HFC consumption by 2047.**
 - Given their zero impact on the depletion of the ozone layer, **HFCs are currently used as replacements of hydrochlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs)** in air conditioning, refrigeration and foam insulation, however they are powerful greenhouse gases.
 - **Under the amendment :**
 - Developed countries will reduce HFC consumption beginning in 2019.
 - Most developing countries will freeze consumption in 2024,
 - Some developing countries including India with unique circumstances will freeze consumption in 2028.
 - The plan also **provides financing to certain countries**, to help them transition to climate-friendly alternatives.
 - With the Kigali Amendment, the **Montreal Protocol has become an even more powerful instrument** against global warming.
- **Significance:**
 - This important instrument is crucial to **achieving the target of restraining the increase in global temperatures to 2 degree Celsius** from pre-industrial times.
 - As pointed out by a recent report of the **Intergovernmental Panel on Climate Change (IPCC)**, the average temperature of the planet has already risen by about 1.1 degree Celsius.
 - The collective action is expected to **prevent emissions of upto 105 million tonnes of carbon dioxide equivalent of greenhouse gases helping to avoid up to 0.5 degree Celsius** of global temperature rise by 2100, while continuing to protect the ozone layer.
 - Because **HFCs** were not ozone-depleting, they were not controlled substances under the Montreal Protocol. They were part of the problematic greenhouse gases whose emissions are **sought to be curtailed through climate change instruments such as the Kyoto Protocol of 1997 and the 2015 Paris Agreement.**
 - But the Montreal Protocol has been a far more effective and successful agreement than the climate change instruments. It has

already resulted in the phase-out of 98.6% of ozone-depleting substances. The remaining 1.4% are the HCFCs that are in the process of being transitioned.

▪ **Significance for India:**

- **India became a party** to the Montreal Protocol on Substances that Deplete the Ozone Layer **in June 1992** and since then has ratified the amendments to the Montreal Protocol. India **has successfully met the phase-out targets of all the Ozone Depleting Substances** as per the Montreal Protocol Schedule.
- India is **one of the first countries in the world to launch a cooling action plan in 2019**. This comprehensive plan is aimed at reducing cooling demand, enabling refrigerant transition, enhancing energy efficiency and better technology options with a 20-year time horizon.
 - **The signing of the Kigali Amendment is a cue for the markets to make a faster transition from HFCs to cleaner gases.**
- It would **boost domestic manufacturing and employment generation goals**.
- The ratification would signify that **India is ready to compete in the market for low-Global Warming Potential GWP (climate-friendly) refrigerants**, which will spur domestic innovation and attract international investments.
- The decision would **pave the way for India to achieve its climate change mitigation goals and cooling commitments**. India is among a small group of countries on track to meet its climate commitments under the Paris Agreement.

Prelims Practice Questions

1. Consider the following statements :

1. In India, judges of the higher judiciary are appointed only through the collegium system.
2. The government cannot raise an objection on the collegium's reiteration for appointment of a judge.

Which of the statements given above is/ correct?

A 1 only

B 2 only

C Both 1 and 2
D Neither 1 nor 2

Answer : C

Explanation

- The Collegium System is the **system of appointment and transfer of judges** that has evolved through judgments of the SC, and not by an Act of Parliament or by a provision of the Constitution.
- **Judges of the higher judiciary are appointed only through the collegium system** and the government has a role only after names have been decided by the collegium. **Hence, statement 1 is correct.**
- The **government's role is limited to getting an inquiry conducted by the Intelligence Bureau (IB)** if a lawyer is to be elevated as a judge in a High Court or the Supreme Court.
- It can also **raise objections and seek clarifications** regarding the collegium's choices, **but if the collegium reiterates the same names**, the government is bound, under Constitution Bench judgments, to appoint them as judges. **Hence, statement 2 is correct.**

2. Which of the following are the web portals launched by Government of India to provide information on geospatial data:

1. Bhuvan
2. Sarthi
3. Manchitran

Select the correct answer using the code given below:

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

Answer :D

Explanation

- **Geospatial technologies** is a term used to describe the **range of modern tools contributing to the geographic mapping** and analysis of the Earth and human societies.
- The Union government has also launched web portals to offer geospatial data.
 - **Sarathi:** The Survey of India has developed a web Geographic Information System (GIS) called Sarathi. It will help users in creating applications for geospatial data visualisation, manipulation, and analysis without a lot of resources at their end.
 - **Manchitran:** National Atlas and Thematic Mapping Organization (NATMO) has released thematic maps such as the cultural map of India, the climactic map, or the economic map, on this portal.
 - **Bhuvan:** It is the national Geo-portal developed and hosted by ISRO comprising Geo Spatial Data, Services and Tools for Analysis.
 - **Hence, option D is correct**

3. Consider the following statements:

1. The Central Pollution Control Board (CPCB) is constituted under the Environment (Protection) Act, 1986.
2. The CPCB provides technical services to the Ministry of Environment, Forest and Climate Change.

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 : B

Explanation

- **Central Pollution Control Board (CPCB)** is a statutory organisation which was constituted in September, 1974 under the **Water (Prevention and Control of Pollution) Act, 1974**. Hence, **statement 1 is not correct**.
 - It was also entrusted with the powers and functions under the **Air (Prevention and Control of Pollution) Act, 1981**.
 - It serves as a field formation and also provides technical services to the **Ministry of Environment, Forest and Climate Change** of the provisions of the **Environment (Protection) Act, 1986**. Hence, **statement 2 is correct**.
 - **Principal Functions** of the CPCB:
 - To promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution.
 - To improve the quality of air and to prevent, control or abate air pollution in the country.

4. Consider the following statements:

1. Tribunals in the Indian Constitution were incorporated by 42nd Amendment Act, 1976.
2. Administrative Tribunals owe their origin to Article 323 A of the Indian Constitution.

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

Explanation

- Tribunals were not part of the original constitution, it was **incorporated in the Indian Constitution by 42nd Amendment Act, 1976. Hence, statement 1 is correct.**
- Administrative Tribunals were set-up by an act of Parliament, Administrative Tribunals Act, 1985. It **owes its origin to Article 323 A of the Constitution. Hence, statement 2 is correct.**
 - It adjudicates disputes and complaints with respect to recruitment and conditions of service of persons appointed to the public service and posts in connection with the affairs of the Union and the States.
- Article 323-B deals with tribunals for other matters.

5. With reference to the 'UNITE Aware' platform, consider the following statements:

1. It is launched by India in collaboration with the United Nations (UN).
2. It aims to deploy a UN peacekeeping mission to deal with the crisis in Afghanistan.

Which of the above statements is/are correct?

- A 1 only
- B 2 only
- C Both 1 and 2
- D Neither 1 and 2

Answer : A

Explanation

- India, in collaboration with the **United Nations (UN)**, has launched a technology platform to ensure the safety and security of peacekeepers who are operating across the world.
 - The launch of the UNITE AWARE platform came as India assumed the **Presidency of the 15-nation UN Security Council** for the month of August.
 - **Hence, statement 1 is correct.**

- This project aims to demonstrate the impact of **modern surveillance technology** on the **detection of asymmetric threats**. Hence, **statement 2 is not correct**.

6. Consider the following statements:

1. Warming will be stronger in the Arctic, on land and in the Northern Hemisphere.
2. Precipitation will increase in high latitudes, the tropics and monsoon regions.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

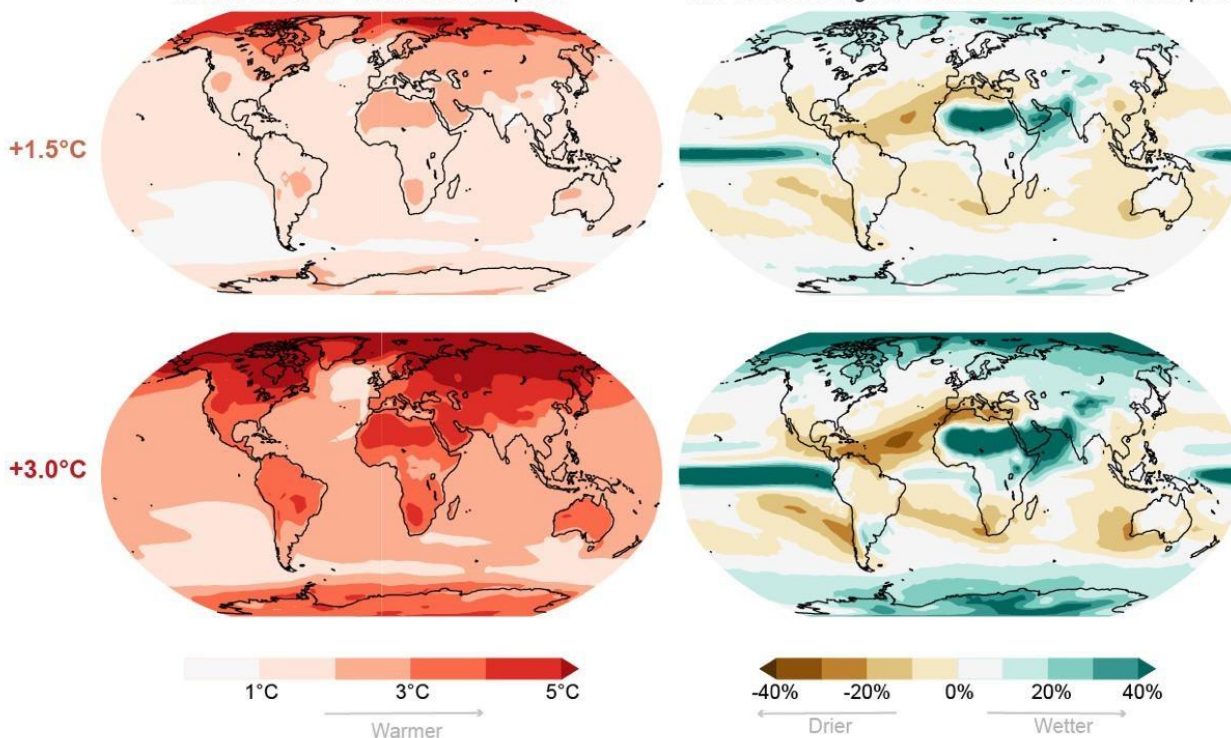
Answer : c

Climate change and regional patterns

Climate change is not uniform and proportional to the level of global warming.

Warming will be **stronger** in the Arctic, on land and in the Northern Hemisphere

Precipitation will **increase** in high latitudes, the tropics and monsoon regions and **decrease** in the subtropics



Mains Practice Questions

1. How does the draft Environment Impact Assessment (EIA) Notification, 2020 differ from the existing EIA Notification, 2006.

Approach

- Start your answer by mentioning the context of the draft Environment Impact Assessment (EIA) Notification, 2020
- Highlight major differences between the draft and current notification.
- Conclude suitably.

2. 'Indian diaspora has a decisive role to play in the politics and economy of America and European Countries'. Comment with examples.

Approach

- Start your answer by briefly discussing the significance of the Indian diaspora.
- Discuss in what ways the Indian diaspora affects the politics and economy of America and European Countries
- Conclude suitably.