Current Affairs MONTHLY



JANUARY 2022

By CivilsTap Himachal



For HPAS & Other Competitive Exam in Himachal Pradesh

Mains

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GENERAL STUDIES 1.

GEOGRAPHY

Punjab's Agroclimatic zones

Context:

 Amid talk of MSP guarantee and Punjab's urgent need to break away from the wheat-paddy cycle, experts feel that the state must follow cropping pattern as per its agro-climatic and soil conditions to protect the environment while increasing farmers' income.

About the Six Agri Zones of Punjab

- According to Punjab Agriculture University (PAU), Ludhiana, there are six agro-climatic zones in Punjab which include
- Sub-Mountain Undulating Region,
- Undulating Plain Region (UPR),
- Central Plain Region (CPR),
- Western Plain Region (WPR),
- Western Region (WR) and
- Flood Plain Region (FPR).
- These regions have rainfall variations from 165 mm to 2000 mm annually and climate from humid to cold-arid to arid and extreme arid.
- The variations in soil range from hill soils, tarai, brown hill, alluvial to desert.
- In these zones all agro-climatic conditions, rainfall pattern, distribution, soil texture are taken into account to have a suitable cropping pattern.
- Temperatures and humidity levels are also little bit different from each other in all these zones.

What They Offer

- In Zone 1 and 2, mostly kandi belt of the state's five districts, there are large sub-mountainous tracts along the Shivalik foothills.
- The temperatures are cold, humid to sub-humid, and semi-arid to humid and the rainfall varies between 165 mm to over 1000 mm.
- The soil of these areas is suitable to grow vegetables, wheat, maize, basmati sugarcane, jowar, bajra, barley etc.
- The land in these parts is uneven and semi-hilly, with light and sandy soil that is significantly rain-fed.

- Growing paddy here is not suitable because it requires continuous standing water for days. That makes maize practically a default crop for farmers here.
- The state has a flood plain region which is also called Bet area which falls across several districts where
 rivers like Satluj, Beas, Ravi and Gagghar pass and this region falls in the east-west cross section of the
 state and it has homogenous climatic conditions.
- Farmers prefer to grow paddy here because of the huge requirement of water for this crop.

Forward Plan

- Though as per the climatic conditions we have a cropping pattern for all the six regions of the state, but still the over usage of fertilisers and over exploitation of ground water for decades need for research and development work for modifying this cropping pattern further and having an ideal cropping system to help the farmers growing their incomes.
- The government wants to divide the whole state into zones according to the soil fertility and the respective suitable produce and for that a vision document is being prepared which will be adopted in the state to bring good reforms in the agriculture sector of the state.

The Indian Express link-

https://indianexpress.com/article/explained/punjabs-six-agro-climatic-zones-might-hold-key-to-its-diversification-conundrum-7655281/

Question- Punjab which benefitted the most during green revolution need to break the wheat paddy cycle and diversify crops based on agro-climatic conditions. Explain.

Cold wave

Context

- The India Meteorological Department (IMD) has predicted a cold wave in parts of Punjab, Haryana, Chandigarh, Gujarat, Rajasthan and Uttar Pradesh over the next few days.
- According to IMD, Punjab, Haryana, Chandigarh, Saurashtra and Kutch could witness a cold wave or a severe cold wave in December. A cold wave is likely over north Rajasthan, west Uttar and Gujarat.
- Dense morning fog is likely over isolated parts of Punjab and Haryana.
- Ground frost is also on the forecast for parts of Punjab, Haryana and Gujarat over the next few days.

Cause of this cold wave

- A western disturbance as a cyclonic circulation lies over north Pakistan and adjoining Jammu and Kashmir, according to an IMD bulletin on Thursday.
- **Western disturbances** are storms that originate in the Mediterranean region and bring winter rainfall to northwest India.

What is a cold wave?

- The IMD defines a cold wave qualitatively as "a condition of air temperature which becomes fatal to the human body when exposed."
- The IMD records a **cold wave** when the minimum temperature is equal to or less than 10 degree Celsius at a weather station in the plains, and is 4.5 degrees to 6.4 degrees below the normal temperature for that period.
- A cold wave may also be recorded at a station in the plains when the minimum temperature is less than or equal to 4 degree Celsius.
- For hilly regions, a cold wave is declared when the minimum temperature is less than or equal to 0 degree Celsius and the minimum temperature is 4.5 degrees to 6.4 degrees below the normal.
- The 'normal' temperature is calculated for every five days by taking the average temperature for these days over the past 30 years.
- The IMD also has an 'impact matrix' for cold waves when cold wave conditions persist in isolated areas for more than two days, the impact matrix indicates that the cold is tolerable but "a mild health concern for vulnerable people (infants, pregnant women, elderly, people with chronic diseases etc."
- It suggests avoiding prolonged exposure to the cold, and covering the head, neck, hands and toes as "majority of heat loss occurs through these body parts."
- In 'severe' cold wave conditions, where the minimum temperature is less than or equal to 10 degree Celsius, and departs from the normal by 6.5 degrees or more, or if cold wave conditions persist for four days or more, the IMD's impact matrix indicates an increased likelihood of illnesses like flu, due to prolonged exposure to the cold.

Why do cold waves occur?

- Cold waves usually occur from mid-December to the end of February. Sometimes, a cold wave may set in before mid-December.
- The cold waves depend on weather systems and wind patterns from the middle latitudes, that is from Europe or West Asia, since the winds from these regions bring cold weather.
- According to the IMD, the factors that bring cold waves to India include the movement of cold air masses brought about by upper-level winds. They can be triggered by strong westerly winds approaching northwest India and transporting cold air towards the southeast direction.
- Build-up of an extended area of relatively high pressure over northwest Asia can also bring cold waves.
- Like heat waves, cold waves are hazardous to those who are exposed to the cold.

The Indian Express Link

https://indianexpress.com/article/explained/explained-why-imd-has-predicted-a-cold-wave-in-northwest-india-7677262/

Question- Write a short note on cold wave.

Himalayan glaciers melting at 'exceptional rate' due to global warming

Context

 According to a study published in journal Scientific reports, Glaciers in the Himalayas are melting at an "exceptional" rate because of global warming, threatening the water supply of millions of people in Asia.

Key highlights

- The Himalayan mountain range is home to the world's third-largest amount of glacier ice, after Antarctica and the Arctic and is often referred to as 'the Third Pole'.
- The researchers found that the Himalayan glaciers have lost ice ten times more quickly over the last few decades than on average since the last major glacier expansion 400-700 years ago, a period known as the Little Ice Age.
- The study also shows that Himalayan glaciers are shrinking far more rapidly than glaciers in other parts of the world.
- Eg: A team led by researchers at the University of Leeds, UK, made a reconstruction of the size and ice surfaces of 14,798 Himalayan glaciers during the Little Ice Age and calculated that the glaciers have lost around 40 per cent of their area, shrinking from a peak of 28,000 square kilometres (km2) to around 19,600 km2 today.
- The water released through that melting has raised sea levels across the world by between 0.92 millimetres (mm) and 1.38 mm.
- The researchers found that acceleration in the rate of loss has only emerged within the last few decades, and coincides with human-induced climate change.
- The acceleration of melting of Himalayan glaciers has significant implications for hundreds of millions
 of people who depend on Asia's major river systems for food and energy and these rivers include
 the Brahmaputra, Ganges and Indus.
- The Himalayan glaciers are generally losing mass faster in the eastern regions, taking in east Nepal and Bhutan north of the main divide.
- The study suggests this variation is probably due to differences in geographical features on the two sides of the mountain range and their interaction with the atmosphere resulting in different weather patterns.
- Researchers emphasised that Himalayan glaciers are also declining faster where they end in lakes, which have several warming effects, rather than where they end on land as the number and size of these lakes are increasing so continued acceleration in mass loss can be expected.
- Glaciers which have significant amounts of natural debris upon their surfaces are also losing mass more quickly, contributing around 46.5 per cent of total volume loss despite making up only around 7.5 per cent of the total number of glaciers.

The HT link

https://www.hindustantimes.com/environment/himalayan-glaciers-melting-at-exceptional-rate-due-to-global-warming-study-101640004313543.html

Question- Discuss the impact of global warming on Himalayan ice sheets and water security in Asia.

SOCIETY

Children and schooling in the post-COVID-19 era

Context:

- The pandemic has revealed the limits of our wherewithal to look after the collective needs of children during a calamity. A child in the family has a radically different status from that accorded to children as a collective entity in our country.
- The pandemic has revealed that society and state institutions prefer to ignore the conditions under which the family copes with the demands of childhood.

Peripheral concern

- **Children's education** and **health** are two major domains in which welfare policies of the modern state are expected to support and enhance the family's role.
- In both these domains, the policy framework reflects a minimalist stance, both in terms of financial investment and institutional strength. In policies as well as in their execution, there is considerable diversity and disparity among the States. The overall picture suggests that childhood is of peripheral concern. Gains made in this context have proved difficult to sustain.

The pandemic's deep effect

- The structures and procedures created under the Sarva Shiksha Abhiyan during the decade preceding
 the Right to Education (RTE) were not perfect, but they marked a new beginning in the direction of
 local autonomy and devolution of power.
- These fragile structures required nurturing on a **long-term basis**. Neglect and decay set in quite soon in regions where the system was weak to begin with, and then came COVID-19.
- However, several recent surveys show that the pandemic has left the entire system ravaged. Even something as basic as a meal for the youngest age group ceased. Teaching switched wholesale to the online mode, leaving it to the family to cope with the demands hidden in this medium.
- India was unique in the fact that even the very youngest age group was covered by online teaching. With the reopening of schools, the outcomes of prolonged exposure to digital devices in confined spaces have started to be revealed and documented.
- The vast majority of children from **lower socio-economic backgrounds could not access online teaching** for reasons totally beyond their control.
- And among those who did have access to online lessons, rates of comprehension and progress were
 quite low.
- Academic losses are compounded by emotional problems. A survey carried out by the Vipla
 Foundation has traced the kinds of stress children experienced at home. Exposure to domestic
 violence, prolonged hours in front of TV, especially among boys, and addiction to digital sources of
 entertainment are among the various outcomes of COVID-19 confinement.

How to tackle this?

- Systemic recovery will be tough. The time required for recovery will depend on imagination and resources.
- Case study- A significant beginning has been made in Tamil Nadu. A committee chaired by Professor R. Ramanujam has been asked to prepare a three-year recovery plan and a new curriculum. A major problem this committee will need to address is the addictive effect of prolonged online teaching. Devices such as the smartphone induce small children into a seductive bond that may not be easy to shake off. Restoring children's innate desire to relate to the world physically and socially surrounding them will constitute a major step towards educational recovery. This will demand de-addiction from digital instruments.
- Exclusive dependence on digital machinery has resulted in a radical expansion of its market. It has also permitted digital activism to mutate into an ideological doctrine of progress. We need to listen to child psychologists and teachers of young children.
- Also the **teachers had little say in decisions and no autonomy to do their best**. Distrust in the teacher cuts across the deep divisions that characterise the system.

Insightful report

- A new United Nations Educational, Scientific and Cultural Organization (UNESCO) report titled "No Teacher, No Class" gives recommendations in this regard.
- Prepared by a team of scholars at the Tata Institute of Social Sciences, this report tells us that India is
 facing a shortfall of at least one million school teachers. The report makes several key
 recommendations.
- The first is: "Improve the terms of employment of teachers in both public and private schools." Some of the other recommendations are:
- Value the professional autonomy of teachers, build career pathways, and, above all, recruit more teachers.
- If sound, research-based advice is what we need for rebuilding the system, it is available in this excellent report.

The Hindu link-

https://www.thehindu.com/opinion/lead/children-and-schooling-in-the-post-covid-19-era/article37918167.ece

Question- Discuss how the pandemic has affected the school education in India.

Smart cities mission

Recent context

 Many plans under the SCM, which is funded partly by the Centre, remain incomplete due to the COVID-19 pandemic that stalled activities for most of 2020. In response, the Smart Cities Mission has extended the implementation date and given cities until June 2023 to complete the work.

Background

• The Centre used a competitive process to select **100 cities for upgradation with significant investments through the Smart Cities Mission** (SCM) launched on June 25, 2015. These cities were

identified through a "challenge" to which State governments and local bodies responded with plans that covered showpiece projects for a specific area, as well citywide plans. These included

- Integrated data,
- Use of technology platforms for service delivery to citizens, and
- Mainstreaming of urban development concepts to encourage other cities to adopt best practice.
- In September 2020, the Ministry of Housing and Urban Affairs (MoHUA) expanded the emphasis on climate-friendly infrastructure in smart cities through the Climate Smart Cities Assessment Framework
 2.0 and a "Streets for People" plan that would put pedestrians and non-motorised road users at the centre of urban planning.

Progress so far

• As per the Urban Affairs Ministry by November 2021, a total of 6,452 projects at a cost of ₹1,84,998 crore had been tendered. In terms of work progress, 5,809 projects worth ₹1,56,571 crore were under implementation or had been completed, it says, although it is not clear how many were completed.

Challenges faced by smart city plans

- The key features of smart cities, according to the Ministry, are
- Liveability,
- Economic ability and
- Sustainability.
- These broad ideas have a universal character and incorporate access to clean water, safe streets and
 public spaces, good public transport, facilities for health and education and places for recreation.
 They also seek to expand economic opportunity for all and address environmental stresses rising
 temperatures, extreme weather events, bad air quality, flood and drought, and lost urban
 biodiversity.

Planning issue

 In practice, smart city plans mainly involve State governments, the bureaucracy and independent experts. This is in spite of processes that have been incorporated to tap public sentiment using online tools and platforms.

Affordable housing

A core factor of liveability and inclusivity, such as affordable rental housing, determines the usability of
other features of a smart city. Some centres, such as Ahmedabad, Bhopal, Bhubaneshwar, Indore, and
Thane have pencilled in housing developments of various models, ranging from slum improvement to
free sale of houses, into their smart city projects, a few involving over ₹1,000 crore; others have
smaller levels of outlays for housing.

Planning for climate change

On-going smart city plans also face the pressure of designing for climate change. The Climate Smart
Assessment Framework would need to put in compulsory features to align all investments with
national commitments towards obligations under the Paris Agreement of the UN Framework
Convention on Climate Change (UNFCCC) and UN Sustainable Development Goals (SDG).

The Hindu Link

https://www.thehindu.com/news/national/the-status-of-the-smart-cities-mission/article37958454.ece

Question- How Smart Cities Mission can help to design climate change resilient infrastructure? Also list other challenges faced by SCM.



CULTURE

Paika rebellion

Context:

- The 1817 Paika rebellion of Odisha could not be called the first war of Independence, but considering
 it as a beginning of a popular uprising against the British, it would be included as a case study in the
 Class 8 National Council of Educational Research and Training (NCERT) history textbook, according to
 the Union Culture Minister.
- The Culture Ministry had received a reference from the Odisha Chief Minister asking that the Paika rebellion be declared the first war of Independence.

Paika rebellion of 1817

- Paikas had been recruited since the 16th century by kings in Odisha from a variety of social groups to render martial services in return for rent-free land (nish-kar jagirs) and titles.
- After entering Odisha in 1803, the British introduced new revenue settlements, due to which many
 Odia proprietors ended up losing their lands to absentee Bengali landlords.
- Changes in the currency and revenue systems meant the Odias had to pay taxes in silver, which was more expensive for them, and resulted in their further marginalisation and oppression.
- In 1817, some 400 Kondhs, who belonged to the state of Ghumsur, banded together to revolt against the British.
- Bakshi (Commander) Jagabandhu Bidyadhar Mahapatra Bhramaraber Ray was the military chief of the then Khordha Raja, who roused and led Paikas (peasant militia) and Kandhs (tribals) in a military attack on the British in 1817.
- During the course of the rebellion, government buildings in Banapur were set on fire, policemen and British officials were killed, and the treasury was looted.
- The uprising lasted for a few months but was eventually crushed by the better-equipped and trained forces of the East India Company.
- After seven years of evading arrest, in May 1825, he surrendered in Cuttack and was granted a pension till he died in 1829.

The Indian Express link-

https://indianexpress.com/article/explained/paika-revolution-odisha-demand-explained-7653963/

Question- Write a short note on Paika rebellion.

Red fort

Context

 The Delhi High Court dismissed a petition by the wife of the late Mirza Mohammed Bedar Bakht, greatgrandson of last Mughal emperor Bahadur Shah Zafar to hand over to her the possession of the Red Fort.

The Red Fort

- The Red Fort Complex was built as the palace fort of Shahjahanabad the new capital of the fifth
 Mughal Emperor of India, Shah Jahan. Shah Jahan, after ruling from Agra for eleven years, decided to
 shift to Delhi and laid the foundation stone of the Red Fort in 1618.
- Named for its **massive enclosing walls of red sandstone**, it is adjacent to an older fort, the Salimgarh, built by Islam Shah Suri in 1546, with which it forms the Red Fort Complex.
- For its **inauguration in 1647**, the main halls of the palace were draped in rich tapestry and covered with silk from China and velvet from Turkey.
- With a circumference of almost one and a half miles, the fort is an irregular octagon and has two
 entrances, the Lahore and Delhi Gates
- The private apartments consist of a row of pavilions connected by a **continuous water channel**, known as the **Nahr-i-Behisht (Stream of Paradise)**.
- The Red Fort is considered to represent the zenith of Mughal creativity which, under the Shah Jahan, was brought to a new level of refinement.
- The planning of the palace is based on Islamic prototypes, but each pavilion reveals architectural elements typical of Mughal building, reflecting a fusion of Persian, Timurid and Hindu traditions.

Elements of the Red Fort

- The Diwan-e-Aam is the Red Fort's hall of public audience. The Mughal emperors would hold court
 here and meet dignitaries and foreign emissaries. In the recess behind the platform are fine examples
 of Italian Pietra-Dura work.
- The piece de resistance of the fort, the Diwan-e-Khas was the hall of private audience. The most highly ornamented of all Shah Jahan's buildings, Diwan-e-Khas is a pavilion of white marble supported by intricately carved pillars. So enamoured was the emperor by the beauty of this pavilion that he engraved on it the following words: "If there is paradise on the face of this earth, it is this, it is this."
- Richly decorated with flowers of inlaid mosaic work of cornelian and other stones, the Diwan-e-Khas
 once housed the famous Peacock Throne, which when it was plundered by Nadir Shah in 1739

Importance

- The Mughal emperor was so closely identified with legitimate government in the public mind that
 when the country revolted in 1857, the mutinous soldiers made their way to Delhi, seeking his
 command. When the insurrection in Delhi was subdued, the British forces took over the Red Fort, and
 officers drank to their Queen's health in the Diwan-e-Khas, where Mughal kings had held court.
- It was in this hall that Bahadur Shah was tried, condemned, and deported.

Call @7814622609

• In **1945-46**, **personnel from the Indian National Army were tried there**, sparking a massive wave of nationalist fervour in the run-up to independence..

- It was also from its ramparts that the **first Prime Minister of India**, Pandit Jawharlal Nehru, **announced** to the nation that India was free from colonial rule.
- Every year on India's Independence Day (15 August), the Prime Minister hoists the Indian tricolour flag at the fort's main gate and delivers a nationally broadcast speech from its ramparts.
- The Red Fort Complex is **managed directly by the Archaeological Survey of India**, which is also responsible for the protection of all national level heritage sites in India and Indian cultural properties **included in the World Heritage List.**

The Hindu link

https://www.thehindu.com/news/national/hc-rejects-plea-for-red-fort-possession-by-bahadur-shah-zafars-great-grandsons-wife/article37999323.ece

https://whc.unesco.org/en/list/231/

Question- Describe the cultural and political significance of Red fort.

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GENERAL STUDIES 2.

INTERNATIONAL RELATIONS

India Sri Lanka relations

Context:

 As Sri Lanka battles to revive its Covid-battered economy, New Delhi and Colombo have agreed on a four-pronged cooperation package comprising urgent food and health security, energy security, currency swap and Indian investments.

More in the news

- The short- to medium-term plan was decided during the Sri Lanka Finance Minister visit to India recently.
- Sri Lankan met his Indian counterpart Nirmala Sitharaman and External Affairs Minister S Jaishankar, among others.
- The brother of Sri Lanka's Prime Minister and President, the Finance Minister is considered a political strategist.
- Both sides expressed satisfaction over the evolving trajectory of the bilateral relationship. During the discussions, they identified ways and means through which the existing bilateral economic relationship between the two countries could be further broadened and deepened.
- The Indian ministers expressed solidarity and reiterated that the country has always stood by Sri Lanka.
- According to the statement it was agreed that modalities to implement these objectives would be finalised within a mutually agreed timeline.
- The ministers also agreed to open direct lines of communication to coordinate the initiatives.
- According to a statement issued by the Sri Lanka High Commission in New Delhi, the two sides discussed "four pillars" for short- and medium-term cooperation.

Indo-Sri Lanka Relations:

- The relationship between India and Sri Lanka is more than **2,500 years old.**
- Both countries have a legacy of intellectual, cultural, religious and linguistic interaction.
- In recent years, significant progress in the implementation of developmental assistance projects for Internally Displaced Persons (IDPs) and disadvantaged sections of the population in Sri Lanka has helped further cement the bonds of friendship between the two countries.

Significance of Srilanka for India:

• **Economic** - India has enjoyed the status of being Sri Lanka's main economic partner for most of its independent history.

- Geo-strategic importance Srilanka is placed at a crucial juncture of important shipping lanes. India can
 leverage its geostrategic significance for enhanced transhipment facilities and regional security.
- Regional Significance Being a member of SAARC, BIMSTEC, and IORA both Sri Lanka and India can complement each other by finding greater convergence and syncing their respective foreign policies including <u>SAGAR doctrine</u>.

Political Relations:

 Political relations between the two countries have been marked by high-level exchanges of visits at regular intervals.

Commercial Relations:

- Sri Lanka is one of India's largest trading partners in SAARC. India in turn is Sri Lanka's largest trade partner globally.
- Trade between the two countries grew particularly rapidly after the entry into force of the India-Sri Lanka Free Trade Agreement in 2000.
- Exports from India to Sri Lanka in 2016 were US\$ 3.83 billion, while exports from Sri Lanka to India were US\$ 551 million.

Cultural Relations:

- The Cultural Cooperation Agreement, 1977 forms the basis for periodic Cultural Exchange Programmes between the two countries.
- The Indian Cultural Centre in Colombo actively **promotes awareness of Indian culture by offering** classes in Indian music, dance, Hindi and Yoga.
- India and Sri Lanka commemorated the 2600th year of the attainment of enlightenment by Lord
 Buddha (Sambuddhatva Jayanthi) through joint activities.
- The two Governments jointly celebrated the 150th Anniversary of Anagarika Dharmapala in 2014.
- The India-Sri Lanka Foundation, set up in 1998 as an intergovernmental initiative, also aims towards the enhancement of scientific, technical, educational and cultural cooperation.
- Under the **Indian Technical and Economic Cooperation Scheme** and the Colombo Plan, India offers 370 slots annually to Sri Lankan nationals.
- Tourism also forms an important link between India and Sri Lanka.
- The government of India formally launched the e-Tourist Visa (eTV) scheme for Sri Lankan tourists in 2015.
- In 2016, 14% of the total number of tourists arriving in Sri Lanka were Indians.
- Sri Lankan tourists too are among the top ten sources for the Indian tourism market.

About the "four pillars" for short- and medium-term cooperation.

 Urgent food and health security package that would envisage an extension of a line of credit to cover the import of food, medicines and other essential items from India to Sri Lanka;

- Call @7814622609
- Energy security package that would include a line of credit to cover the import of fuel from India, and early modernisation of the Trincomalee Tank Farm;
- Offer of a currency swap to help Sri Lanka address its balance of payment issues;
- Facilitation of Indian investments in different sectors that would contribute to growth and expand employment

The Indian Express link-

https://indianexpress.com/article/india/india-cooperation-plan-revive-covid-hit-sri-lanka-7654990/

Question- Economic recovery from pandemic can give India chance to help Sri Lanka and regain lost ground to China in the island nation. Comment.

India Russia relations

Context:

 Defence Minister recently highlighted the challenges faced by India due to what he termed 'unprovoked aggression" on the northern border.

More on the news

• Addressing the first India-Russia 2+2 ministerial meeting, Defence Minister urged to discuss in detail the emerging challenges India is confronted with and the enhanced requirement of India for closer military-to-military technical collaboration with Russia. The pandemic, the extraordinary militarization and expansion of armament in our neighborhood and unprovoked aggression on our northern border since early summer of 2020 has thrown in several challenges.

Recent developments

- The agencies from both sides will collaborate with each other to increase "regional trust and global security".
- Russia pointed out the commonalities between Indian and Russian positions on international issues.
- In all, at the 20th meeting of India-Russia Inter-Govt Commission on Military & Military Technical Technical Cooperation (IRIGC-M&MTC) four agreements, contracts and protocols were signed.
- Bilateral deal
- A bilateral logistics support deal Reciprocal Exchange of Logistics Agreement (RELOS), as well as a Navy-to-Navy cooperation MoU were also on the agenda.
- Russia has also begun deliveries of the S-400 long range air defence systems, the shipments of which are enroute.
- The deal for 6.1 lakh Ak-203 assault rifles is estimated at over ₹5,000 crore and will be manufactured by a joint venture, Indo-Russian Rifles Private Ltd (IRRPL) at Korwa, Amethi in Uttar Pradesh.
- IRRPL was set up jointly between the erstwhile OFB [now Advanced Weapons and Equipment India Ltd.] and Munitions India Ltd. of India and Rosoboronexport (RoE) and Kalashnikov of Russia.

India Russia Relations

• India and Russia have shared longstanding ties since Indian independence. The two countries signed the "Declaration on India Russia Strategic Partnership" in 2000 and since then the ties between the two countries have acquired a qualitatively new character with enhanced levels of cooperation in diverse areas of bilateral relationship which include political, security, defense, trade and economy, science and technology, and culture.

- Russia has been an all-weather friend for India since a long time under relationship with the country and has been a key pillar of India's foreign policy.
- However, in the recent times the bilateral ties between the two countries have suffered minor drawbacks mostly due to India's inclination towards the West and Russia's growing relationship with China.
- The year 2020 saw several geopolitical events that impacted both India and Russia. These include the sharpening rivalry between the US and China, the India-China border issue, the continuing decline in ties between the West and Russia, and now change of leadership in the US.
- Both India and Russia desire a multipolar world and therefore are equally important to each other in fulfilling each other's national interests.

Significance of Russia for India

- **Defence** Russia has remained one of the largest importers of defence equipment to India.
- Nuclear Energy- Russia recognises India's need to develop nuclear energy for peaceful purposes. In 2014, the Department of Atomic Energy (DAE) and Russia's Rosatom signed the Strategic Vision for strengthening cooperation in peaceful uses of atomic energy between India and Russia. The Kudankulam Nuclear Power Plant (KKNPP) in India is being built with Russian cooperation.
- **Strategic** Considering the emerging strong ties between Russia and China, India sees it as an actor that can help in influencing China amidst the increasing rate of clashes between India and China.
- Russia recently organised a trilateral meeting among the foreign ministers of Russia, India, and China following deadly clashes in the Galwan Valley in the disputed territory of Ladakh.
- Space cooperation The year 2020 has marked the 45th anniversary of the launch of India's first satellite "Aryabhatt" on a Russian (then USSR) launch vehicle "Soyuz". Both the countries have also been exploring the possibility of cooperation in manned space flight.
- **Combating terrorism** India and Russia have been working together closely to finalize the comprehensive convention on international terrorism as clearly as possible.
- Emerging New Sectors of Economic Engagement- Apart from the traditional areas of cooperation like
 weapons, hydrocarbons, nuclear energy and diamonds, there are several new sectors of economic
 engagement that are likely to emerge in the near future. Some of these include mining, agro industrial,
 and high technology including robotics, nanotechnology as well as biotechnology.
- In addition to this, India's presence in the Russian forest and in the Arctic is likely to expand in the near future and the connectivity projects may get a boost too.
- **Support at Multilateral Forums** Russia has been a crucial supporter of India's candidacy for permanent membership of the United Nations Security Council as well as the Nuclear Suppliers Group (NSG).

Challenges

India's growing inclination to the West especially the US-

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• China's expansionist foreign policy has forced India to shed its past hesitations and actively pursue closer relations with the West, especially the US. This can be seen in a determined restart of the Quad process and a clearer enunciation of a free and inclusive Indo-Pacific by both India as well as the US.

Russia's growing relations with the East especially China-

- The Western countries have imposed harsh economic sanctions on Russia after its annexation of Crimea in 2014.
- Russia has responded to these efforts to isolate it, by revving its own "Pivot to the East" Policy.
- The most distinct results of this include the markedly improved relations with China, and better ties with Turkey, Iran, and Pakistan.
- Russia's Pivot to the East policy is not in synergy with that of the US and this in turn affects the relationship between India and Russia.
- Russia's decision to supply M-35 Hind attack Helicopters to Pakistan has further alarmed the Indian defense establishment.

The Hindu link-

https://www.thehindu.com/todays-paper/india-russia-renew-military-technical-pact/article37876631.ece

Question- Describe the significance and challenges to India-Russia relations.

India's central Asia dialogue

Context

• India hosted the third India-Central Asia dialogue which saw participation of the Foreign Ministers of Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.

Important takeaways

- India and Central Asian nations share a "broad regional consensus" on Afghanistan, said a regional conference of Foreign Ministers in Delhi on Sunday that proposed the use of the India-run terminal at the Chabahar port in Iran as a route for trade.
- A joint statement issued at the end of deliberations said it was **important to provide immediate humanitarian aid for Afghans.**
- The Central Asia dialogue comes a month after National Security Adviser Ajit Doval hosted five counterparts from the region for a security dialogue focusing on Afghanistan.
- Ministers noted that there is a broad regional consensus on the issues related to Afghanistan, which
 includes formation of a truly representative and inclusive government, combating terrorism and drug
 trafficking, central role of the UN, providing immediate humanitarian assistance for the Afghan people
 and preserving the rights of women, children and other national ethnic groups.

Helping Afghans

- India sent a shipment of medical aid by air to Afghanistan earlier this month, but the bulk of its planned aid including 50,000 tonnes of wheat is still being discussed with Pakistan.
- While none of the countries recognise the Taliban, only Tajikistan has taken a strong stand against any bilateral contacts with the group after it took control of Afghanistan in August.
- The dialogue also discussed how to increase links in the "4 C's" of Commerce, Capacity enhancement, Connectivity and Contacts. India-Central Asia trade is quite small at present, accounting for less than \$2 billion, most of which comes from Kazakh oil exports to India.
- Given Pakistan's block on land trade from India, the countries determined to make more use of the sea
 route via Chabahar, which is connected to Central Asian countries by road and rail through Iran, as well
 as the International North South Transit Corridor (INSTC) that goes via the Iranian port of Bandar
 Abbas.
- The dialogue also decided to explore establishing joint working groups to address issues of free movements of goods and services between India and Central Asian countries.

The Hindu Link

https://www.thehindu.com/news/national/jaishankar-external-affairs-minister-india-central-asian-dialogue/article37990024.ece

Question- India along with central Asian countries can help in ensuring peace and stability in Afghanistan. Explain.

Testing the red lines in the Iran nuclear talks

Context

- The multilateral nuclear talks have began again after the Iranian presidential elections with the new Iranian negotiating team.
- According to a report by non partition organisations, Iran started exceeding JCPOA limits on both its allowed stockpile and level of enrichment in 2018 and began re imposing the Economic sanctions

Iran vs. US

- Both the countries want the other party to back down and make concessions, Iran insists on all sanctions being lifted while America is asking Iran to reduce the enrichment of Uranium and accept full International atomic energy agency (IAEA) inspections
- According to experts Iran is playing the North Korean card while moving towards leaving the economics affair of the United States and Europe and joining China and Russia
- Also there are apprehensions about the US not having a clear direction for Iran's future especially after
 the the refusal of commitment by US President to lift sanctions on Iran during remaining years of his
 presidency.

European Stand

- According to political director of European external action service who coordinates talks between heron and 6 powers, the P4+1 must take into account the political sensibilities of the new Iranian administration
- Since China and Russia are in favour of Iran, the Europeans do not seem to be a forceful mediator in the talks, though they are trying to to salvage the deal as quickly as possible as Iran ramps up uranium enrichment

Chinese stance

• China has talked about nuclear hypocrisy of the west suggesting its sympathy towards fundamental arguments of Iranian negotiators which has been dealt a fundamental injustice by America

Israel's stance

- Israeli officials have been pressing your pin governments and the US on a real Iranian nuclear threat
- According to the former Defence Minister of Israel, quitting the deal during Trump administration was the major mistake of the last decade
- The Prime Minister of Israel has asked US to use a different tool kit against Iran's forward gallop in the enrichment sphere
- Though, Israel continues to see Islamic republic of Iran as an existential threat, this threat can be justified notably by Iran's current hegemonic military drive

Iranian Stand

- Iran's supreme leaders have consistently been centred on the full sanctions removal, however the newly elected government of Iran has repeatedly proclaimed that nothing is agreed on unless everything has been agreed on.
- It appears that the government of Iran is testing the international web lines and trying to leverage iran's expanding nuclear program to produce more concessions from the international community without paying significant costs
- Iran has already started the advancement of centrifuges to perceive 20% uranium enrichment.

The Hindu Link

https://www.thehindu.com/opinion/op-ed/testing-the-red-lines-in-the-iran-nuclear-talks/article37992584.ece

Question- Iran-USA nuclear deal has multiple countries as stakeholders which impacts its implementation. Elucidate.

POLITY AND GOVERNANCE

Citizenship

Context:

- More than six lakh Indians renounced citizenship in the past five years, the Ministry of Home Affairs (MHA) informed the Lok Sabha recently.
- In 2021, till September 30, 1,11,287 Indians gave up their citizenship.

Probable reason for exodus

- The reason for a large number of Indians surrendering their citizenship was not stated.
- Though, in 2018, the MHA revised Form XXII under Citizenship Rules for declaration of renunciation of citizenship, which, for the first time, included a column on "circumstances/reasons due to which applicant intends to acquire foreign citizenship and renounce Indian citizenship".
- Recently, the MHA had simplified the process and provisions were made for the applicants to upload documents online and an upper limit of 60 days was fixed for the renunciation process to be completed.

Key Reports.

- According to a Global Wealth Migration Review report, in 2019, India came second only to China when
 it came to high net worth individuals (HNIs) leaving the country. As many as 7,000 HNIs left India in
 2019.
- In October, former Finance Minister of West Bengal, quoting a Morgan Stanley report, tweeted that "35,000 Indian Entrepreneurs of High Net Worth LEFT India between 2014-2020, as NRI/Immigrants. India RANKED No 1 IN EXODUS IN THE WORLD".

Key Stats of the Home Ministry

- In the period 2016-20, 10,645 foreigners applied for Indian citizenship, of which more than 7,782 were from Pakistan and 452 were stateless.
- During the same period, 4,177 persons were granted Indian citizenship but the country-wise breakup was not provided.
- A total number of 1,33,83,718 Indian nationals were living in foreign countries.
- The Minister said the persons covered under the Citizenship Amendment Act (CAA) might apply after the rules were notified.
- Till now, the Government has not taken any decision to prepare the National Register of Indian Citizens (NRIC) at the national level.

Renunciation of Indian citizenship

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- **Renunciation** is a voluntary act by which a person after acquiring the citizenship of another country gives up his Indian citizenship.
- Termination takes place by operation of law.
- When an Indian citizen voluntarily acquires the citizenship of another country, he automatically ceases to be an Indian citizen.

Acquiring Indian Citizenship

- There are four ways in which Indian citizenship can be acquired: birth, descent, registration and naturalisation. The provisions are listed under the Citizenship Act, 1955.
- **By** Birth:
- Every person born in India on or after 26.01.1950 but before 01.07.1987 is an Indian citizen irrespective of the nationality of his/her parents.
- Every person born in India between 01.07.1987 and 02.12.2004 is a citizen of India given that either of his/her parents is a citizen of the country at the time of his/her birth.
- Every person born in India on or after 3.12.2004 is a citizen of the country given both his/her parents are Indians or at least one parent is a citizen and the other is not an illegal migrant at the time of birth.
- By Registration:
- Citizenship can also be acquired by registration. Some of the mandatory rules are:
- A person of Indian origin who has been a resident of India for 7 years before applying for registration.
- A person of Indian origin who is a resident of any country outside undivided India.
- A person who is married to an Indian citizen and is ordinarily resident for 7 years before applying for registration.
- Minor children of persons who are citizens of India.
- By Descent:
- A person born outside India on or after January 26, 1950 is a citizen of India by descent **if his/her father** was a citizen of India by birth.
- A person born outside India on or after December 10, 1992, but before December 3, 2004 if either of his/her parents was a citizen of India by birth.
- If a person born outside India or or after December 3, 2004 has to acquire citizenship, his/her parents have to declare that the minor does not hold a passport of another country and his/her birth is registered at an Indian consulate within one year of birth.
- By Naturalisation:
- A person can acquire citizenship by naturalisation if he/she is ordinarily resident of India for 12
 years(throughout 12 months preceding the date of application and 11 years in the aggregate) and
 fulfils all qualifications in the third schedule of the Citizenship Act.
- The **Act does not provide for dual citizenship or dual nationality.** It only allows citizenship for a person listed under the provisions above ie: by birth, descent, registration or naturalisation.

The Hindu link-

https://www.thehindu.com/todays-paper/tp-national/6-lakh-indians-renounced-citizenship/article37781466.ece

Question- Write a short note on ways to acquire and renounce Indian citizenship.

RBI for more functional autonomy to civic bodies

Context:

• The Reserve Bank of India (RBI) has batted for more functional autonomy to civic bodies as the Covid pandemic has put severe strain on the third tier of the government.

Reason behind this-

According to the RBI's report on state governments' finances, the third-tier governments in India
playing a frontline role in combating the pandemic by implementing containment strategies,
healthcare, quarantining and testing facilities, organising vaccination camps and maintaining the supply
of essential goods and services, their finances have come under severe strain, forcing them to cut down
expenditures and mobilise funding from various sources.

Recommendations-

- According to the central bank, increasing the functional autonomy of the civic bodies, strengthening
 their governance structure and financially empowering them via higher resource availability through
 self-resource generation and transfers are critical for building resilience and effective interventions at
 the grass-root level.
- State governments should set up State Finance Commissions (SFC) at regular intervals, in line with the recommendations of FC XV.
- States may also urge rural and urban local bodies to make audited accounts available online in a timely manner to access grants.
- In addition, States should undertake local body reforms as stipulated by the Centre to improve the financial autonomy of third-tier governments.

Need

- As the impact of the second wave wanes, state governments need to take credible steps to address debt sustainability concerns.
- The combined debt to GDP ratio of states, which stood at 31 per cent at end-March 2021 and is expected to remain at that level by end-March 2022, is worryingly higher than the target of 20 per cent to be achieved by 2022-23, as per the recommendations of the FRBM Review Committee.
- However, the RBI said the state governments have proposed a reduction in fiscal deficit to GDP ratio.
- For 2021-22, States have budgeted their consolidated gross fiscal deficit (GFD) to gross domestic product (GDP) ratio at 3.7 per cent, a marked improvement from the level of 4.7 per cent in the revised estimates for 2020-21, the year of the first wave of the pandemic.

- This consolidation is sought to be achieved through higher revenue receipts in an environment of
 expanding vaccination coverage, waning of the second wave and removal of localised restrictions on
 mobility and activity, it said.
- In 2021-22 so far, revenue receipts of states have posted robust growth, led by their own tax revenue from State GST, excise duty and sales tax collections.
- Further, in 2021-22, state governments' capital expenditure remains robust so far the ratio
 of revenue spending to capital outlay (RECO) is budgeted to decline to 5.5 in 2021-22 from 6.7 in 202021.
- Within capital outlay, it is important for the states to channelise expenditure to sectors that crowd in private investments and optimise multiplier effects and inter-temporal and intersectoral linkages that boost output, employment and productivity.
- The gross and net market borrowings by state governments have been 13 per cent and 21 per cent lower than in the corresponding period of the previous year, respectively, in 2021-22 so far (April-September, 2021).
- States have preferred to borrow from financial accommodation provided by the RBI through shortterm borrowing via the special drawing facility (SDF) and ways and means advances (WMA), it said.
- In the medium term, improvements in the fiscal position of state governments will be contingent upon reforms in the power sector.

The Indian Express link-

https://indianexpress.com/article/business/rbi-for-more-functional-autonomy-to-civic-bodies-7651640/

Question- Local governments can help in countering emergencies at grass root levels if provided with adequate resources. Comment.

Manual scavenging

Context:

• The country has 58,098 manual scavengers and 42,594 of them belong to the Scheduled Castes, the government has told Parliament.

Key Data

- The Minister of State of Social Justice and Empowerment said that a number of surveys on manual scavengers in the country have been carried out according to the provisions of the manual scavenging Act, 2013.
- These surveys have confirmed a disproportionately large number of manual scavengers from Scheduled Castes alone.
- According to this data, 431 manual scavengers are OBCs, 421 are from Scheduled Tribes and 351 manual scavengers belong to the "Others" category.

- The ministry said the government is implementing a central employment scheme for rehabilitation of manual scavengers which provides a one-time cash assistance of Rs 40,000, and skill training for the person and their dependents with a stipend of Rs 3,000 per month for the period of their training.
- It also provides for capital subsidy of Rs 5 lakh for those who have taken loans for self-employment projects and health insurance under Ayushman Bharat for scavengers and their families.
- The ministry said the one-time cash payment has been given to all manual scavengers in the country.
- It said that 18,199 have been given skill training and 1,562 capital subsidies.
- Manual scavenging had been banned in 2013, with the provision that no one could be employed as one from that date.

The Prohibition of Employment as Manual Scavengers and their Rehabilitation (PEMSR) Act, 2013:

- Prohibits Manual Scavenging: The law prohibits employing manual scavengers, manual cleaning of sewers and septic tanks without protective equipment and construction of insanitary latrines.
- Punishment for violating the law:
- Those violating the law and getting sewers and septic tanks cleaned without protective equipment can face imprisonment of up to two years or a fine of up to Rs 2 lakh, or both.
- Repeat offenders will face imprisonment of up to five years or a fine of up to Rs 5 lakh, or both.
- Challenges: Despite all these efforts, Manual Scavenging is still practiced across India and deaths due to cleaning of sewers are increasing as per the recent data.

Way forward

- A national policy for mechanised sanitation ecosystem: Had been formulated by the Ministry of Social
 Justice and Empowerment, which included professional training for mechanised cleaning of sewers and
 setting up a sanitation response unit in each municipality.
- Workshops to raise awareness: All civic bodies need to hold workshops to raise awareness on this issue in their respective jurisdiction.
- Adoption of latest technology: For example, Bandicoot.
- Setting accountability of authorities: For example local bodies in urban and rural areas, contractors etc.
- Rehabilitation: Should be the priority of the government to provide alternative livelihood options to those engaged in manual scavenging.

The Indian Express link-

https://indianexpress.com/article/india/athawale-in-parliament-73-31-of-manual-scavengers-from-scheduled-castes-7653092/

Question- Manual scavenging still exists in the country despite being illegal. Suggest measures which can help to prevent it.

How MPs questions are allowed and disallowed

Context:

• Over the last few sessions, MPs mainly from the Opposition have often alleged their questions have been disallowed.

How are questions admitted?

- In both Houses, elected members enjoy the right to seek information from various ministries and departments in the form of starred questions, unstarred questions, short notice questions and questions to private members.
- Usually, MPs' questions form a long list, which then go through a rigorous process of clearance. The admissibility of questions in Rajya Sabha is governed by Rules 47-50 of the Rules of Procedure and Conduct of Business in the Council of States.
- Once a question that fulfils the conditions of admissibility is received, the Secretariat sends it to the ministry concerned.
- Once the facts are received from the ministry, the question is further examined for admissibility. A final list of questions is circulated to ministers, on the basis of which they frame their answers.
- In Lok Sabha, once the notice for questions is received, ballots determine priority.
- Starred, unstarred and short notice questions are entered into software, separately.
- Next, the questions are examined for admissibility under Rules 41-44 of the Rules of Procedure and Conduct of Business in Lok Sabha.
- For answering the questions, ministries and departments have been divided into five groups (I to V)
 that have been allotted Mondays, Tuesdays, Wednesdays, Thursdays and Fridays respectively.
- The grouping has been done in such a way that each minister has one fixed day in the week for answering questions in Rajya Sabha and another fixed day for answering questions in Lok Sabha.

What are starred, unstarred and other categories of questions?

- **STARRED QUESTION:** The member desires an oral answer from the minister. Such a question is distinguished by the MP with an asterisk. The answer can also be followed by supplementary questions from members.
- **UNSTARRED QUESTION:** The MP seeks a written answer, which is deemed to be laid on the table of the House by the concerned minister.
- **SHORT NOTICE QUESTION:** These are on an urgent matter of public importance, and an oral answer is sought. A notice of less than 10 days is prescribed as the minimum period for asking such a question.
- QUESTION TO PRIVATE MEMBER: A question can be addressed to a private member under Rule 40 of Lok Sabha's Rules of Procedure, or under Rule 48 of Rajya Sabha's Rules, provided that the question deals with a subject relating to some Bill, resolution or other matter for which that member is responsible.

When are the questions asked?

• In both Houses, the first hour of every sitting is usually devoted to asking and answering of questions, and this is referred to as the 'Question Hour'.

 The total number of questions for any day is limited to 175, including 15 questions for oral answers, questions postponed from one list to another for written answers, and 15 questions pertaining to states under President's Rule.

What kind of questions can be asked?

- Their admissibility is governed by Rules 47-50 (Rajya Sabha) and 41-44 (Lok Sabha). The Rajya Sabha Chairman or the Lok Sabha Speaker has the authority to decide whether a question or a part is or is not admissible under the norms of the House, and disallow any question or a part.
- In Rajya Sabha, among various norms, the question "shall be pointed, specific and confined to one issue only; it shall not bring in any name or statement not strictly necessary to make the question intelligible.
- If it contains a statement the member shall make himself responsible for the accuracy of the statement; it shall not contain arguments, inferences, ironical expressions, imputations, epithets or defamatory statements".
- In Lok Sabha, questions that are not admitted include: those that are repetitive or have been answered previously; and matters that are pending for judgment before any court of law or under consideration before a Parliamentary Committee.

How often are questions disallowed?

 According to Rajya Sabha data, 833 questions were disallowed during the last Monsoon Session. For comparison, during the 2013-14 Winter Session, Rajya Sabha disallowed 748 questions. Once disallowed, it is often difficult for members to challenge the decision.

During the Monsoon Session 2021:

- The government moved to disallow a question in Rajya Sabha seeking details on whether the
 government entered into a contract with Israeli cybersecurity firm NSO Group, at the centre of a global
 controversy over the misuse of Pegasus to hack multiple phones in India.
- The government stated the issue is sub judice after "several PILs have been filed in the Supreme Court.
- The government cited Rule 47 (xix) that states "it shall not ask for information on matter which is under adjudication by a court of law having jurisdiction in any part of India".
- The Ministry of External Affairs requested the Chairman to disallow a question by opposition on "Indian Position in Democracy Index" — due for a reply on July 22 — on the ground that the question was sensitive in nature.

Conclusion

• Questions were earlier disallowed very rarely; such instances are getting more regular. Many questions are being disallowed whether it is a sub judice matter or a matter of national security. We used to allow questions regularly and only when a serious issue would come up would the government make a request to the Speaker or the Rajya Sabha Chairman," said a former Lok Sabha general secretary.

The Indian Express link-

https://indianexpress.com/article/explained/explained-mp-questions-are-allowed-7655219/

Question- Write a short note on question hour and types of questions asked in the parliament.

States told to adopt Delhi Police model

Context:

The Parliamentary Standing Committee on Home Affairs has urged the State Governments to follow
the crime analytics model of Delhi Police in preventing street crimes against women through crime
mapping and identification of hotspots for reinforced action.

Key Points

- The Crime Mapping Analytics and Productive System and related tools were deployed on the **Crime** and **Criminal Tracking Network & Systems (CCTNS).**
- As part of the initiatives to strengthen the capacity to deal with cases of crimes against women, it was
 recommended that the SOP on registration of FIRs should include guidelines to police to record reasons
 for delay in reporting of crimes by the complainants to the police.
- A provision was made for recording this statement in the FIRs on the CCTNS.
- The States and Union Territories were told to widely circulate the BPR&D's handbooks on 'Women's Safety & Security' and 'First respondents and Investigators' to police personnel, and include the guidelines in the training modules.
- In Tamil Nadu, which leads the nation in the concept of all-women police station, Director-General of Police/Chennai Police Commissioner says police were sensitised to the need for taking proactive measures to avert crime against women and children and also to prosecute offenders in such cases expeditiously.

Crime and Criminal Tracking Network & Systems

- Background:
- Crime and Criminal Tracking Network & Systems (CCTNS) is a plan scheme conceived in the light of experience of a non-plan scheme namely Common Integrated Police Application (CIPA).
- Launch:
- CCTNS is a Mission Mode Project under the National e-Governance Plan (NeGP) of the Ministry of Home Affairs.
- Approx. 14,000 Police Stations throughout the country have been proposed to be automated besides 6000 higher offices in the police hierarchy.
- It was approved in 2009.
- Objectives:
- Make the Police functioning citizen friendly and more transparent by automating the functioning of Police Stations.
- Improve delivery of citizen-centric services through effective usage of ICT.
- Provide the Investigating Officers of the Civil Police with tools, technology and information to facilitate investigation of crime and detection of criminals.

- Recent Initiatives:
- A Memorandum of Understanding (MoU) was signed between National Intelligence Grid (NATGRID) and National Crime Records Bureau (NCRB) for the access of the CCTNS database.

The Hindu link-

https://www.thehindu.com/news/national/states-told-to-adopt-delhi-police-model/article37857998.ece

Question- Write a short note on Crime and Criminal Tracking Network & Systems (CCTNS).

Judicial inaction favours those in power

Context:

High pendency of cases, large number of vacancies and the collegium system of appointment were
among the key issues raised by Lok Sabha members recently while debating a Bill that seeks to bring
clarity on when Supreme Court and High Court judges will get enhanced pension on attaining a certain
age.

Some Critical Observations on the High Court and Supreme Court Judges (Salaries and Conditions of Service) Amendment Bill 2021

- The judiciary failing to stem the tide of majoritarianism.
- Judiciary's "inaction" always favours those in power.
- A number of examples such the judicial challenge to the abrogation of Article 370 and Citizenship (Amendment) Act.
- The "insensitivity" shown by higher judiciary while dealing with the plight of migrant workers during the COVID-19 lockdown.
- The issue of transfer of Chief Justice Sanjib Banerjee from the Madras High Court to the Meghalaya High Court by the SC Collegium, and said that the decision was tantamount to "wasting a property of the nation".
- Opposition called for a mechanism to ensure accountability for corruption in the judiciary.
- Several members also stressed the need to increase the retirement age of High Court judges and bring it on a par with the retirement age of SC judges. As of now, HC judges retire at 62 and SC judges at 65.
- Some members called for a cooling-off period for judges, saying two former Chief Justices of India were "demoted" one was appointed a Governor and the other became a Rajya Sabha member.

Key Features of the High Court and Supreme Court Judges (Salaries and Conditions of Service) Amendment Bill, 2021

- It clarifies on when Supreme Court and High Court judges are entitled to an additional quantum of pension or family pension on attaining a certain age.
- Bill to amend High Court judges Act introduced in Lok Sabha.

• The bill proposes to insert an explanation in section 17B of the High Court Judges Act and in section 16B of the Supreme Court Judges Act to clarify the intention of the government.

- Under the two Acts, a sumptuary allowance is paid to judges of the High Court and the Supreme Court to compensate for expenses incurred on account of entertaining visitors.
- The Bill seeks to revise this allowance with effect from September 22, 2017.
- The two Acts specify that judges of the High Court and the Supreme Courts will be entitled to the use of an official residence, without payment of rent. Further, if judges do not use this entitlement, they will be paid a monthly allowance equal to 30% of their salary.
- The Bill seeks to revise this allowance to 24% of their salary. Further, it specifies that this allowance will be revised to: (i) 27% of salary when the dearness allowance (DA) crosses 25%, and (ii) 30% of salary when DA crosses 50%.
- **Pension:** The two Acts specify the pension for High Court and Supreme Court judges based on: (i) if they have previously held a pensionable post under the central or state governments, or (ii) if they have not held any such post.
- The Bill seeks to revise the pension for judges under both these categories. Further, it also revises the cap on maximum pension payable to these judges

The Hindu link-

https://www.thehindu.com/news/national/judicial-inaction-favours-those-in-power-tharoor/article37889523.ece

https://www.firstpost.com/politics/centre-to-table-judges-salaries-and-service-amendment-bill-in-lok-sabha-key-features-of-proposed-legislation-10191431.html

Question- Judiciary requires reforms from inside to ensure effective functioning and accountability. Comment.

Growing voice in favour of reintroducing NJAC Bill

Context:

• Recently, the Law and Justice Minister, stated that there is a growing voice in favour of reintroduction of the National Judicial Appointments Commission (NJAC) Bill.

Background:

- The NJAC Act, 2014 was enacted by the incumbent government to regulate the procedure to be followed by the NJAC for recommending names for appointment as Chief Justice of India and other judges of Supreme Court and Chief Justices and judges of High Courts and for their transfers.
- However, in October 2015, the Supreme Court struck down as unconstitutional an amendment to the Constitution establishing the NJAC.
- Replying to the debate on the High Court and Supreme Court Judges (Salaries and Conditions of Service) Amendment Bill, 2021, which was passed by the House with a voice vote, Law minister said, There has been a huge support regarding NJAC.

- The appointment process of judges in the higher judiciary is going on smoothly. From the government side, there is no effort to scuttle or to create any kind of slow down in the process of appointments.
- Some of the allegations are also not correct to say that the government is stopping some of the names recommended by the Collegium.
- The minister also appreciated the performance of the judiciary during the Covid-19 pandemic.

The NJAC

- The National Judicial Appointments Commission (NJAC) was a proposed body which would have been responsible for the appointment and transfer of judges to the higher judiciary in India.
- The NJAC would have replaced the collegium system.
- The NJAC was a body that would have been composed of the CJI, two senior judges, the Law Minister and "two eminent personalities" appointed by the Prime Minister, Leader of Opposition and CJI.
- The Commission was established by Parliament in 2014 as the 99th Constitutional Amendment Act.
- Later on the NJAC was struck down as unconstitutional by the SC by a 4-1 majority (in what is sometimes referred to as the Fourth Judges Case).
- The SC branded the Commission as an infringement on judicial independence and a violation of the separation of powers. Therefore, the Collegium System was preserved.
- There were legitimate fears that the commission might have resulted in the appointment of malleable judges.
- However the court invited suggestions, even from the general public, on how to improve the collegium system, broadly along the lines of –
- Setting up an eligibility criteria for appointments
- A permanent secretariat to help the collegium sift through material on potential candidates
- Infusing more transparency into the selection process
- Grievance redressal and any other suggestion not in these four categories, like transfer of judges.

The Indian Express link-

https://indianexpress.com/article/india/in-favour-of-reintroducing-njac-bill-lok-sabha-kiren-rijiju-7663199/

Question- Write a short note on appointment procedure of judges under collegium system and what changes were proposed under NJAC?

Armed Forces (Special Powers) Act (AFSPA)

Context:

• The killing of 14 civilians in a botched military operation in Nagaland has led to fresh calls for repealing The Armed Forces (Special Powers) Act (AFSPA), a stringent law that allows the armed forces to use maximum force in an area declared as 'disturbed'.

Origin of AFSPA

- In the wake of the partition riots, four ordinances were promulgated in 1947.
- The first was the **Bengal** Disturbed Areas (Special Powers of Armed Forces) Ordinance;
- This was followed by ordinances for **Assam, East Punjab and Delhi**, and the **United Provinces**.
- These were replaced by a common legislation, the Armed Forces (Special Powers) Act, 1948. This was meant to be in force for one year, but was repealed only in 1957.
- Thereafter, the President promulgated the Armed Forces (Assam and Manipur) Special Powers Ordinance in May 1958.
- This was subsequently replaced by an act of Parliament. Initially known as the Armed Forces (Assam and Manipur) Special Powers Act, 1958, it was subsequently adapted appropriately after the creation of Arunachal Pradesh, Meghalaya, Mizoram, Nagaland and Tripura.

AFSPA in the country

- Under this law, an area can be declared a 'disturbed area', bringing into play the protection it offers to the armed forces for use of force in the notified area. The notification is extended periodically, mostly for six months at a time.
- As of today, the whole of Assam and Nagaland are 'disturbed areas'. The last six-month extension was
 made on August 28 and June 30 respectively. The whole of Manipur, except Imphal municipal area,
 has been notified by the State government for one year from December 2020.
- In Arunachal Pradesh, the 'disturbed area' notification is confined to the districts of Tirap, Changlang
 and Longding, and the areas falling under Namsai and Mahadevpur police stations, bordering Assam.
- The AFSPA was revoked in Tripura in May 2015 and Meghalaya in 2018.
- Jammu and Kashmir has a separate J&K Armed Forces (Special Powers) Act, 1990.

What does the Act say?

- The Act empowers the Governor of any State, or the Administrator of a Union Territory, or the Central Government to notify parts of or the whole of a State or a Union Territory as a 'disturbed area', if they consider that the condition in such areas is so dangerous or disturbed that the use of the armed forces is necessary in aid of civil power.
- In such a notified area, any officer of the armed forces may fire upon or use force, even to the point of causing death, against any person for the maintenance of public order. This must be done after giving due warning as considered necessary, and the target must be a person who is contravening any law, or order prohibiting the assembly of five or more persons, and carrying weapons, firearms or ammunition.
- The Act allows arrest and search of any premises without a warrant in a notified area, and the recovery
 of any confined person, or any arms and ammunition stored unlawfully.
- No person can be prosecuted or subjected to any legal proceedings for action taken under the Act, without the Central Government's previous sanction.

Demand for repeal

• Detractors and human rights organisations, as well as many sections of civil society, argue that the Act encourages impunity and is the cause of many instances of excesses and atrocities committed by the armed forces under its protective cover.

- Call @7814622609
- Irom Chanu Sharmila, an activist from Manipur, became an iconic figure symbolising the struggle against AFSPA after she sat on an indefinite fast in 2000, demanding its repeal. She ended it only in August 2016.
- In 2005, a Government-appointed five-member committee headed by retired Supreme Court judge, B.
 P. Jeevan Reddy, recommended that AFSPA be repealed. It suggested that the Unlawful Activities (Prevention) Act UAPA could be suitably amended to deal with terrorism.
- It made this recommendation as it felt that the AFSPA created an impression that the people of the Northeast States were being targeted for hostile treatment.
- However, the Army has been resolutely opposed to the repeal of AFSPA.

The Hindu link-

https://www.thehindu.com/news/national/explained-which-states-in-the-ne-are-under-afspa/article37935344.ece

Question- Describe the provisions of Armed Forces (Special Powers) Act (AFSPA) and where is it operational in the country?

Atmanirbhar Bharat Rojgar Yojana

Context:

 The Ministry of Labour and Employment provided details about the State-wise number of beneficiaries under ABRY.

About the Scheme

- Last year, the Union Cabinet gave its approval for Atmanirbhar Bharat Rojgar Yojana (ABRY).
- Under ABRY, the government will provide **subsidy for provident fund contributions** for adding new employees to establishments registered with the Employees' Provident Fund Organisation (EPFO).
- The Centre will provide the **subsidy for two years** for workers who lost jobs between March 1 to September 30 and for new workers employed on or after October 1.

Salient features of ABRY

- Under the scheme, the Government of India will pay both 12% employees' contribution and 12% employers' contribution i.e. 24% of wages towards Employees' Provident Fund (EPF) in respect of new employees in establishments employing upto 1000 employees for two years.
- The Government of India will pay **only employees' share of EPF contribution** i.e. 12% of wages in respect of **new employees in establishments employing more than 1000 employees for two years.**

Eligibility

- The beneficiaries include **new employee drawing less than Rs. 15,000 per month**, who falls under one of the following categories:-
- Who was not working in any establishment registered with the Employees' Provident Fund Organisation (EPFO) and did not have a Universal Account Number (UAN) prior to 1st October 2020

 Any EPF member possessing Universal Account Number (UAN) drawing monthly wage of less than Rs. 15000/- who made exit from employment during Covid pandemic from 01.03.2020 to 30.09.2020 and did not join employment in any EPF covered establishment up to 30.09.2020.

PIB link

https://pib.gov.in/PressReleasePage.aspx?PRID=1780939

Question- Write a short note on provisions of Atmanirbhar Bharat Rojgar Yojana.

The NMP is hardly the panacea for growth in India

Context:

• The National Monetisation Pipeline (NMP) envisages an aggregate monetisation potential of ₹ 6-lakh crore through the leasing of core assets of the Central government in sectors such as roads, railways, power, oil and gas pipelines, telecom, civil aviation, ports and waterways, mining, food and public distribution, coal, housing and urban affairs etc over a four-year period (FY2022 to FY2025).

Unlocking the value

- The Eight core industrial sectors that support infrastructure such as coal, crude oil, natural gas, refinery
 products, fertilizers, steel, cement, and electricity have a total weight of nearly 40% in the Index of
 Industrial Production (IIP).
- According to NITI Aayog, the strategic objective of the asset monetisation program is to unlock the value of investment in public sector assets by tapping private sector capital as well as efficiency
- According to the annual report (2020-2021) of the Department of Public Enterprises, Government of India, there are 256 operationally-run central public sector undertakings (CPSUs), employing about one million people. Out of these, 96 have been conferred the Ratna status (72, 14, and 10 are Miniratnas, Navaratnas, and Maharatna companies, respectively).
- According to the Economic Survey 2019-20, public enterprises should be in focus as India needs to
 invest about \$1.5 trillion on infrastructure development in order to aspire to become \$5 trillion
 economy by the year 2024-25

Objectives

- The national monetization pipeline envisages unlocking the idle capital from non strategic and underperforming government owned assets.
- It aims at reinvesting the received funds into new infrastructure projects and augmentation of assets like greenfield infrastructure creation.
- The government with its initiative claims to boost the economy, generate employment opportunities and drive the competitiveness of Indian economy

Need for taking stock of situation

- It is imperative for policymakers to look for the root causes for decline of profit making public assets in the backdrop of government contemplating reinvestment of funds received to create fresh assets post the the national monetisation pipeline exercise
- Not doing so, may put the country's economy into vicious cycle of creating new assets and then monetizing the same then they become liabilities for the government at a later stage

Reasons for Declining PSUs

• **Cost overruns**- it is the primary reason for failure of public sector enterprises, in some cases project completion time is exceeded that leads to elevated project cost making the project either unviable at the time of its launch or or causes a delay in its break even point.

- **Over capitalisation** the optimum input output ratio is not given due importance in majority of government infrastructure projects, that leads to over capitalisation
- Policy measures- the lack of implementation of labour reforms, ineffective inter-ministerial and departmental coordination, poor decision making, inefficient governance and excessive government control are other reasons for failure

The Pradhan Mantri Gati Shakti National master plan

- It is essentially a digital platform for information sharing among different ministries and departments at Union and State levels, it also fosters a periodical review and monitoring of progress of cross sectorial infrastructure projects through GIS platform
- It also entails analytical decision making tools for dissemination of project related information and prioritisation of key infrastructure projects
- The scheme was launched for multimodal connectivity for synchronisation of operation of different departments of 16 ministries including railways and roadways for seamless planning and coordination in execution of infrastructure projects in timely manner

Initiatives by Department of public enterprises

 The department of public enterprises has initiated revamping of performance monitoring system of Central public sector enterprises to make the more transparent, objective and forward looking which is based on sectoral indices and benchmarks

The Atmanirbhar Abhiyan

- The economic survey 2020-21 has highlighted the government's initiative to boost domestic production in steel sector true measures like inclusion of speciality Steel, the production linked incentive scheme, selling to micro small and medium enterprises etc.
- More such out-of-the-box policy initiatives are needed to rule out public asset monetisation schemes such as the NMP in future.

The Hindu link-

https://www.thehindu.com/opinion/op-ed/the-nmp-is-hardly-the-panacea-for-growth-in-india/article37956016.ece

Question- National Monetisation Pipeline cannot be the panacea for growth. It needs to be complimented by other measures for efficient use of public resources. Comment.

Women in judiciary

Context:

• Chief justice of India ruled the quite low representation women at all levels in legal field and promise to take up the demand for higher representation beyond 50% on the bench.

More on the news

- Women on an average constituted only around 30% of the judges in lower judiciary
- In high court's the percentage of women judges is nearly 11.5%, while in the supreme court there are four sitting women judges out of 33 Indore office
- Out of 1.7 million registered advocates, only 15% of women.
- In 70 years of its existence the Supreme Court has seen only 8 women judges and no woman has been appointed chief justice so far
- The ratio of women to men judges is 81:1078 in the 25 High courts of the country

Barriers

Lack of judicial infrastructure

- The absence of restrooms, child care facilities and crowded as well as claimed small Court rooms are another barrier for women to enter the profession
- About 22% of courts do not have washroom facilities for women.

Bias

- The continued prevalence of certain attitudes about the role of women in society, is a persistent problem faced by women regardless of the type of employment
- The entire attitude and orientation towards women who work outside home must change, for example a women who join as magistrates are transferred every 3 years, thus reducing the staying power of women in any profession

Bias related to women

- The woman face bias, from their colleagues as well as litigants. This bias affects not just women advocates but also those on the bench.
- This creates completely unwelcome atmosphere and sides court rules for women, it becomes duty for all lawyers and judges to ensure a friendly environment

Impact Of Inclusion Of Women

- The inclusion of women as judges and advocates would substantially improve the justice delivery system, the women can bring a different perspective to the law which would enrich the legal field
- Achieving equality for women judges should be our goal not only because it is right for women but also because it is right for the achievement of a more just rule of law. Women judges help in strengthening the judiciary as well as help to game the trust of people

- The entry of women generous in two spaces from which they had been historically excluded would be seen as a positive step of judiciary being perceived as more transparent, inclusive and representative of the people whose lives they affect.
- Women judges by their mere presence have the capability to enhance the legitimacy of courts sending a powerful signal that they are open and accessible to those who seek recourse to justice
- The women judges bring those lived experiences to their judicial actions that tends towards a more comprehensive and sympathetic perspective encompassing not only the legal basis but also awareness of consequences of the judicial action
- Having more diverse judiciary and shows diversity of perspectives and install the high degree of public confidence
- The former Supreme Court judge of the United States said that women belong in all places where decisions are being made, it shouldn't be that women are the exception.

The Hindu link-

https://www.thehindu.com/news/national/cji-bats-for-more-women-judges/article37956578.ece

https://timesofindia.indiatimes.com/india/cji-ramana-rues-quite-low-representation-of-women-in-judiciary/articleshow/88284659.cms

Question- How can equivalent inclusion of women in judiciary be helpful for both judicial system and women empowerment?

Mid-day meal scheme

Context

 According to official records, it has been found that around 65% of India's cook cum helpers engaged under mid day meal scheme are less than rupees 2,000 per month

About

- The scheme has now been renamed to PM-Poshan, the scheme originally started in Tamil Nadu in 1960s as national programme of nutritional support to Pre education and was later expanded in 1980s
- The scheme was appreciated by the World Bank and hence adopted at the national level
- The central government launched mid day meal scheme as a centrally sponsored scheme in 1995 by then Ministry of human resources and development

Objectives of the scheme

- Enhancement in nutritional status of children
- Encourage enrollment and regular attendance
- Promote harmony among children

Positive outcomes

- According to the Indian statistical institute survey, it was found that there was an increase in primary school enrollment especially in grade 1 and 2.
- According to the survey the mid day meal scheme was effective and encouraging in early-stage enrollment
- The scheme has improved nutritional levels, various States have started food fortification that is addition of micronutrients thereby preventing malnutrition and hidden hunger
- It has also help in reducing the burden of family, it is the most important meal for a poor family
- It has also acted as an incentive for more attendance among children in the school
- The Nobel laureate Amartya Sen has highlighted that most important aspect of mid day meal is the promotion of social harmony since education is the most important tool for social economic mobility

Issues and challenges

- Capability trap
- Various economist consider mid day meal as an example of capability trap
- The capability trap is a condition when developing countries or organisations cannot perform the task given to them and doing the same thing or routine work is not improving but usually making the things worse
- According to accountability initiative, an NGO found that due to implementation of scheme in Uttar
 Pradesh and Bihar even routine tasks are not implemented properly
- Lack of adequate infrastructure and poor management
- Teachers have a major role to play for effective implementation, the dilemma for the Teachers is whether to take class or focus on mid day meal
- There has also been irregularity in serving meals and supply of food grains
- Social discrimination and prejudice
- There have been cases where students of particular caste have denied eating food cooked by the lower caste

Quality of food

- The focus has been more on the reach and not on the quality.
- There have been concerns of unhygienic and poisonous food, for instance in Bihar there was an
 unfortunate incidents of death of 27 children because of oil being kept in the same bottle which was
 used to store pesticides
- According to the mid day meal rules, meal should be of good quality, nutritious, tasty and adjustable
 and it should vary from day to day ensuring variety in the menu

Corruption

- There have been various instances of funds being used for other purposes
- The CAG report of 2015 has revealed financial mismanagement and discovered that States have indulged in the diversion of funds

Conclusion

- Various States have like Jharkhand, Uttarakhand have included the local women self help groups and mothers of students in preparation of the food to ensure the quality of the meals
- According to committee for evaluation of the scheme in 2010 suggested that monitoring committee should be made more effective and food grants must be delivered directly to school
- The models adopted by various States like collaboration with NGOs to help in distribution of males have been effective as in such situation the meals are cooked that one centralised place and hence it is easier to keep a check on the quality of food
- There is a need for schools to be trained on management of cooking and distribution of meal as it is vital that the food served has to be checked by the school management
- With inclusion of scheme under the ambit of PM Poshan, there is a need to focus on improvement of nutritional status, encourage education and learning, increase enrollment in schools and promote overall growth of children

The Indian Express Link

https://indianexpress.com/article/india/most-mid-day-meal-cooks-pay-7680906/
http://mdm.nic.in/mdm_website/

Question- What are the challenges remaining in effective implementation of PM Poshan Scheme-Mid day meal scheme?

SVAMITVA Scheme

Context

• The Ministry of Panchayati Raj provided details about the proposed state-wise villages to be covered under SVAMITVA Scheme in the Parliament.

About the scheme

- SVAMITVA (Survey of villages and mapping with improvised technology in village areas) scheme is a collaborative effort of the Ministry of Panchayati Raj, State Panchayati Raj Departments, State Revenue Departments and Survey of India.
- It is a **central sector scheme** that aims to provide rural people with the **right to document their residential properties** so that they can use their property for economic purposes. The scheme is for surveying the land parcels in rural inhabited areas using **Drone technology.**

Objectives

- The outcome from the scheme would include updating the record of rights in the revenue/property registers and issuance of property cards to the property owners. This would facilitate **monetisation of rural residential assets** for credit and other financial services.
- It will also lead to creation of **accurate land records** for rural planning and determination of **property** tax.
- Through the SVAMITVA scheme, the government hopes that **property disputes and legal cases will be reduced.**

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• Other gram panchayats and community assets like village roads, ponds, canals, open spaces, school, anganwadi, health sub-centres etc will also be surveyed and GIS maps will be created. These maps can be used to prepare better quality gram panchayat development plans.

Coverage

- There are about 6.62 lakh villages in the country which will be eventually covered in this scheme. The entire work is likely to be spread over a period of four years (2020 -2024).
- Presently, the pilot phase is being approved for the year 2020-21. Pilot Phase will extend to 8 states –
 Maharashtra, Karnataka, Haryana, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Punjab and
 Rajasthan.
- The Ministry of Panchayati Raj (MoPR) is the Nodal Ministry for implementation of the scheme. Survey of India shall work as the technology partner for implementation.

The PIB Link

https://pib.gov.in/PressReleasePage.aspx?PRID=1783885

https://svamitva.nic.in/svamitva/index.html

Question- Write a short note on Svamitva scheme.

This clean cooking fuel plan needs more firing up

Context

• There are certain **challenges in sustaining LPG adoption in rural India** and emphasises that the goal must be a more sustainable energy basket per family.

Data on LPG use

- Over the five years, the average per capita consumption among Ujjwala customers has hovered around three cylinders per year (of 14.2 kg), rising to 4.2 (2020-21).
- Relatively poorer Ujjwala consumers are reaching the LPG consumption levels of relatively well-off non-Ujjwala rural consumers.
- Completed the target of enlisting eight crore Ujjwala customers in late 2019.

How was this possible?

- Successful implementation of the Direct Benefit Transfer of LPG (DBTL) or PAHAL (Pratyaksh
 Hanstantrit Labh) scheme of 2014 which freed up the financial resources needed to dream of a largescale programme for deposit-free LPG connections.
- Ujjwala was conceptualised and launched which ensured enhanced availability of LPG.
- Various capacities such as of the ports for handling imports, of tanks for storage of LPG, of pipelines and trucks for transportation of gas, and of bottling plants for filling in more cylinders were enhanced.
- Production of cylinders, pressure regulators, hose and affordable LPG stoves was also enhanced.
- New distributors/dealers were appointed to reach remote pockets.
- Enthusiasm for Ujjwala was sustained by **creating avenues for local MPs** and other elected representatives to support Ujjwala and its implementation.

About PMUY

• The Ministry of Petroleum & Natural Gas launched PMUY in 2016 to provide clean cooking fuel to poor households.

- It aims to provide **8 crore deposit free LPG connections to poor households.** The connections are issued in the **name of women** of the households.
- The scheme increases the usage of LPG and helps in reducing health disorders, air pollution and deforestation. Use of fossil fuels and conventional fuel like cow-dung, firewood etc. has serious implications on the health of rural women and children.
- Initially, the beneficiaries were identified through Socio Economic Caste Census (SECC), 2011 data.
 The scope of PMUY has now been expanded to cover all the poor families in the country subject to fulfilling the terms and conditions.
- Under the scheme, cash assistance of Rs. 1600 is given to the beneficiaries to get a deposit-free new
 connection. Further, interest free loans are provided to purchase a stove and refill by Oil Marketing
 Companies.

PMUJ 2.0

- Recently, Prime Minister Narendra Modi launched the second phase of Pradhan Mantri Ujjwala Yojana
 Ujjwala 2.0.
- During Ujjwala 1.0, launched in 2016, a target was set to provide LPG connections to 5 crore women members of BPL households. Later, the target was revised to 8 Crore LPG connections which was achieved in August 2019.
- In the Union budget for Financial Year 2021-22, a provision for an additional one crore LPG connection under the Pradhan Mantri Ujjwala Yojana was announced. These one crore additional connections under Ujjwala 2.0 aim to provide deposit-free LPG connections to those low-income families who could not be covered under the earlier phase of this scheme.
- Along with a deposit free LPG connection, Ujjwala 2.0 will provide first refill and hotplate free of cost to the beneficiaries.

Challenges in PMUY

- While the number of LPG distributors went up in the five years of Ujjwala, the number of administrative blocks which do not have an LPG distributor has come down drastically.
- The novel coronavirus pandemic has resulted in an increase in LPG prices.

Way forward

- The push has to be such that every household moves toward adopting a more sustainable cooking energy basket.
- Improvements in regular and on-demand supplies of LPG -Options for refill financing
- · Alternative remunerative uses for cow dung and biomass
- (Possibly on the pattern of procurement of cow dung as is being done in Chhattisgarh)
- A massive boost to women's incomes through the National Rural Livelihoods Mission
- These all have great potential to nudge women to choose a more sustainable cooking mix.

The Hindu link

https://www.thehindu.com/todays-paper/tp-opinion/this-clean-cooking-fuel-plan-needsmore-firing-up/article38024594.ece

Question- Describe achievements of Pradhan Mantri Ujjwala Yojana and pending issues. Suggest measures to ensure a cleaner energy mix in rural India.

Mission Karmayogi

Context

- The Government of India conducted a workshop on Mission Karmayogi.
- The aim of "Mission Karmayogi" is to impart futuristic vision to civil services which could effectively determine the roadmap for next 25 years and shape the Century India of 2047.

About the programme

- Mission Karmayogi is a nationwide programme to lay the foundation for capacity building of civil servants. It will help the officers to learn about the best practices across the world.
- Officially called the "National Programme for Civil Services Capacity Building (NPCSCB)", the mission plans to transform human resource management in the country.
- Mission Karmayogi aims to prepare the Indian civil servant for the future by making him more creative, constructive, imaginative, innovative, proactive, professional, progressive, energetic, enabling, transparent and technology-enabled.
- The fundamental focus of the reform is the creation of a 'citizen centric civil service' capable of creating and delivering services conducive to economic growth and public welfare.
- It shifts the focus from "Rule based training to Role based training". Greater thrust has been laid on behavioural change. CivilsTap Hlmachal

Framework

- Mission Karmayogi programme will be delivered by setting up a digital platform called iGOTKarmayogi.
- The platform will act as a launchpad for the National Programme for Civil Services Capacity Building, which will enable a comprehensive reform of the capacity building apparatus at the individual, institutional and process levels.
- NPCSCB will be governed by the Prime Minister's Human Resource Council, which will also include state Chief Ministers, Union Cabinet ministers and experts. This council will approve and review civil service capacity building programmes.
- Besides this, there will be a Cabinet Secretary Coordination Unit comprising select secretaries and cadre controlling authorities.
- Also, there will be a Capacity Building Commission, which will include experts in related fields and global professionals. This commission will prepare and monitor annual capacity building plans and audit human resources available in the government.

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- There will be a wholly-owned **Special Purpose Vehicle (SPV), which will govern the iGOT-Karmayogi platform.**
- The SPV will be a "not-for-profit" company which will create and operationalise the content, market place and manage key business services of iGOT-Karmayogi platform.
- To cover around 46 lakh central employees, a sum of Rs 510.86 crore will be spent over a period of 5 years from 2020-21 to 2024-25. The expenditure is partly funded by multilateral assistance to the tune of \$50 million.
- Other good governance initiatives of this Government, following the maxim "Minimum Government Maximum Governance" are –
- e-Samiksha- A real time online monitoring system in respect of implementation of important Government programmes/projects;
- e-Office- e-Office Mission Mode Project to switchover to paperless office and efficient decision making;
- Self-certification of documents for appointments; Discontinuation of interview in recruitment to all Group 'C', Group 'B' (Non-Gazetted posts) to curb malpractices and for bringing objectivity to the selection process;
- Multi-source feedback for empanelment for the posts of Joint Secretary and above; Intensive review for weeding out inefficient officials and officers of doubtful integrity by premature retirement;
- Promoting e-Governance in a holistic manner;
- ASO foundation training programme has been restructured and linked to 18 behavioural and 38 functional competencies and it is now being delivered by ISTM to 884 ASOs in different Ministries.

The PIB Link

https://pib.gov.in/PressReleasePage.aspx?PRID=1784572

Question- Enlist various good governance initiatives for civil service reforms, with special focus on Mission Karmayogi.

ivilsTap Hlmacha

Good governance Index

Context

• The Government of India has released the Good Governance Index 2021 prepared by DARPG on Good Governance Day (25th December).

About the Index

- Good Governance Index (GGI) 2021 Framework covered ten sectors and 58 indicators.
- The sectors of GGI 2020-21 are
- Agriculture and Allied Sectors,
- Commerce & Industries,
- Human Resource Development,

- Public Health,
- Public Infrastructure & Utilities,
- Economic Governance,
- Social Welfare & Development,
- Judicial & Public Security,
- Environment, and
- Citizen-Centric Governance.
- The GGI 2020-21 categorises States and UTs into **four categories**, i.e., (i) Other States Group A; (ii) Other States Group B; (iii) North-East and Hill States; and (iv) Union Territories.

Highlights of the Index

- **Gujarat, Maharashtra and Goa** top the composite rank score covering 10 sectors. GGI 2021 says that Gujarat registered 12.3 per cent increase and Goa registered 24.7 per cent increase over GGI 2019 indicators.
- In the North-East and Hill States category, **Mizoram and Jammu and Kashmir** have registered an overall increase of 10.4% and 3.7% respectively over GGI 2019.
- In the Union Territories category, **Delhi** tops the composite rank registering a 14 per cent increase over the GGI 2019 indicators. Delhi has performed strongly in Agriculture & Allied Sectors, Commerce & Industry, Public Infrastructure and Utilities and Social Welfare & Development.
- 20 States have improved their composite GGI scores over the GGI 2019 index scores. The sector-wise
 scores attained by the States and UT's indicate strong performance in one or the other sector. This
 indicates that overall governance in the States of India is moving in the positive direction.

The PIB link

https://pib.gov.in/PressReleasePage.aspx?PRID=1785140

Question- Write a short note on Good Governance Index.

Deendayal Antyodaya Yojana-National Rural Livelihoods Mission

Context

- The government has launched a facility for overdraft (OD) of Rs. 5,000/- to verified SHG members under DAY NRLM having accounts under the prime Minister Jan Dhan Yojana.
- This facility has been initiated in pursuance of the announcement made by the Finance Minister in her budget speech of 2019-20.

About

 Aajeevika-National Rural Livelihoods Mission (NRLM) was launched by the Ministry of Rural Development (MoRD) in 2011.

- Aided in part through investment support by the World Bank, the scheme aimed at helping the rural
 poor by enabling them to increase household income through sustainable livelihood enhancements
 and improved access to financial services.
- NRLM has the mandate of reaching out to 100 million rural poor in 6 lakh villages across the country.
- In 2015, the program was renamed Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM).

Mission

- The poor have innate capabilities to overcome poverty. DAY-NRLM believes in harnessing these innate capabilities of the poor and complements them with capacities (information, knowledge, skills, tools, finance and collectivization) to participate in the growing economy of the country.
- NRLM rests on three major pillars universal social mobilization, financial inclusion and livelihood enhancement.

Implementation

- It works towards bringing at least one member (preferably a woman) from all poor families into the Self Help Group (SHG) network.
- The SHGs and their federations offer their members microfinance services such as savings, credit, bank linkages, insurance, remittances, equity etc. They also offer collectivization and group activities.
 The SHGs offer social security and social action in various fronts including health, nutrition, food, gender, convergence etc., directly or through their federations.
- NRLM facilitates the SHGs to open and operate bank accounts and bank linkages. It also facilitates access to insurance to members. It encourages individual members too to open bank accounts.
- As the Institutions of the Poor (IoP) mature, they are facilitated to take up livelihoods/incomegenerating activities.
- SHGs, their federations at the village, cluster levels and beyond, and other collectives of the poor constitute IoP.
- DAY-NRLM adopts a **demand driven approach**, enabling the States to formulate their own State specific poverty reduction action plans.

Beneficiaries

- NRLM's priority is to reach out to the poorest, most vulnerable and marginalized. It begins with targeting women and they are considered as representatives of their households.
- In case of **extremely vulnerable persons** like Persons with Disabilities (PwDs), elders etc., NRLM mobilizes **both men and women.**
- The NRLM Target Households (NTH) are identified through the **Participatory Identification of Poor (PIP).** The PIP is a community-driven process where the Community Based Organisations (CBOs) themselves identify the poor in the village using participatory tools. The list of poor identified by the CBO is vetted by the Gram Sabha.

The PIB link

https://pib.gov.in/PressReleasePage.aspx?PRID=1785274

https://aajeevika.gov.in/en/content/welcome-deendayal-antyodaya-yojana-nrlm

Question- Describe how Deendayal Antyodaya Yojana- National Rural Livelihoods Mission can help in alleviating rural poverty by mobilising people through self help groups?

Electoral bonds

Context

The Ministry of Finance released details about the electoral bonds scheme.

What are Electoral Bonds?

- An electoral bond is designed to be an **interest-free bearer instrument** like a **Promissory Note** in effect, it will be similar to a bank note that is payable to the bearer on demand.
- It can be purchased by any **citizen of India or a body incorporated in India.** A person being an individual can buy Electoral Bonds, either singly or jointly with other individuals.
- The electoral bonds were announced in the 2017 Union Budget.
- The bonds will be issued in multiples of ₹1,000, ₹10,000, ₹1 lakh, ₹10 lakh and ₹1 crore and will be available at specified branches of **State Bank of India**.
- They can be bought by the donor with a KYC-compliant account.

Features

- The bonds will be available for purchase for a period of 10 days each in the beginning of every quarter, i.e. in January, April, July and October as specified by the Central Government.
- The donor will remain **anonymous**. The electoral bonds will **not bear the name of the donor**. The intention is to ensure that all the donations made to a party will be accounted for in the balance sheets **without exposing the donor details to the public**.
- Political parties are allotted a verified account by the Election Commission and all the electoral bond transactions are done through this account only.
- Only political parties registered under Section 29A of the Representation of the Peoples Act,
 1951 and have secured no less than one per cent votes in the last General Election to the House of the People or the Legislative Assembly of the State, are eligible to receive electoral bonds.
- A donor will get **tax deduction** and the recipient, or the political party, will get **tax exemption**, provided returns are filed by the political party.
- The information furnished by the buyer shall be treated confidential by the authorised bank and shall
 not be disclosed to any authority for any purposes, except when demanded by a competent court or
 upon registration of a criminal case by any law enforcement agency.

Criticisms

• The key critique is that, for something meant to bring transparency to the system, electoral bonds actually make political funding more opaque – but only for the public. Companies don't have to say who they are donating money to and parties don't need to say from whom they're getting the cash.

- Experts have said this undercuts the freedom of political information, which is an integral element of **Article 19(1)(a)** of the Constitution (the free expression clause).
- Prior to 2017, Companies Act, 2013, stipulated that a company can donate only up to 7.5% of its
 average profit of the last three years. Now, through the electoral bonds, there is no limit to the
 amount companies can donate, and the requirement for such firms to have existed for the last three
 years on a profit-making basis has also been deleted.
- The implication is that even **loss-making companies or shell companies** can be used to purchase electoral bonds.
- In 2016 and 2017, amendments were made to the Foreign Contribution (Regulation) Act (FCRA),
 2010, with retrospective effect. Thus, enabling the Indian subsidiaries of foreign companies to make donations to political parties through electoral bonds.
- This allows anonymous financing by foreign entities opening Indian elections to the influence of foreign interests.
- The Reserve Bank of India (RBI) and the Election Commission had both said the sale of electoral bonds
 had become an avenue for shell corporations and entities to park illicit money and even proceeds of
 bribes with political parties.
- The Election Commission of India criticised electoral bonds saying it would wreck transparency in political funding and allow for unchecked foreign funding of Indian political parties.
- However, the government defended the scheme, saying it allowed anonymity to political donors to protect them from "political victimisation".

The PIB link

https://pib.gov.in/PressReleasePage.aspx?PRID=1786345

https://retail.onlinesbi.com/documents/FAQs.pdf

Question- Electoral Bond scheme has not been able to completely resolve issues of electoral funding. Comment.

General studies 3.

Economics

World Inequality Report

Context:

• The latest **World Inequality Report 2022** states that Since the mid-1990s, the richest 1 per cent captured 38 per cent of wealth growth at the global level.

Key Highlights of the report

- Global billionaire wealth in 2021 represents 3.5 per cent of the world's household wealth, with the share of the global top 0.01 per cent up from 7 per cent of global wealth in 1995 to 11 per cent this year.
- The report suggested developing new forms of wealth taxation on multimillionaires, including a
 progressive rate of wealth tax with tax rates according to the value of the total amount of wealth
 owned.
- Proposal:
- The time is right to develop new forms of wealth taxation, to modernise our tax system, to take stock of what has been happening in the economy over the past decades.
- What has been happening is a higher concentration of wealth, more wealth inequality and our tax systems so far in most countries in the world have not adapted to this.
- It makes sense when the governments are looking for money, looking for how to repay the debt of Covid.
- A global wealth tax on multi millionaires, people who own more than a million dollars or euros and this
 tax in this proposal is progressive, meaning that the rates are going to be according to the value of the
 total amount of wealth that you own.
- In countries, where wealth is highly concentrated, more rates on the stock of wealth of very wealthy individuals can deliver high amounts of revenues.
- As per the report, the richest 10 per cent own around 60-80 per cent of wealth and the poorest half systematically own less than 5 per cent of wealth.
- The government intervention is key to tackle inequality with social and tax policies.
- Women today get just one-third of all labour income in the world whereas gender parity would mean they get half of that.
- But currently women earn just one-third of all incomes from work and the situation has increased since
 the 1990s but at a very slow rate. If we continue at this rate, we need to wait at least a century to reach
 gender parity.

Furthermore

• Tax ranging from 1 per cent of wealth owned over \$1 million to 3 per cent for global billionaires can generate 1.6 per cent of global income.

- Wealth taxation in unequal societies helps tackle extreme inequality and generate substantial revenues to invest in the future.
- The report finds that he average increase in the wealth of billionaires is over 9 per cent per year.
- So, taxing them at 3.5 per cent still means their wealth is going to increase in coming years.
- The wealth tax can raise significant amount of money to invest in climate investments for bottom 50 per cent of the population, in education and also in health.
- The report finds that the 15 per cent minimum corporate tax deal is very low as compared to the statutory tax rate paid by low-end and middle-size companies/corporations.
- As per the estimates in the report, a 15 per cent minimum corporate tax would lead to revenue gains of 83.3 billion euros in EU, 57.0 billion euros in the US, 6.1 billion euros in China and 0.5 billion euros in India.
- The global bottom 50 per cent income share remains historically low despite growth in the emerging world in the past decades.
- The share of global income going to top 10 per cent highest incomes at the world level has fluctuated around 50-60 per cent, while the share going to the bottom 50 per cent lowest incomes has generally been around or below 10 per cent.
- The top 0.1 per cent of the global population captures more income than the entire bottom 50 per cent.
- The average annual wealth growth rates among the poorest half of the population were between 3 per cent and 4 per cent per year between 1995 and 2021.
- The poorest half of the world population only captured 3 per cent of overall wealth growth since 1995.
- The share of wealth detained by the world's billionaires rose from 1 per cent of total household wealth in 1995 to nearly 3.5 per cent today.

The Indian Express link-

https://indianexpress.com/article/business/top-1-captured-over-a-third-of-wealth-growth-7651633/

Question- Reducing inequality needs taxing High Net Individuals and ensuring government benefits reach the needy and vulnerable. Elucidate.

Risks of allowing large industrial groups to set up banks

Context:

• The Reserve Bank of India (RBI) late last month decided to keep on hold the implementation of a recommendation made by an internal working group to issue banking licences to large industrial groups. Many view the RBI's decision as a prudent step to preserve financial stability.

More on the news-

• An internal working group of the RBI headed by **P.K. Mohanty** last year **recommended, that the RBI** allow large industrial groups to set up banks.

- The group's recommendation was seen by analysts as an effort to bring more **private capital into the banking system** and help **increase lending**.
- The proposal was met with criticism from many experts, including former RBI governor Raghuram
 Rajan and former RBI deputy governor Viral Acharya.
- **International practices** -Many countries across the world either completely ban industrial groups from owning banks or heavily restrict such ownership.
- RBI decided to put on hold the major recommendation to allow industrial groups to own and operate banks.

Risks associated with allowing large industrial groups to set up banks

- It is argued that giving large industrialists the licence to own and operate banks will **lead to** misallocation of capital.
- The banks owned by these industrial groups would lend money to their own companies over those owned by others.
- A bank owned by a certain industrial group may also be more willing to offer loans to its sister
 companies even if they do not meet credit standards. Such loans are more likely to turn into bad assets
 and threaten the stability of the financial system.
- India lacks the infrastructure necessary to effectively implement regulations to prevent such dangerous connected lending.
- Past precedence-The failure of many private banks in the past due to bad lending decisions too has been cited as a reason to oppose the idea of large industrial groups entering banking.

Analysis

- Granting bank licences to industrial groups would give these groups easy access to capital.
- Under the current fractional-reserve banking system, banks possess the rare privilege to create loans
 out of thin air without a commensurate size of deposits. So, an industrial group that owns a bank can
 expect an abundant supply of loans from its banking wing. This can potentially lead to serious
 problems.
- For example, an industrial group suffering huge losses could use its banking wing to keep itself afloat for a long time.
- **Connected lending** *per se* does not have to be dangerous if the bank management understands that throwing good money after bad is not a wise decision.
- Banks in general are protected from going bust by the RBI usually citing the systemic risks posed by bank failures and the desire to protect depositors.
- Such protection itself, however, raises the risk of moral hazard as it encourages banks to engage in
 poor lending practices without worrying about the consequences. In the absence of such sovereign
 support for banks, there would be a lot more incentive for depositors who want to protect their money
 to oversee the lending decisions of banks and prevent over-exposure to any borrower, including a
 related party.

The Hindu link-

https://www.thehindu.com/business/Industry/explained-risks-of-allowing-large-industrial-groups-to-set-up-banks/article37921352.ece

Question- What are the risks involved with allowing large industrial groups to set up banks?

India's Defence Exports

Context

- India's defence exports have increased from ₹1,521 crore in 2016-17 to ₹8,434.84 crore in 2020-21. The figure stood at ₹10,745 crore in 2018-19.
- The **Government** has set an ambitious **target** to **achieve exports of about ₹35,000 crore** (\$5 billion) in aerospace and defence goods and services **by 2025.**

Emerging defence scenario

- According to the latest report of the Swedish think tank Stockholm International Peace Research
 Institute (SIPRI), three Indian companies figure among the top 100 defence companies in the 2020
 rankings Hindustan Aeronautics Limited (HAL), Ordnance Factory Board and Bharat Electronics Ltd
 (BEL). "Their aggregated arms sales of \$6.5 billion were 1.7% higher in 2020 than in 2019 and
 accounted for 1.2% of the top 100 total.
- There was an overall drop in India's arms imports between 2011-15 and 2016-20, according to
 another SIPRI report of 2020 and while India remained among the top importers, it was also included
 in the Top 25 defence exporters.
- Changing geopolitical reality meant that many smaller nations were now worried about security and would look towards India as it had the strength of low-cost, high-quality production.
- Big ticket defence items that can be considered for exports
- The Defence Minister announced that India was ready to supply different types of missile systems, LCA/helicopters, multi-purpose light transport aircraft, warships and patrol vessels, artillery gun systems, tanks, radars, military vehicles, electronic warfare systems and other weapons systems to IOR nations.
- Assistance in capacity building and capability enhancement has emerged as a major theme in discussions with Indian Ocean littoral states with the Navy taking the lead in this area.
- **Vietnam** is procuring 12 Fast Attack Craft under a \$100 million **credit line** announced by India and discussions are continuing to identify systems under the second **line of credit** of \$500 million. Vietnam is also interested in Advanced Light Helicopters and Akash surface-to-air missiles.
- HAL has pitched its helicopters and the **Tejas LCA to several Southeast Asian and West Asian** nations and is in the race to supply the **LCA to Malaysia**.
- Sale of BrahMos supersonic cruise missiles are at an advanced stage with some Southeast Asian nations.

Measures to improve defence exports

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- Measures announced to boost exports include simplified defence industrial licensing, relaxation of export controls and grant of no-objection certificates.
- **Specific incentives** were introduced under the foreign trade policy and the Ministry of External Affairs has facilitated **Lines of Credit for countries to import defence products.**
- In addition, **defence attaches** in Indian missions abroad have been empowered to promote defence exports.
- The Defence Ministry has also issued a draft Defence Production & Export Promotion Policy 2020.
- On the domestic front, to boost indigenous manufacturing, the Government had issued two "positive
 indigenisation lists" consisting of 209 items that cannot be imported and can only be procured from
 domestic industry.
- In addition, a percentage of the capital outlay of the defence budget has been reserved for procurement from domestic industry. For the year 2021-22, about 63% of the capital outlay or about ₹70,221 crore will be done from domestic defence industry

The Hindu Link

https://www.thehindu.com/news/national/the-growth-of-indias-defence-exports/article37966675.ece

Question- India's defence sector can substitute costly imports and can cater to defence need of smaller nations with low cost and high quality exports. Elucidate.

Time farmers harvested the power of tech

Context

- Be it education, healthcare, or the roadside vendor, the biggest takeaway for every sector organised and unorganised from the Covid-19 pandemic is adapting to the new normal.
- And this 'new normal' is almost entirely technology driven and farming will also need to embrace new technologies.

Tech in agriculture so far

- Advances in machinery have expanded the scale, speed, and productivity of farm equipment, leading to more efficient cultivation of larger land parcels.
- Seed, irrigation, and fertilisers also have vastly improved, helping farmers increase yields.
- However the farming sector, which contributes 16 per cent to the GDP and employs more than 45 per cent of the workforce, is nowhere near leveraging the benefits of technological innovations that are being offered by agritech start-ups.
- Recent technologies and their benefits
- Now, agriculture is in the early days of yet another revolution, at the heart of which lie data and connectivity.

Artificial intelligence, analytics, connected sensors, and other emerging technologies could further
increase yields, improve the efficiency of water and other inputs, and build sustainability and resilience
across crop cultivation and animal husbandry.

How startups help farmers

- Connections
- Through the use of artificial intelligence, machine learning, internet of things (IoT), etc., these start-ups are connecting farmers, small operators such as *kirana* shops, the neighbourhood mom-and-pop stores, the delivery start-ups and ultimately the consumer under one umbrella.
- Through these start-ups, farmers are also able to directly **connect to bigger players** who buy quality produce in bulk.
- F2B model
- The agritech start-ups have solved this problem by starting a unique farmer-to-business (F2B) model.
- Example- **Dehaati Beej Se Baazar Tak**, a full-stack agri-service firm that engages through B2F (business-to-farmer) and F2B models. It uses data science, agriscience and analytics to nurture a ecosystem of farmers, micro-entrepreneurs and institutional buyers.
- **Ninjacart**, which sources fresh produce from farms and supplies to retailers, restaurants, grocery and *kirana* stores, and small businesses and is operational in around a dozen cities. Thus it helps in reducing wastage by involving **demand-driven harvest schedule**.

Lost opportunity due to farm laws repeal

 It is estimated that there are about 500 agritech start-ups in India, operating at various levels of supply chains. Almost all of them would have benefited from the new farms laws which have now been repealed.

Other challenges

- India's biggest challenge is to scale up farmer outreach.
- The Indian farmer is not as technologically advanced as his Western counterpart.
- Also, tech penetration in the rural landscape is not widespread enough.

Conclusion

 Farmers, who form one of the oldest industries civilisation has known, must embrace a digital, connectivity-fuelled transformation in order to overcome increasing demand and benefit from the quality of their produce directly from the consumer.

The Hindu link

https://www.thehindubusinessline.com/opinion/time-farmers-harvested-the-power-of-tech/article38006441.ece

Question- How agri-starups can change the agriculture landscape both in terms of enhancing production and reducing wastage. Explain.

PM KISAN

Context

 Prime Minister Narendra Modi is set to release the 10th installment of financial benefit under the PM-KISAN scheme.

About the scheme

- Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is a Central Sector Scheme with 100% funding from Government of India.
- Aim: To augment the income of the farmers by providing income support to all landholding farmers' families across the country.
- The Scheme initially provided income support to all Small and Marginal Farmers' families across the country, holding cultivable land upto 2 hectares. Its ambit was later expanded w.e.f. 01.06.2019 to cover all farmer families in the country irrespective of the size of their land holdings.
- Under the Scheme an amount of Rs. 6000/- per year is transferred in three 4-monthly installments of Rs. 2000/- directly into the bank accounts of the farmers, subject to certain exclusion criteria relating to higher income status.
- **Eligibility**: All landholder farmer's families in the country are eligible for the PM-Kisan Scheme subject to the prevalent exclusion criteria. **Farmers who do not own any land are not eligible for this scheme.**
- Excluded from the scheme
- Institutional land holders,
- Farmer families holding constitutional posts,
- Serving or retired officers and employees of state/central government as well as PSUs and government autonomous bodies.
- Professionals like doctors, engineers and lawyers as well as retired pensioners with a monthly pension
 of over Rs 10,000 and those who paid income tax in the last assessment year.
- **Identification of beneficiaries:** The responsibility of identifying the eligible beneficiary farmers and uploading their data on PM-KISAN portal lies entirely with the **state governments.**

The PIB link

https://pib.gov.in/PressReleasePage.aspx?PRID=1786069

https://pmkisan.gov.in/#About

Question- Write a short note on PM-Kisan scheme.

Website: www.civilstaphimachal@gmail.com	Call @7814622609
Environment	

Green hydrogen

Context:

 Prime Minister Narendra Modi recently announced that India would aim for net-zero carbon emissions by 2070. The announcement was given credence by the country's solar achievements since 2015. India is the only major economy whose policies and actions are on track to limit global average temperature rise below 2°C above pre-industrial levels, as envisioned in the Paris Agreement.

Green hydrogen

- Green hydrogen is hydrogen produced by splitting water by electrolysis. This produces only hydrogen
 and oxygen. We can use the hydrogen and vent the oxygen to the atmosphere with no negative
 impact.
- To achieve electrolysis we need electricity, we need power. This process to make green hydrogen is
 powered by renewable energy sources, such as wind or solar. That makes green hydrogen the cleanest
 option hydrogen from renewable energy sources without CO2 as a by-product.

Colour coding of hydrogen

• While hydrogen generated through renewable energy sources is **green**, it is **blue** when the carbon generated from the process is captured and stored without dispersing it in the atmosphere. When the carbon is not captured, the generated hydrogen is labelled **grey**.

Significance of green hydrogen

- **Energy Security** India's 75% of the energy demand is met by coal and oil, including imports. This is expected to increase, so the synergy between renewable energy and green hydrogen must be tapped to tackle the dependence on fossil fuel and take greater advantage of India's solar capacity.
- **To tackle climate change** –Hydrogen, particularly green hydrogen, is a vital weapon in India's arsenal to fight climate change as it improves the long-term energy storage capabilities of renewable energy.
- **Decarbonise the most polluting sectors**-The simplest element in the periodic table is also the most promising solution to decarbonise sectors like cement, steel, and refineries.
- According to Hydrogen Council, Hydrogen can provide the lowest-cost decarbonization solution for over a fifth of final energy demand by mid-century contributing a cumulated reduction of 80Gt of CO2, thus making it an essential solution to reach the 1.5°C climate scenario

Head Start for India

- Nearly 70% of the investments required to produce green hydrogen through electrolysis goes into generating renewable energy.
- With India's solar capacity increasing nearly 3,000 times in less than a decade, the cost of solar energy has reached a low of ₹2 per kWh. This gives India a unique **head start** in scaling up the use of green hydrogen.
- India can reduce its carbon emissions and make a dent in its annual import bills by developing a value chain for hydrogen from its production to its diverse applications, including production technologies, storage, transport and distribution, infrastructure (ports, refuelling stations), vehicular applications, and electricity/gas grid.

Way Forward

- Government funding and long-term policies that attract private investments within the standards and a progressive compliance framework are essential to boost green hydrogen.
- Hydrogen's cross-sectoral capabilities should be exploited according to each sector's cost and ease of adoption.
- **Short term goals**-A few key sectors with low transition costs, such as refineries, fertilizers and natural gas, should be mandated to use hydrogen to bring down costs as part of near-term goals.
- **Medium term goals**-New demand from steel, cement and road mobility should be mandated as part of medium-term goals.
- Long term goals- Heavy-duty vehicles should receive State and Central incentives. Shipping, aviation, energy storage and solutions towards power intermittency should be mandated to use green hydrogen in the long run.
- Enforcing time-bound mid- and long-term policies would inspire the private sector to invest more in green hydrogen and give the boost it requires in its nascent stages.
- India's current grey hydrogen production is six million tonnes per annum, which is around 8.5% of global annual production. India should replace this with green hydrogen and reduce dependence on imported ammonia.
- It should aim to produce 4-6 million tonnes of green hydrogen per annum by the end of the decade and export at least 2 million tonnes per annum.
- India has already taken the first step with the Indian Oil Corporation floating a global tender to set up two green hydrogen generation units at the Mathura and Panipat refineries.

The Hindu link-

https://www.thehindu.com/opinion/op-ed/boosting-green-hydrogen/article37758140.ece

Question- Green hydrogen can potentially help in greening the country's energy mix. Elucida

Why is India facing bouts of extreme weather?

Context:

- Even as the southwest monsoon began to retreat from the subcontinent, Kerala and Uttarakhand received record rainfall in October.
- Over the last few years, there have been **variations in the pattern and intensity of rainfall** in both these States and others.

What explains the torrential rain in Kerala and Uttarakhand?

- When the atmosphere and the ocean is considered as a whole, rain everywhere is the result of
 moisture rushing up to fill differences in temperature between oceans and the land.
- Warming oceans are contributing to intense spells of rainfall in pockets followed by long rainless spells.
- But specific instances such as what is being seen in **Kerala** and **Uttarakhand** aren't unprecedented.
- The monsoon cycle is prone to **large variations**, and every year, **regional factors get accentuated** which then lead to extreme climate events.

Causes of such rainfall in Kerala and Uttarakhand-

- There are different factors at play in Kerala and Uttarakhand. There have been two rain-bearing 'low pressure systems' that are active in the Arabian Sea as well as the Bay of Bengal.
- The low pressure system in the Arabian Sea contributed to the heavy rain in Kerala whereas western disturbances are what caused the rain in northern India.
- **Western disturbances** are periodic influxes of moisture-laden clouds from the Mediterranean that are common during winter.
- The Bay of Bengal is still warm and strong winds from there are reaching as far as Uttarakhand and will
 contribute to rainfall in several parts of north-eastern India.

Relation with global warming

- Normally, October is the month when the southwest monsoon entirely retreats from India and the northeast monsoon sets in, bringing rain over Tamil Nadu, Puducherry, coastal Andhra Pradesh and Kerala.
- Both low pressures, as well as the western disturbances, are tangentially connected to the larger pattern of global warming.
- The Bay of Bengal is historically the warmer ocean that seeds low pressures and cyclones that bring rain to India. In recent years, however, the Arabian Sea, too, has been warmer than normal, leading to significant cyclonic activity.
- Overall **elevated temperatures** are also contributing to warmer waters in the Arctic Ocean and drawing colder air from the poles with greater intensity. This has added to the increased moisture, thereby seeding more intense western disturbance activity over north India.

How are society's environmental choices leading to disasters?

- Kerala and Uttarakhand have large tracts of hilly terrain that are prone to landslips. But construction
 has continued unabated even on land unsuited for human habitation. Several ecologists and
 environmentalists have for years warned of the consequences of unplanned development.
- In the context of an increasingly erratic climate, it is only logical that more inhabitants of these regions will be exposed to greater climate risk.

The Hindu link-

https://www.thehindu.com/news/national/why-is-india-facing-bouts-of-extreme-weather/article37232005.ece

Question- In view recent untimely and unprecedented rains in Uttarakhand and Kerala, what are the probable causes of rising cases of extreme weather events?

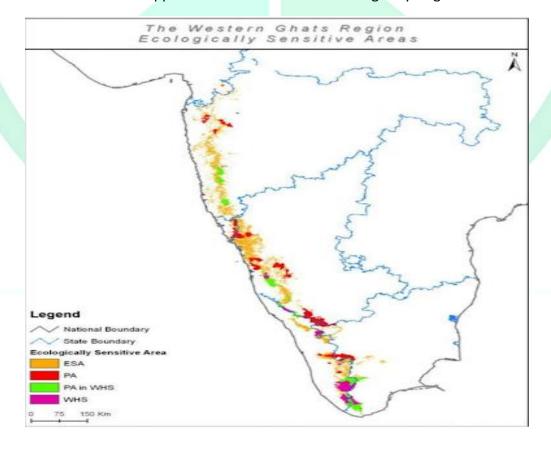
Kasturirangan report

Context:

• Recently, Karnataka Chief Minister informed the Centre that the state is opposed to the Kasturirangan Committee report on Western Ghats.

Concerns of Karnataka Government

- It said that declaring Western Ghats as ecologically sensitive zone would adversely affect the livelihood
 of people in the region.
- The experts called the state's opposition disastrous for the ecologically fragile Western Ghats.



The recommendations of the Kasturirangan committee report

• The committee report proposes 37 per cent of the total area of Western Ghats, which is roughly 60,000 square kilometres, to be declared as eco-sensitive area (ESA).

- Out of this, 20,668 sq km of the area falls in Karnataka covering 1,576 villages.
- The report recommended a blanket ban on mining, quarrying, setting up of red category industries and thermal power projects.
- It also stated that the impact of infrastructural projects on the forest and wildlife should be studied before permission is given for these activities.
- It also stated that the UNESCO Heritage tag is an opportunity to build global and domestic recognition of the enormous natural wealth that exists in the Western Ghats.
- The 39 sites are located across the Western Ghats and distributed across the states (Kerala 19),
 Karnataka (10), Tamil Nadu (6) and Maharashtra (4). The boundary of the sites, are in most cases,
 boundaries of the legally demarcated national parks, wildlife sanctuaries, tiger reserves and forest
 divisions and therefore, already accorded with high level of protection.
- The Eco-Sensitive Area mapping and demarcation done by the committee also indicates that all sites
 are within this area.
- The state governments should view this development and build a plan to protect, conserve and value
 the resources and opportunities of the region. The state of Karnataka has the highest percentage of the
 ESA- 46.50 per cent.

Probable reason behind the successive governments in Karnataka rejected the report

- The state government believes that implementation of the report will halt the developmental activities in the region.
- Karnataka has the distinction of being one of the states with extensive forest cover and the government has taken care to protect the biodiversity of Western Ghats.
- Karnataka Contention is that:
- The Kasturirangan report has been prepared based on the satellite images, but the ground reality is different.
- People of the region have adopted agriculture and horticultural activities in an eco-friendly manner.
- Priority has been accorded for environment protection under the Forest Protection Act.
- The political representatives from Uttara Kannada district have always opposed the Kasturirangan report since 600-plus villages will fall under the eco-sensitive area if the report is implemented.
- The union government since 2014 has issued several draft notifications to the Karnataka government to finalise the eco-sensitive areas in the Western Ghats but the government has been firm in rejecting the implementation of the report.

Adverse effect due to the non-implementation of the report have on the Western Ghats

• Considering the changes in climate (evident from recurring floods, droughts, landslides, increasing temperature, etc), which would affect the livelihood of all people (irrespective of poor or rich) and hurt the nation's economy.

- It is prudent to conserve the fragile ecosystems that costs less compared to the situation prone to calamities (with changes in the climate) than spending money /resources for restoration / rejuvenation.
- As a researcher and someone who has extensively studied the Western Ghats for more than three decades, Dr Ramachandra suggests the government to accept and implement the report.
- If the government truly cares for the welfare of 22 crore people who are sustained by the Western Ghats, it would accept at least 85 per cent of the recommendations of the Kasturirangan Committee. Else, it would be the reason for the sufferings of the people.

The present status of the deemed forest land in Karnataka

- While there is a growing concern over the forest encroachments in Karnataka, the state government has planned to further shrink the deemed forest area from 3,30,186.938 hectares to 2 lakh hectares.
- In the order dated December 12, 1996 of the Supreme Court of India in Writ Petition in Godavarman Thirumulpad Vs Union of India & others, the term forest as per dictionary meaning and the forests recorded in government records were to be included in the broad definition of 'forests' along with notified forests for consideration of any diversion proposal under the Forest (Conservation) Act, 1980.
- The expert committee appointed by the Government of Karnataka identified 10 lakh hectares of land in the State as deemed forest.
- The state expert committee in 1997 had identified 10 lakh hectares of deemed forest area which over the years were shrunk by the successive governments.
- The state government has made a mockery of the existing eco-sensitive zones across the forest areas.
- There have been massive encroachments across the state forest areas and these have been done at the behest of political leaders. In some of the districts, the encroachments are huge but there has been no eviction.

The Indian Express link-

https://indianexpress.com/article/explained/explained-implementation-recommendations-kasturirangan-committee-western-ghats-important-7660924/

Question- Conservation of ecologically sensitive western ghats can be ensured by following recommendations of Kasturirangan report. Elucidate.

Nod for Ken-Betwa link project

Context:

• The Union Cabinet recently approved the funding and implementation of the Ken-Betwa river interlinking project at a cost of ₹44,605 crore at the 2020-21 price level.

Key Highlights of the project

- The Centre would fund ₹39,317 crore for the project, with ₹36,290 crore as a grant and ₹3,027 crore as a loan.
- The project involves transferring of water from the Ken river to the Betwa river through the construction of Daudhan dam and a canal linking the two rivers, the Lower Orr Project, Kotha Barrage and the Bina Complex Multipurpose Project.

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 The project is slated to irrigate 10.62 lakh hectares annually, provide drinking water supply to 62 lakh people and generate 103 MW of hydropower and 27 MW of solar power. The project is proposed to be completed in eight years.

Benefits

- The project will be of immense benefit to the water-starved Bundelkhand region, spread across Madhya Pradesh and Uttar Pradesh.
- The project is expected to boost socio-economic prosperity in the backward Bundelkhand region on account of increased agricultural activities and employment generation.
- It would also help in arresting distress migration from this region.

Challenges

- Several obstacles have dogged the project. For one, the project will partly submerge the Panna Tiger
 Reserve in Madhya Pradesh and affect the habitat of vultures and jackals.
- After years of protests, it was finally cleared by the apex wildlife regulator, the National Board for Wildlife, in 2016.
- Then Uttar Pradesh and Madhya Pradesh reached an agreement on how water would be shared in March 2021.

The Hindu link-

https://www.thehindu.com/todays-paper/tp-national/cabinet-nod-for-ken-betwa-project/article37906445.ece

Question- Write a short note on benefits of interlinking of rivers with respect to Ken Betwa Link project.

Climate change and food security

Context:

- At the United Nations Climate Change Conference (COP26) held in Glasgow countries did commit to reducing greenhouse gas emissions and put forth a record-shattering U.S.\$356 million in new support from contributing national and regional governments to protect the most vulnerable.
- But this is not enough to stay below the limit of 2°C above pre-industrial levels. **COP26 fell far short of the ground-breaking success** many had hoped for.

Climate crisis and hunger

Climate crisis and hunger are linked inextricably-

- Analysis by the United Nations World Food Programme (WFP) shows that a 2°C rise in average global temperature from pre-industrial levels will see a staggering 189 million additional people in the grip of hunger.
- Vulnerable communities, a vast majority of whom rely on subsistence agriculture, fishing, and livestock
 and, who contribute the least to the climate crisis, will continue to bear the brunt of the impacts with
 limited means to cushion the blow.

- The absence of social protection measures such as food safety nets forces the food insecure to depend on humanitarian aid for survival.
- Across the world, up to 811 million people do not have enough food and as per the recent WFP estimates, 41 million people in 43 countries are at risk of sliding into famine.
- Crop failures, water scarcity, and declining nutrition threaten millions who rely on agriculture, fishing, and livestock

Adaptation is urgent

- Adaptation and resilience-building for poor and vulnerable communities are critical for food security.
 The focus though has been on reducing emissions and targets related as these are essential to protect livelihoods and the food security of millions.
- We need to understand climate and weather extremes and their adverse impacts on people and nature will continue to increase with rising temperatures.
- There is a strong emphasis on the urgency of scaling up action and support, including
- Finance,
- Capacity-building, and
- Technology transfer, to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change in line with the best available science, and considering the priorities and needs of developing country parties.

Adaptation finance

- The contributions made to the Adaptation Fund and the Least Developed Countries Fund, represent significant progress when compared with previous efforts. However, the current climate finance for adaptation and base of stakeholders remain insufficient to respond to worsening climate change impacts.
- COP called upon multilateral development banks, other financial institutions, and the private sector to
 enhance finance mobilization to deliver the scale of resources needed to achieve climate plans,
 particularly for adaptation.
- The WFP is working with communities to adapt to the changing climate that threatens their ability to grow food, secure incomes, and withstand shocks. It has supported 39 governments, helping them realise their national climate ambitions.

Here are a few key areas or measures we should focus on.

- **Creating resilient livelihoods and food security solutions** by protecting and improving the livelihood of vulnerable communities.
- The adaptation of climate-resilient food crops, such as millets, for nutritional security.
- **Enabling women's control and ownership of production processes** and assets and increased value addition and local solutions.
- **Promoting a resilient agriculture sector** by creating sustainable opportunities, access to finance, and innovation for small-holder farmers, with climate information and preparedness.
- **Building capacity and knowledge of civil society and governments** for vulnerability analysis to increase food security by addressing the link between food security and climate risk.

Fixing broken food systems

 Reimagining food systems requires us to look at food systems through the prism of climate change adaptation and mitigation, which must also entail making them resilient to climate change and pandemics while making them green and sustainable.

Way Forward

- We are on the cusp of transformation to make the world free of hunger by 2030 and deliver promises for Sustainable Development Goals (sdgs), with strong cooperation and partnership between
- Governments,
- Citizens,
- · Civil society organisations, and
- The private sector.
- This requires reimagining the food system towards balancing growth and sustainability, mitigating climate change, ensuring healthy, safe, quality, and affordable food, with investment from governments and the private sector in supporting farmers while maintaining biodiversity, improving resilience, and offering attractive income and work environment to smallholders and youth.

The Hindu link-

https://www.thehindu.com/opinion/lead/cop27-in-egypt-must-focus-on-food-systems/article37831854.ece

Question- Climate change and global food security are intricately linked. Elucidate.

Nuclear energy and climate change

Context:

- The latest figures on global carbon dioxide emissions call into question the world's efforts to tackle the climate crisis.
- CO2 emissions are set to soar 4.9% in 2021, compared with the previous year, according to a study published earlier this month by the Global Carbon Project (GCP), a group of scientists that track emissions.
- During the COP26 climate summit, advocates have been arguing about the importance of Nuclear energy as comprehensive alternatives.

Is nuclear power a zero-emissions energy source?

- Nuclear energy is **also responsible for greenhouse gas emissions**. In fact, no energy source is completely free of emissions, but more on that later.
- When it comes to nuclear, uranium extraction, transport and processing produces emissions. The long
 and complex construction process of nuclear power plants also releases CO2, as does the demolition of
 decommissioned sites.

- And, last but not least, nuclear waste also has to be transported and stored under strict conditions and here, too, emissions must be taken into account.
- Taking into account the current overall energy system, nuclear energy is by no means CO2 neutral,

How much CO2 does nuclear power produce?

- A report released in 2014 by the UN's Intergovernmental Panel on Climate Change (IPCC), for example, estimated a range of **3.7 to 110 grams of CO2** equivalent per kilowatt-hour (kWh).
- New power plants, for example, generate more CO2 during construction than those built in previous decades, due to stricter safety regulations.

How climate-friendly is nuclear compared to other energies?

• If the entire life cycle of a nuclear plant is included in the calculation, nuclear energy certainly comes out ahead of fossil fuels like coal or natural gas.

The Indian express link

https://indianexpress.com/article/explained/nuclear-energy-climate-change-7649150/

Question- Can nuclear energy be the panacea for tackling climate change. Explain.

United Nations Convention on the Law of the Sea (UNCLOS)

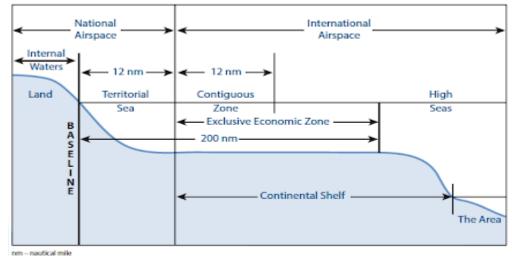
Context:

- The Centre has informed Parliament that India supports UNCLOS and the country is committed to promoting a free, open and rules-based order rooted in international law and undaunted by coercion.
- As a State party to the UNCLOS, India promoted utmost respect for the UNCLOS, which established the international legal order of the seas and oceans.
- India developed its maritime cooperation with regional partners in consonance with the Government's vision of Security and Growth for All in the Region (SAGAR).
- The steps taken include 'Mission based Deployments' of naval ships and aircraft to enhance Maritime Domain Awareness, promote maritime security and address contingencies that may arise.
- In addition, India proactively engaged with regional and extra-regional maritime forces through multilateral exercises, joint surveillance, coordinated patrols among others to promote maritime security in the region in an inclusive and cooperative manner.

About UNCLOS

- The United Nations Convention on the Law of the Sea (UNCLOS), also known as the **Law of the Sea Treaty**, is an international treaty which was adopted and signed in 1982. The Convention was formed to ensure freedom of shipping navigation at the sea.
- The Convention has created three new institutions on the international scene:
- The International Tribunal for the Law of the Sea,
- The International Seabed Authority,

- The Commission on the Limits of the Continental Shelf.
- India is a party to UNCLOS.
- UNCLOS classifies marine areas into five zones. They are:
- Territorial sea
- Contiguous zone
- Exclusive economic zone
- Continental shelf
- High Sea



Legal Boundaries of the Oceans and Airspace

Territorial sea

- According to UNCLOS, the territorial sea can be defined as the area which extends up to 12 nautical
 miles from the baseline of a country's coastal state. The territorial sea is under the jurisdiction of that
 particular country; however, foreign ships (both merchant and military) ships are allowed passage
 through it.
- This type of passage of territorial passage of foreign ships is known as an innocent passage. However, the right to the innocent passage can be suspended if there is a threat to the security of the coastal state.

Contiguous Zone

- The contiguous zone can be defined as the belt which **extends 12 nautical miles beyond the territorial sea limit.**
- A coastal state's control on this area is limited to prevention of actions which can infringe its customs, fiscal, and immigration laws. It can also act if any activity in the contiguous zone threatens regulations in the territorial sea.

Exclusive economic zone

- The exclusive economic zone can be defined as a belt of water which **extends up to 200 nautical miles** from the baseline of the coastal state. Thus it **includes both territorial sea and contiguous zone.**
- The exclusive economic zone provides the coastal state **control over all economic resources** such as fishing, mining, oil exploration, and marine research.

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• The coastal state also has jurisdiction regarding protection and preservation of natural resources and marine environment.

Continental Shelf

- The continental shelf can be defined as the area whose outer limit shall not exceed 350 nautical miles from the baseline or shall not exceed 100 nautical miles from the 2500 meters isobath.
- Isobath is a line connecting points of equal underwater depth.
- The coastal state has exclusive rights for exploring and exploiting its natural resources in this area. The state also has the exclusive rights to authorize and regulate drilling on the shelf for all purposes.

High Seas

- High seas can be defined as the part of the sea that is **not included** in the exclusive economic zone, in the territorial sea, or in the internal waters of a coastal state or archipelagic waters of an archipelagic state.
- High seas are **open to all states** for freedom of navigation, freedom of over flight, freedom to construct artificial islands installation, freedom of fishing, and freedom of scientific research.

The Hindu link

https://www.thehindu.com/todays-paper/tp-national/india-lays-emphasis-on-unclos/article37948787.ece

Question- Write a short note on United Nations Convention on the Law of the Sea (UNCLOS).

The push for Zero Budget Natural Farming

Context:

• The Prime Minister is set to promote the **ZBNF's benefits** and provide more details on the strategies to implement it at a national conclave in **Anand, Gujarat.**

About ZBNF

- In the recent past, there has been a global demand to shift to sustainable farming systems, such as Zero Budget Natural Farming (ZBNF).
- India, too, introduced ZBNF in its Union Budget 2019-20.
- ZBNF is a method of chemical-free agriculture drawing from traditional Indian practices.
- It was originally promoted by **Maharashtrian agriculturist** and Padma Shri recipient **Subhash Palekar**, who developed it in the mid-1990s as an alternative to the Green Revolution's methods driven by chemical fertilizers and pesticides and intensive irrigation.
- Without the need to spend money on these inputs or take loans to buy them, the cost of production could be reduced and farming made into a "zero budget" exercise, breaking the debt cycle for many small farmers.
- ZBNF is also **against vermicomposting**, which is the mainstay of typical organic farming.

Jeevamrutha

 Instead of commercially produced chemical inputs, the ZBNF promotes the application of jeevamrutha, a mixture of fresh desi cow dung and aged desi cow urine, jaggery, pulse flour, water and soil on farmland.

- This is a fermented microbial culture that **adds nutrients to the soil**, and acts as a **catalytic agent** to promote the activity of microorganisms and earthworms in the soil.
- About 200 litres of jeevamrutha should be sprayed twice a month per acre of land. Only one local indian breed cow is needed for 30 acres of land.

Other techniques in ZBNF

• The ZBNF method also promotes soil aeration, minimal watering, intercropping, bunds and topsoil mulching and discourages intensive irrigation and deep ploughing.

Advantages of ZBNF

- Input costs are near zero as no fertilizers and pesticides are used.
- ZBNF farms were able to withstand drought and flooding.
- The planting of multiple crops and border crops on the same field provide varied income and nutrient sources.
- There is reduced usage of water and electricity, improved health of farmers, flourishing of local ecosystems and biodiversity and no toxic chemical residues in the environment.
- The inputs help manage soil nutrition, fertility, pests and seeds.
- The technology requires less tilling and completely rejects the use of inorganic fertilisers, pesticides and herbicides.

States with implementation plans for ZBNF

- The Centre has sanctioned the proposals of **eight States** for support under the **Paramparagat Krishi Vikas Yojana** scheme this year.
- Andhra Pradesh has the biggest ambition to bring one lakh additional hectares of land under ZBNF under the scheme, followed by Chhattisgarh, with 85,000 additional hectares and Gujarat, with 71,000 additional hectares.
- The Indian Council of Agricultural Research, which is conducting studies on the ZBNF methods practised by **basmati and wheat farmers** in Modipuram (Uttar Pradesh), Ludhiana (Punjab), Pantnagar (Uttarakhand) and Kurukshetra (Haryana), evaluating the **impact on productivity, economics and soil health including soil organic carbon and soil fertility.**

Effectiveness

- A limited 2017 study in Andhra Pradesh claimed a sharp decline in input costs and improvement in yields.
- They warn against a wholesale move away from that model without sufficient proof that yields will not be affected. Also, India needed the Green Revolution in order to become self-sufficient and ensure food security.
- Sikkim, which has seen some decline in yields following a conversion to organic farming, is used as a cautionary tale regarding the pitfalls of abandoning chemical fertilizers.

The Hindu link-

https://www.thehindu.com/sci-tech/agriculture/the-push-for-zero-budget-natural-farming/article37964198.ece

Question- Write a short note on Zero Budget Natural Farming (ZBNF) and its benefits.

Pradhan Mantri Krishi Sanchayee Yojana

Context:

• The union government has approved the extension of Pradhan Mantri krishi sinchai Yojana (PMKSY) till 2026, which would help in funding the irrigation projects to increase the water supply in the country.

PMKSY

- The scheme was launched in 2015, it is an amalgamation of existing components with an output-driven approach as an umbrella programme with various components envisioning increased irrigation potential.
- It has been formulated with the vision of extending the coverage of irrigation 'Har Khet ko pani' and improving water use efficiency 'More crop per drop' in a focused manner with end to end solution on source creation, distribution, management, field application and extension activities.

Objectives Of The Scheme

- Achieve convergence of investments in irrigation at the field level
- Har Khet ko pani- Enhance the physical access of water on the farm and expand cultivable area under assured irrigation
- Integration of water source, distribution and its efficient use, to make best use of water through appropriate technologies and practices.
- Improve on farm water use efficiency to reduce wastage and increase availability both in duration and extent.
- Enhance the adoption of precision irrigation and other water saving technologies (More crop per drop).
- Enhance recharge of aquifers and introduce sustainable water conservation practices.
- Ensure the integrated development of rainfed areas using the watershed approach towards soil and water conservation, regeneration of groundwater, arresting runoff, providing livelihood options and other NRM activities.
- Promote extension activities relating to water harvesting, water management and crop alignment for farmers and grass root level field functionaries.
- Explore the feasibility of reusing treated municipal wastewater for peri urban agriculture.
- Attract greater private investments in irrigation.

Components of the scheme

- PMKSY consists of 3 main components implemented by various ministries-
- Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti oversees implementation of-
- Accelerated Irrigation Benefits Programme (AIBP)
- Har Khet Ko Pani (HKKP)
- Watershed Development under Department of Land Resources, Ministry of Rural Development
- Per Drop More Crop under Department of Agriculture and Farmers Welfare, Ministry of Agriculture & Farmers Welfare

Achievements of the scheme

- **Development of Hybrid Annuity PPP model**: In order to accelerate the pace of micro irrigation development in the country, NITI Aayog-Water resource division has assisted in the development of Hybrid Annuity model with Public-Private-Partnership (PPP) to provide water to every field.
- Siang Multi-Purpose River Valley Project: To harness the hydro power potential in the North-East part of India, the Multi-Purpose River Valley Project on Siang River in Arunachal Pradesh has been proposed by MoWR, RD&GR.
- Water Management Index: In pursuit of cooperative and competitive federalism, NITI Aayog has been laying emphasis on developing indicators on various social sectors. As a step in this direction and keeping in view the criticality of water for life, NITI Aayog has prepared a report on Composite Water Management Index (CWMI).

Challenges

- Ignoring problems
- One of the principal causes of the failure of the AIBP was its inability to take land acquisition into account. The requirement of agencies to possess land first before funding is not in the scheme of PMKSY.
- Therefore, two of its sub-components, namely AIBP and Har Khet Ko Pani are adversely affected and fall short of the target.
- The programme unveils a grand vision of end-to-end solutions from tapping water source to distribution to water management in order to increase water and agriculture productivity in the command area, it turns a blind eye to the fact that the command area is not under the control of the government.
- Lack of government investment
- "Per Drop More Crop" requires higher investment to introduce costly sprinklers and drip irrigation which small landowning farmers cannot afford.
- The extent of government contribution in the investment of micro-irrigation on behalf of farmers, or incentives for farmers who adopt such micro-irrigation, finds no mention in PMKSY.
- Lack of accountability
- There is also no reference to accountability when there is a failure to meet targets or to formulate any
 district plans. The tenure of service of the bureaucrats heading the committee is secure, irrespective of
 the outcome of PMKSY

- Absence of new thinking in approach
- It is a hotchpotch of old schemes: The Accelerated Irrigation Benefits Programme (AIBP) for fast-tracking of public irrigation projects, Per-Drop, More-Crop for promoting drip and sprinkler irrigation, and Watershed Management.
- Har Khet Ko Paani is a new component focusing on local water bodies and groundwater, but its funding is puny.

Case studies

- Anantapur, Andhra Pradesh
- The Gram Panchayat Irrigation plans were prepared through Water Gap Analysis for all 1003 Gram
 Panchayats and these were integrated into a Comprehensive District irrigation plan, 100% Geo tagging
 of all structures has been done using satellite imagery
- 'Panta Sanjivani' was implemented to provide protective irrigation to the rain fed groundnut crop during dry spells. A comprehensive District Irrigation Plan (DIP) was made focusing on "Drought Proofing" instead of "Drought Relief".
- · Banaskantha, Gujarat
- The district developed an Agriculture Contingency Plan and a comprehensive District Irrigation Plan (DIP) to ensure convergence of all programmes/activities for water conservation.
- Requirement of water for domestic use, crop, irrigation, livestock, industrial purpose was calculated separately.
- Renovation, Restoration and Repairing (RRR) of old canal structure during off season was done to minimize loss of water. Regular contact with farmers and user groups/ mandlis was established to assess their demands, time of release of water, frequency, etc.

Way Forward

The Agricultural sector i.e the primary sector of the economy can flourish only when the farmers no
longer have to depend on the monsoon rain, for the economic growth of the entire nation, continuous
supply of irrigation water without any hindrance to the cultivated field is the need of the hour.
However, the cultivators need to be educated to use the water efficiently in order to minimise losses
and to increase the productivity of their farms.

Livemint link-

https://www.livemint.com/news/india/cabinet-approves-implementation-of-pmksy-scheme-for-202126-11639562477698.html

Question- Evaluate the performance of Pradhan Mantri Krishi Sanchayee Yojana.

Science and Technology

A measured response: On the Omicron threat

Context:

The threat posed by Omicron is tenuous and it will still be a few weeks before a comprehensive
understanding of it emerges, but what is known unambiguously is that this latest variant of the
coronavirus is extremely infectious.

What we know till now

- Nearly 50 countries now have reported its presence within their borders but insight into its effects is available only from **South Africa**. A preliminary analysis of patients in Tshwane district, in Gauteng Province of South Africa, which has been the global epicentre of the Omicron-led fourth wave, suggests that despite its infectiousness, **Omicron is less deadly than other variants** that have led the country's previous three waves. When 166 new admissions were analysed, there were 10 deaths in the past two weeks, making up 6.6% of the 166 admissions. By comparison, the death rates in previous waves ranged from 17%-23%.
- The major caveat, as scientists who are part of the South African Medical Research Council point out, is
 that patterns could rapidly change in the next two weeks as it takes nearly a month for infection to
 reveal its worst-case outcome of death, and so the current data of two weeks are insufficient. Trends
 in hospitalisation too are encouraging, the scientists say.
- Finally, the third piece is that an **overwhelmingly large number of those needing intensive care were unvaccinated**.
- Therefore, the prevalent wisdom that despite being highly infectious, vaccination it is not clear if
 those in the wards were fully or partially vaccinated significantly protected against disease and
 death.
- But vaccination trends in South Africa are not encouraging. Only about 30% of the country has had one
 dose and only 25% fully vaccinated.
- Challenges vaccine hesitancy or easy access for the greater part of the population.
- As observed in previous waves, the first line of defence or neutralising antibodies produced as a
 result of a prior infection or vaccination was significantly reduced when confronted with the Beta or
 Delta variants.
- The same appears to be the case with Omicron, but the second line of defence, or cellular immunity, continues to be effective from the extant evidence.

Conclusion

Hence, the lesson for the world continues to be that rather than focus on the novelty of Omicron, it is
wiser to double up on efforts to completely vaccinate people and then, based on the evidence,
consider booster or subsequent doses.

The Hindu link-

https://www.thehindu.com/opinion/editorial/a-measured-response-the-hindu-editorial-on-the-omicron-threat/article37904525.ece

Question- Write a short note on Omicron variant of Covid-19 and why it could be a cause of concern.

Laser Communications Relay Demonstration

Context:

- Recently, NASA launched its new Laser Communications Relay Demonstration (LCRD) the
 agency's first-ever laser communications system from Cape Canaveral Space Force Station in Florida,
 USA.
- The LCRD will help the agency test optical communication in space.
- Currently, most NASA spacecraft use radio frequency communications to send data. Optical
 communications will help increase the bandwidth 10 to 100 times more than radio frequency
 systems.
- LCRD will demonstrate all of the advantages of using laser systems and allow us to learn how to use them best operationally.
- With this capability further proven, we can start to implement laser communications on more missions, making it a standardized way to send and receive data.
- LCRD has **two optical terminals** one to receive data from a user spacecraft, and the other to transmit data to ground stations.
- The modems will translate the digital data into laser signals. This will then be transmitted via encoded beams of light. These capabilities make LCRD NASA's first two-way, end-to-end optical relay.

Laser VS radio

- Laser communications and radio waves use different wavelengths of light. Laser uses infrared light and has a shorter wavelength than radio waves.
- It would take roughly nine weeks to transmit a completed map of Mars back to Earth with current radio frequency systems. With lasers, we can **accelerate** that to about nine days.
- Using infrared lasers, LCRD will send data to Earth at 1.2 gigabits-per-second (Gbps). At this speed, it will take less than a minute to download a movie.

Other advantages

- Optical communications systems are smaller in size, weight, and require less power compared with radio instruments.
- A smaller size means more room for science instruments. Less weight means a less expensive launch. Less power means less drain on the spacecraft's batteries.

• With optical communications supplementing radio, missions will have unparalleled communications capabilities.

The Indian express link

https://indianexpress.com/article/explained/explained-what-is-nasas-new-communications-system-lcrd-its-importance-7661272/

Question- Give out the differences between laser and radio communications.

NASA's flagship telescope, and its successor

Context

- Recently, NASA has announced the launch of the James Webb Space Telescope (JWST).
- Webb, the world's premier space science observatory, will succeed the Hubble Space Telescope,
 NASA's flagship telescope that has been in service for more than three decades now.

Features of Hubble Telescope

- NASA says Webb is not Hubble's replacement rather, its successor whose science goals were
 motivated by the results from Hubble.
- Webb will primarily study the universe in the infrared, while Hubble looks at it mainly at optical and ultraviolet wavelengths.
- Infrared observations are important because light at this wavelength can penetrate the dust that shrouds newly formed stars and planets, and make them visible.
 - Webb's mirror is much larger than Hubble's; it can, therefore, look farther back into time than Hubble. Also, Hubble is in a much closer orbit around Earth than Webb will be.

Size

• Webb's primary mirror is approximately 6.5 metres in diameter compared to Hubble's mirror has a diameter of 2.4 metres, which means Webb's collecting area is around 6.25 times that of Hubble's.

Orbit

- Hubble orbits the Earth at an altitude of ~570 km. Webb will not orbit the Earth, instead it will sit at the Earth-Sun L2 Lagrange point, 1.5 million km away.
- This means that Webb will **orbit the Sun along with the Earth**, but will stay fixed at the same spot in relation to the Earth and the Sun.
- At the L2 point, Webb's solar shield will block the light from the Sun, Earth, and Moon, which will help it stay cool important for an infrared telescope.

How Far?

Because light takes time to travel, the farther away an object is, the farther back in time we are looking.
Thus, while Hubble can see the equivalent of "toddler galaxies", Webb will be able to see "baby galaxies".

 This is also because Webb is an infrared telescope, and can see distant objects which are very dim at visible wavelengths of light.

The Indian express link

 $\frac{https://indianexpress.com/article/explained/explained-nasa-james-webb-space-telescope-explained-7684313/$

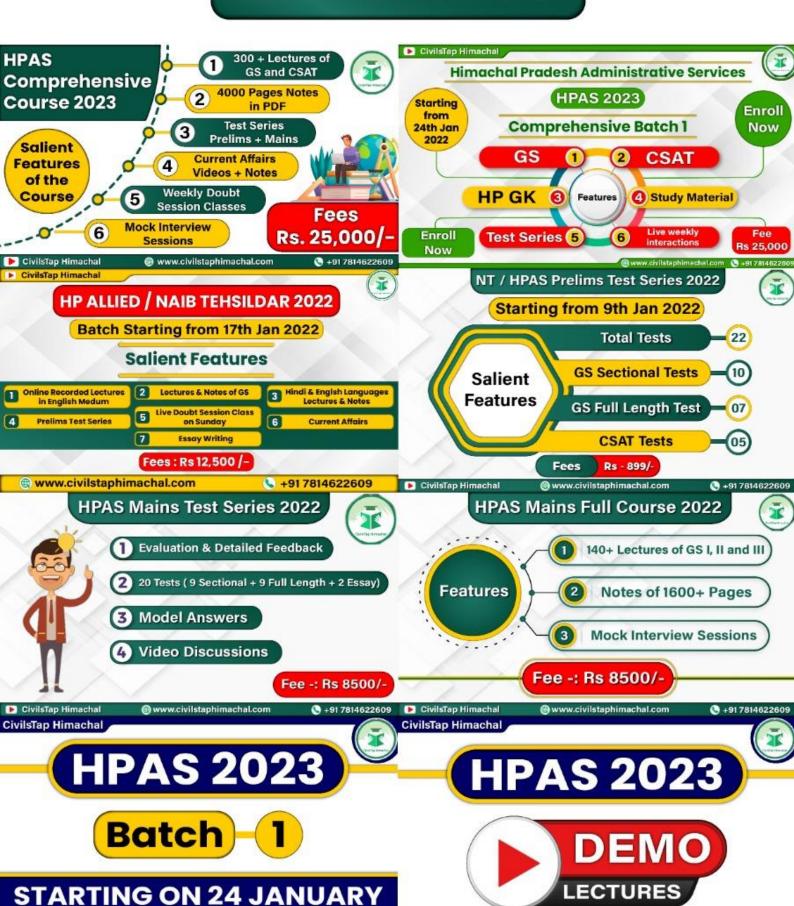
Question- Write a short note on James Webb telescope launched recently by NASA.





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Initiatives



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