



Abode for Affordable Success



FOURTH WEEK APRIL 2023 CURRENT AFFAIRS



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General Studies I: World geography

LONG-PERIOD AVERAGE (LPA)

1. Context

The country is **likely to receive a normal monsoon** for the fourth consecutive year, the India Meteorological Department (IMD) said in its first Long Range Forecast (LRF) for this year released on Thursday (April 14).

Rainfall in the four-month June-September southwest monsoon season was in the normal range in 2019, 2020, and 2021 as well

2. About Long Period Average (LPA)

- The IMD predicts a “normal”, “below normal”, or “above normal” monsoon in relation to a benchmark “long period average” (LPA)
- According to the IMD, the “LPA of rainfall is the rainfall recorded over a particular region for a given interval (like month or season) average over a long period like 30 years, 50 years, etc”
- The IMD’s prediction of a normal monsoon on Thursday was based on the LPA of the 1971-2020 period, during which India received 87 cm of rain for the entire country on average
- The IMD has in the past calculated the LPA at 88 cm for the 1961-2010 period, and at 89 cm for the period 1951-2000
- While this quantitative benchmark refers to **the average rainfall recorded from June to September for the entire country, the amount of rain that falls every year varies from region to region and from month to month**
- Therefore, along with the countrywide figure, the IMD also maintains LPAs for every meteorological region of the country this number ranges from around 61 cm for the drier Northwest India to more than 143 cm for the wetter East and Northeast India

- LPA of the southwest monsoon rainfall over Kerala: 556 mm, 659 mm, 427 mm and 252 mm for the months of June, July, August, and September respectively
- Broken down monthwise for the entire country, the LPA figures for the season are 16.36 cm for June, 28.92 cm for July, 26.13 cm for August, and 17.34 cm for September

3. Need of LPA

- The IMD records rainfall data at more than 2,400 locations and 3,500 rain-gauge stations
- Because annual rainfall can vary greatly not just from region to region and from month to month, but also from year to year within a particular region or month, an LPA is needed to smooth out trends so that a reasonably accurate prediction can be made
- A 50-year LPA covers for large variations in either direction caused by freak years of unusually high or low rainfall (as a result of events such as El Nino or La Nina)
- As well as for the periodic drought years and the increasingly common extreme weather events caused by climate change

4. IMD Calculations

Quantitatively, the monsoon seasonal (June to September) rainfall is likely to be 99% of the LPA with a model error of $\pm 5\%$. The LPA of the season rainfall over the country as a whole for the period 1971-2020 is 87 cm

The IMD maintains five rainfall distribution categories on an all-India scale. These are:

- Normal or near normal, when the percentage departure of actual rainfall is $\pm 10\%$ of LPA, that is, between 96-104% of LPA
- Below normal, when departure of actual rainfall is less than 10% of LPA, that is 90-96% of LPA
- Above normal, when actual rainfall is 104-110% of LPA
- Deficient, when departure of actual rainfall is less than 90% of LPA
- Excess, when the departure of actual rainfall is more than 110% of LPA

5. About India Meteorological Department

- The beginnings of meteorology in India can be traced to ancient times. Early philosophical writings of the 3000 B.C. era, such as the Upanishadas, contain serious discussion about the processes of cloud formation and rain and the seasonal cycles caused by the movement of earth round the sun
- Varahamihira's classical work, the Brihatsamhita, written around 500 A.D., provides a clear evidence that a deep knowledge of atmospheric processes existed even in those times
- It was understood that rains come from the sun (Adityat Jayate Vrishti) and that good rainfall in the rainy season was the key to bountiful agriculture and food for the people
- Kautilya's Arthashastra contains records of scientific measurements of rainfall and its application to the country's revenue and relief work. Kalidasa in his epic, 'Meghdoot', written around the seventh century, even mentions the date of onset of the monsoon over central India and traces the path of the monsoon clouds
- Meteorology, as we perceive it now, may be said to have had its firm scientific foundation in the 17th century after the invention of the thermometer and the barometer and the formulation of laws governing the behaviour of atmospheric gases
- It was in 1636 that Halley, a British scientist, published his treatise on the Indian summer monsoon, which he attributed to a seasonal reversal of winds due to the differential heating of the Asian land mass and the Indian Ocean
- India is fortunate to have some of the oldest meteorological observatories of the world. The British East India Company established several such stations, for example, those at Calcutta in 1785 and Madras (now Chennai) in 1796 for studying the weather and climate of India
- The Asiatic Society of Bengal founded in 1784 at Calcutta, and in 1804 at Bombay (now Mumbai), promoted scientific studies in meteorology in India
- A disastrous tropical cyclone struck Calcutta in 1864 and this was followed by failures of the monsoon rains in 1866 and 1871
- In the year 1875, the Government of India established the India Meteorological Department, bringing all meteorological work in the country under a central authority

- The first Director General of Observatories was Sir John Eliot who was appointed in May 1889 at Calcutta headquarters
- The headquarters of IMD were later shifted to Shimla, then to Poona (now Pune) and finally to New Delhi
- From a modest beginning in 1875, IMD has progressively expanded its infrastructure for meteorological observations, communications, forecasting and weather services and it has achieved a parallel scientific growth
- IMD has always used contemporary technology. In the telegraph age, it made extensive use of weather telegrams for collecting observational data and sending warnings
- Later IMD became the first organisation in India to have a message-switching computer for supporting its global data exchange.
- One of the first few electronic computers introduced in the country was provided to IMD for scientific applications in meteorology
- India was the first developing country in the world to have its own geostationary satellite, INSAT, for continuous weather monitoring of this part of the globe and particularly for cyclone warning
- IMD has continuously ventured into new areas of application and service and steadily built upon its infrastructure in its history of 140 years
- It has simultaneously nurtured the growth of meteorology and atmospheric science in India. Today, meteorology in India is poised at the threshold of an exciting future

RELATIVE HUMIDITY

1. Context

Deficient rain, relatively high humidity in the air, and rising temperature made it a triple whammy of sorts for the people in the different parts of the country, with the heat index (also known as ‘real feel’ temperature) crossing the 50° Celsius mark in many places.

2. About Humidity

- Relative humidity is a simple concept as far as weather phenomena go, but it has significant, far-reaching consequences for how we must take care of ourselves on a hot or wet day.
- Humidity is the amount of moisture in the air around us and there are three ways to track it.
- The most common of them is **absolute humidity** the mass of water vapour in a given volume of air and water vapour mixture, expressed as kg/m^3 .
- The second is **specific humidity**, equal to the mass of the moisture divided by the mass of air.
- It is expressed as a dimensionless number (but Sometimes as grams per kilogram among other similar units).
- The third way is **relative humidity**: it is important because it factors in the amount of vapour that air can hold at different temperatures.
- Determining its value is a bit more complicated it is the vapour density of the air divided by the saturation vapour density at dry bulb temperature.

2. Reasons for Relative humidity matters

- On a hot day, our body uses sweat to cool itself. Sweat is released via our skin to the surface.
- There, the liquid evaporates. When water changes phase from liquid to vapour, it absorbs heat from the surface on which it lies. So when sweat evaporates, it absorbs heat from the skin, cooling it.
- The higher the relative humidity of the air, the more it is filled with moisture.
- When air already contains a lot of moisture, it won't easily accept more. This means that the sweat on your skin can't evaporate.
- At the same time, the body keeps sweating as it is still expecting to cool itself.
- As a result, if the relative humidity is high, you can sweat on a hot day even when you are sitting still while your body keeps accumulating heat. This can quickly become dangerous.
- Relative humidity of 30-60 per cent is generally considered to be comfortable.

- Environments that have lower levels than this typically use humidifiers to increase the humidity.
- When the level is higher, a fan will help move the air around you and help sweat evaporate better. In both cases, drinking water is important.

3. The implication of relative humidity

- Warmer air can hold more moisture than cooler air. So at the same absolute humidity, the relative humidity of warmer air will be lower than that of cooler air.
- It is like saying two vessels can hold the same amount of water just that the bigger vessel will be less full than the smaller vessel.
- This is why, for example, Chennai had an absolute humidity of 70 per cent at 2.30 pm on April 23, its relative humidity was lower, around 60 per cent because it had an ambient temperature of 32°C.
- The change in the capacity for moisture as the air warms are also nonlinear, meaning it does not increase by the same amount as the air warms.
- For example, the difference as it warms over 20°C from 20°C to 0°C is small, but there is an enormous improvement in its vapour carrying capacity as it warms over 20°C from 30°C to 50°C

4. Measuring of Relative humidity

- There are a few ways to measure relative humidity. One is to conduct a simple experiment with household items, another is to use maths and the third is to use an app or device.
- For the experiment, you need two mercury thermometers, some cotton, rubber bands and access to cold water.
- First, make sure both thermometers show the same reading, say, under a fan.
- Next, soak some cotton in cold water and wrap it around the bulb of one of the thermometers with a rubber band.
- Hold this thermometer under the fan, such that water from the cotton evaporates and record the thermometer reading after five minutes.
- Hold up the other thermometer in the air and record its reading after five minutes. You will thus have the wet bulb and dry bulb temperatures, respectively.

- Next, subtract the wet-bulb temperature from the dry-bulb temperature to get the temperature difference.
- Finally, use the relative humidity chart to get the relative humidity value. For example, if the temperature was 6°C and the dry-bulb temperature was 28°C, the relative humidity would have been 59 per cent.
- A **psychrometer** is a device that has two such thermometers plus a chart to get the final reading.
- Modern, electronic psychrometers can calculate the relative humidity directly.
- For a rough sense, the lower the wet bulb temperature, the drier the air is and the less relatively humid it is.
- For the mathematical method, there are two ways (among others) to estimate the relative humidity, one simpler and one a bit more involved.
- The first way is to divide the actual vapour pressure (e) by the saturated vapour pressure (es).
- The vapour pressure is the amount of moisture that air contains. The saturated value is the maximum possible amount.

The given formula requires the dew point (Td), which you can obtain from a weather website.

$$RH = (e/es) * 100$$
$$e = 6.11 \times 10^{((7.5 \times Td)/(237.3 + Td))}$$

- For es, use the same formula but replace Td with T, the actual temperature.
- The second way is to calculate relative humidity starting from the specific humidity, pressure and temperature, using the Clausius Clayeyron equation.
- If you prefer software, search for "**hygrometer**" in your phone's app store to locate some options. (A hygrometer is an instrument that measures humidity).
- Note that the app will only work if your phone has a sensor that can sense humidity.
- If you like hardware, psychrometers and devices called hygrometers are available in physical as well as online stores.

5. Wet bulb temperature

- A more direct way to understand the implications of relative humidity for your well-being is in the form of the wet bulb temperature (also known as the adiabatic saturation temperature).
- It is the lowest temperature a surface like your skin can reach when water evaporates from it.
- The wet bulb temperature is equal to the dry bulb temperature when the relative humidity is 100 per cent.
- A wet bulb temperature in an environment of 32- 35°C or higher can be quickly lethal, even if you are not doing any physical activity or are in the shade. (At least one study has shown that even a wet bulb temperature of more than 29°C can be dangerous).
- The climate crisis is rendering heatwaves more common, more frequent, more spread out and more potent over the Indian subcontinent.
- As a study published in May 2022 Says, "Whether today's most impactful heatwaves could have occurred in a preindustrial climate, traditionally a central focus of attribution research, is fast becoming an obsolete question.
- The next frontier for attribution science is to inform adaptation decision-making in the face of unprecedented future heat.
- One way to adapt is to keep an eye on the relative humidity, drink lots of water and cool yourself.

General Studies I: Art & Culture

BAISAKI FESTIVAL 2023

1. Background

- The Sikh community celebrated Baisakhi with religious fervour and traditional enthusiasm across Jammu and Kashmir

- The Sikh community with traditional and religious ceremonies celebrated the arrival of spring
- The festival marks the beginning of the solar year, and for the farming community of Punjab, it marks the time for the harvest of Rabi crops
- During Baisakhi, Bajan Keertans were performed at Gurdwaras across Kashmir. The biggest function was held at Chatti Patshahi, Kathi Darwaza, and Rainawari in downtown



2. Significance of Baisakhi Festival

- As per the Hindu Calender, this day is observed on the first day of Vaisakh month (April - May) every year.
- Baisakhi is the most famous festival celebrated by Sikh Community people, this festival is observed either on 13th or 14th every year
- As per Sikh Literature, on March 30, 1699, the tenth Guru of Sikh formed the Khalsa Panth
- India is considered an agricultural country and the economy of India is largely depends on agriculture so this festival is dedicated to all the farmers who work hard to provide to all the Citizens of India
- On this Auspicious day of Baisakhi, we all should be grateful to all the farmers of India. This festival is celebrated with different in different regions

- As per Astrology, Baisakhi is also celebrated as Mesha Sankranthi as this day marks the beginning of the new year and on this auspicious day, the planet Sun is going to transit from Pisces to Aries
- Sun is considered to be one of the main planets and devotees visit holy places and start their day with Ganga Snana and offers prayer to Lord Sun
- Some people donate food and clothes to Bramhins and conduct Pitra puja for their ancestors

3. Baisakhi festival in different regions

Baisakhi festival is celebrated in different cities with different names as mentioned below

State	Name
Odisha	Pana Sankranti
Tamilnadu	Puthandu
Kerala	Vishu
West Bengal	Naba Barsha or Pohela Boishakh
Assam	Bohag Bihu

In Punjab and Haryana, the festival of Vaisakhi is celebrated with great enthusiasm and fervor

Sikh community people celebrate this day by doing nagar kirtans, visiting Gurudwaras

This is a religious festival for all the people who belong to Sikh community

They offer prayers and seek blessings

General Studies II: International relations

KONG YIJI

1. Context

As the curtain drew on this year's two sessions, the Chinese state media was busy accusing the country's millions of unemployed university graduates of being picky and not giving up their "**Kong Yiji long gown**".

2. Key points

- In mid-March, a Communist Youth League and CCTV joint social post targeting a self-deprecating "**Kong Yiji**" meme by young netizens who joked their academic degrees made them unemployable making the country's restive youth furious.
- A month later, with the censors having miserably failed to prevent the meme from going viral, the Skittish party-state now fears millions of unemployed youth might get swamped by a subversive social movement.
- Two years ago the social resistance movement called "**lying flat**" by underpaid young Chinese frustrated with gruelling work hours had left the authorities worried, who saw it as a potential threat to "**China's dream of national rejuvenation**".
- This catchphrase has emerged as an essential part of the Chinese cyber narrative and expresses collective sentiments against social and economic marginalization, gender discrimination, unemployment and so on.
- Increasingly critics in China are describing online buzzwords as a reflection of the State of mind of the digital masses and the state of society.
- This year's internet slang kong Yiji has already drawn condemnation from the authorities.
- The **Chinese cyber censor authorities** have banned the **Kong Yiji hashtag** and a pop music video called **Sunny and Cheerful Kong Yiji** has been struck down on China's YouTube version, Bilibili.
- This move came following the state media, especially Qingnianbao or Youth Daily, the official publication of the Communist Youth League of China was alarmed by the increasing popularity of phrases such as Kong Yiji wenxue or "**Kong Yiji Literature**" and Kong Yiji chang shan or Kong Yiji long gown on China vibrant social media.

3. About Kong Yiji

- **Kong Yiji, a Chinese short story** first serialized in a Beijing news weekly in 1919, was a part of the short story collection, titled Call to Arms by China's most influential and famous writer **Lu Xun in 1923**.
The male protagonist in the story, Kong Yiji is a disillusioned scholar who is constantly ridiculed and often beaten up (for stealing books) at a tavern, he regularly visits.
- Lu Xun's use of imagery, symbolism and metaphor served as a symbolic interpretation of his contempt for Chinese traditional values and thought, particularly targeting Confucian values.
- Speaking of Kong Yiji, academics have touted the Short story as a critique of late-imperial China's receding intellectual class and a society unbothered by the economic plight of others.

4. Reasons for the Return of Kong Yiji

- March and April is the time of the hiring season in China, popularly known as Jinsan yinsi or Golden March, silver April.
- Last year a record number of 10.76 million Chinese graduates entered society a coded term meaning fresh college degree-holding job hunters.
- This year, amid an ongoing shortage of jobs an unprecedented 11.6 million "**highly qualified**" young people, facing a lack of employment opportunities are struggling to find a decent job but are ending up doing gruelling shift work in the gig economy.
- According to reports, unable to find a job suitable to his college degree, an unemployed graduate complained in a now-deleted post that he was stuck on a scholarly pedestal like Lu Xun's fictional character Kong Yiji.

5. Kong Yiji literature

- In mid-March, the Weibo post went viral on various social media platforms a new phrase "Kong Yiji literature" was born.
- Typically, intolerant of criticism especially alarmed as the historical nihilism in the ideological arena recently manifested, the surveillance party-state

which denies Chinese people the to freely air their views, the CCP propaganda organs quickly started telling young graduates to not feel shy about roll-up sleeves of their "long gown".

- The long gown was considered the only symbol of a scholar's identity, social status and distinct imperial privilege under the Confucian feudal order.
- But as Lu Xun saw it, the "long gown" wearing Kong in the short story "Kong Yiji" was a symbol of the ills of China's feudal society.
- What further infuriated the young graduates regarding the Party's propaganda was the misconstruing of the metaphor Kong Yiji (as was used by one unemployed graduate in the social media post).
- "The reason why Kong Yiji fell into his predicament wasn't because of his learning, but because he was unwilling to change his situation through labour," the CCTV and Youth League post had said.
- As it were, however, this immediately sparked a further backlash. Angry that the young people were being blamed, another post appeared (which was quickly taken down by the censors) on ByteDance-owned news platform Toutiao, suggesting that "Xi Jinping was responsible for the youth unemployment."

6. Kong Yiji become a potentially diverse social movement

- The most worrying to the authorities is the online confrontation between the Party propaganda machine and millions of young netizens unlike similar past controversies such as lying flat and involution are increasingly drawing the mainstream media and academia into the controversial Kong Yiji debate.
- One key factor behind the emerging Kong Yiji trend is a massive increase in liberal art enrolment in colleges and universities.
- There are not too many jobs for such graduates. A hundred years ago, unable to respond to the social strife revolving around the scholar's gown, the dying Qing dynasty rulers threw away the baby with the bathwater, i.e. they abolished the centuries-long imperial examination system (in 1905).
- The unemployment crisis only threatens to go from bad to worse in China today.

INDIA-DENMARK RELATIONS

1. Context

Prime Minister Narendra Modi recently held a telephone conversation with his Danish counterpart Mette Frederiksen. The two leaders reviewed the progress of the India-Denmark Green Strategic Partnership.

2. Diplomatic Relations

- India and Denmark's relations established in September 1949, are marked by regular high-level exchanges and are based on historical links, common democratic traditions and a shared desire for regional, as well as international peace and stability.
- Bilateral relations were elevated to the level of "Green Strategic Partnership" during the Virtual Summit held on 28 September 2020.
- The current development of renewed India-Denmark relations has been guided by the "**Green Strategic Partnership**".

3. Recent High-Level Interactions

- In January 2019, the then-Danish Prime Minister Lars Lokke Rasmussen visited India for the Vibrant Gujarat Global Summit-2019.
- Indian Prime Minister Modi met Rasmussen at the India-Nordic Summit in Stockholm on 17 April 2018.
- The bilateral high-level interactions include the 4th Joint Commission Meeting, The 9th Clean Energy Ministerial (CEM9) held in Copenhagen and the World Food Summit.

4. Bilateral Institutional Mechanisms

- There are several bilateral institutional mechanisms at different levels between India and Denmark.
- The Joint Commission Meeting at the Foreign Minister's level (established in 2008) and the Foreign Office Consultations at Secretary-level (established in 1995) provide the broad framework for bilateral consultations encompassing all areas of mutual interest.

- So far, four meetings of the Joint Commission have been held.
- The latest meeting was held in Copenhagen in September 2021 during which both sides reviewed the progress made since the launch of the Green Strategic Partnership.
- Foreign Office Consultations have been held six times since 1995.

Further, broad-ranging dialogue mechanisms between various Ministries of both sides have been put in place by establishing 11 Joint Working Groups in

1. Renewable Energy
2. Shipping and Ports
3. Agriculture and Animal Husbandry
4. Food Processing
5. Science and Technology
6. Labour Mobility
7. Environment
8. Smart Cities
9. Digitisation
10. Energy Cooperation and
11. Health and Medicine

28 Joint Working Group Meetings have taken place since 2018.

5. Commercial and Economic Relations

- Bilateral trade in goods and services between India and Denmark has grown by 78 per cent from USD 2.8 billion in 2016 to USD 5 billion in 2021.
- As per Denmark Statistics, the total volume of bilateral trade in goods and services between India and Denmark rose to around USD 5 billion as compared to USD 3.6 billion in 2020.
- Indian exports reached USD 2 billion in 2021 as compared to USD 1.8 billion in 2020, while imports amounted to around USD 3 billion as against USD 1.8 billion in 2020.

6. Bilateral trade

- The major export items from India to Denmark are textiles, apparel and yarns related, vehicles and components, metal goods, iron and steel, footwear and travel goods.
- Major Danish exports to India are medicinal/ Pharmaceutical goods, power generating machinery, industrial machinery, metal waste and ore and organic chemicals.
- Bilateral trade in services between India and Denmark was USD 2.3 billion in 2020 (import to India in services amounting to USD 1.3 billion and export in the service sector by India valued at USD 1 billion).
- As per Department for Promotion of Industry and Internal Trade (DPPIT), the value of total direct investment inflows from Denmark to India from April 2000-March 2021 was USD 677.02 million.
- Around 200 Danish companies have invested in India in sectors such as Shipping, renewable energy, environment, agriculture, food processing and smart urban development.
- Several major Danish companies have built a new manufacturing factory under the Make in India Scheme.

6.1. India's Investment in Denmark

- As per the information available from Invest in Denmark, the total value of Indian investments in Denmark, as of June 2021, was about USD 450 million.
- Around 25 Indian companies are present in Denmark in various sectors, including IT, renewable energy and engineering.
- They are providing multiple IT solutions, projects consultancy and outsourcing services for the Danish Services Sector.

7. Cultural Cooperation

- The Azadi Ka Amrit Mahotsav, to commemorate 75 years of India's Independence is being celebrated with much fervour in Copenhagen with events.

- India's 75th Independence Day was celebrated in Copenhagen with a great enthusiasm with a flag hoisting ceremony and vibrant Azadi Ka Amrit Mahotsav celebrations, attended by a large number of the diaspora.
- The International Day of Yoga is celebrated every year by the Embassy across Denmark with the active participation of several organisations like Art of Living, Brahma Kumaris and the Danish Sports Yoga Federation.
- A curtain raiser flash mob was also organized by the Embassy at the iconic Nyhavn venue in Copenhagen on 13th June 2021.
- As part of the 150th Birth Anniversary Celebrations of Mahatma Gandhi, the Embassy organised various events including talks on Gandhiji and tree-planting ceremonies at more than 20 educational institutions.

8. Indian Diaspora / People-to-People Contacts

- The size of the Indian community in Denmark, inclusive of both NRIs (13,370) and PIOs, (2,750) is approx 16,500.
- These include IT professionals, doctors and engineers. Important streets and public places have been named after Indian leaders.

INDIA-UAE

1. Context

The United Arab Emirates (UAE), whose food security has been built on imports from global markets, is now focusing on the twin objectives of food access and readiness to confront supply chain crises.

2. Key points

- India, the world's second-largest food producer, is an essential partner in the UAE's ambition to strengthen food security.

- The India-UAE food security partnership stands to benefit from multiple points of convergence.

3. India's Role in Global food security

- India has built its status as a global agri-export powerhouse using its vast tracts of arable land, a highly favourable climate and a large and growing food production and processing sector.
- Along with serving global markets with its diversified agri-produce, India has, in recent years, acted as a humanitarian provider of food to developing countries, demonstrating awareness of its evolving role in advancing regional and global food security.
- India has also made major budgetary outlays towards setting up massive food parks, with due emphasis on modern supply chain management spanning farm gates to retail outlets.
- These investments, complemented by how India has placed its food sector to benefit from bilateral trade agreements, reflect the country's strong and sustained intent to make the most of its agri-capabilities in the global food marketplace.
- In parallel, India runs the **Public Distribution System**, the world's largest food subsidy programme, providing nearly 800 million citizens with subsidised grains and reassuring its people of daily, affordable meals.
- Equally laudable is India's Prime Minister's Overarching Scheme for Holistic Nutrition (**POSHAN**) **Abhiyaan**', the world's largest nutrition programme for children and women.
- As part of its G-20 presidency, India is promoting the consumption and farming of millets nutritious, drought-resistant, sustainable, crops that demonstrate the resilience focus that India offers to the global food security dialogue.
- In the realm of food security, India's G-20 presidency seeks to address the three Cs, of "**Covid, Conflict and Climate**", issues pernicious to food security in India and across the globe.

4. Strengthening the India-UAE food security partnership

- Seen together, India brings to the table an incredible wealth of food sector experience and the ability to operationalise the world's largest food supply chains' formidable capabilities that are strengthening the India-UAE food security partnership in a variety of ways.
- During the **I2U2 (India, Israel, the United Arab Emirates and the United States) summit** in July last year, the UAE committed \$2 billion in investment towards constructing food parks in India (in Madhya Pradesh and Gujarat), while the signing of a food security corridor on the **Comprehensive Economic Partnership Agreement (CEPA)'s** sidelines (with logistics partner DP World) has taken forward India's envisioned presence on the global food value chain, beyond the UAE.
- The corridor could potentially commence a route for foods made and processed in India, beginning their outbound journey on the Indian coast of the Arabian Sea, passing through the UAE and towards major international markets.
- With its ability to establish high volume trade of foods, the corridor stands to emerge as a world-class template of successful agri-trade for India, while also unlocking greater productivity, efficiency and growth for its millions of workers and employees.
- For the UAE, the benefits go beyond maintaining and diversifying its food reserves and trade linkages could enable the Emirates to leverage its strategically placed location between Asia and Europe to serve as India's food export gateway to West Asia and the African region and further beyond.
- Given the food corridor's incredible commercial potential, several UAE-based companies have expressed interest in constructing a supporting logistics and infrastructure pipeline to accelerate trade and reinforce the food corridor.
- The Dubai Multi Commodities Centre, the UAE's largest free trade zone, launched Agriota an agri-trading and commodity platform to link Indian farmers to food companies in the UAE.
- Agriota allows millions of Indian farmers to directly reach out to the entirety of the UAE's food ecosystem (processing companies, traders, wholesalers) and stock their products in Emirati stores.

- Alongside this initiative, a consortium of UAE-based entities is investing up to \$7 billion in mega food parks, contract farming and sourcing agro-commodities in India.
- The initiative will include mega food parks, logistics and warehouse hubs and fruits and vegetable hubs.

5. The benefits

- There is much that India stands to gain from the UAE's private sector projects spanning its agricultural and food processing sector.
- Those projects will generate lakhs of non-farm agri-jobs while enabling farmers to discover better prices for their products.
- Bolstered by the UAE's infrastructural capabilities, India's agricultural products will have more resilient and diversified pathways to the global marketplace.
- India's G-20 presidency offers an opportune moment for both India and the UAE to showcase viable strategies and frameworks that can forge the basis of food security in the Global South.
- As it sets the global developmental agenda, India can take to leverage and strengthen trade pathways with the UAE to forge a sustainable, inclusive, efficient and resilient future of food.

ROHINGYAS

1. Context

The long-burning issue of the Rohingyas in Myanmar has recently become a point of debate in India, with the government insisting on their deportation for the sake of national security. Perceived threats to India's national security are based on intelligence reports that connect radical Rohingya groups to Jihadist organizations. In their bid to get rid of the Rohingya refugees, the center in India has been asking

the Myanmar government to show restraint against the Rohingyas and to take them back.

2. Who is Rohingyas?

- Rohingyas are an ethnic group, representing the largest percentage of Muslims in Myanmar and predominantly live in the Western Myanmar province of Rakhine.
- They speak a dialect of Bengali, as opposed to the commonly spoken Burmese language.
- They are described by the United Nations (UN) as one of the most persecuted minorities in the world.
- The Rohingya population is denied citizenship under the 1982 Myanmar nationality law. They have denied the Rohingyas the possibility of acquiring a nationality.
- The flow of Rohingyas from Myanmar intensified in 2017 and the coast near the Bangladeshi city of Cox's Bazar was taken over by refugee settlements.
- Recently, Bangladesh started relocating Rohingya refugees from overcrowded camps at Cox's Bazar to Bhasan Char Island, which is an ecologically fragile area prone to floods.

3. History of Islam in the Arakan region of Myanmar

- The Rakhine (previously called Arakan) region of Northern Myanmar, is largely believed to be the original home of the Rohingyas and has shared a porous border along the Naaf River with Chittagong in Bangladesh.
- Before the modern state of Myanmar came into being, this border was not exactly known to be a line of the division between two separate communities and historical evidence shows a frequent movement of people across the border.
- In pre-colonial days, the region of Arakan was an independent kingdom, separate from both the Burmese kingdoms and the Mughal empire in India and Bengal.
- In 1459, the Arakan king is believed to have conquered Chittagong which had a dense Muslim population. In the years that followed, the Arakanese

control in Chittagong led to an intimate relationship developing between the Muslims and the inhabitant of Arakan.

- In 1784, Burmese King Bodawpaya conquered the Arakan region and brought it under the control of the kingdom of Ava in central Burma.
- What followed was severe oppressive measures taken by the Burmese ruler against the Arakanese population and the latter rebelling against them.
- Thereafter, a large number of Arakanese (both Buddhists and Muslims) fled to the neighboring territory of Bengal which was by now under British rule.
- The large numbers of which Indians, particularly the Bengalis, who were brought into Arakan were a cause of great resentment to the Burmese population, who were now also in the process of developing strong nationalist feelings.
- After the Second World War, when the British left Burma, large sections of the Indian population followed. Those who were left behind were in any case in the bad books of the Buddhist Burmese population and soon after a large number of communal clashes started taking place between the two groups.
- While the Arakanese Muslims, largely inspired by the formation of Pakistan along religious lines, started demanding an autonomous region for themselves on ethnic grounds, the independent government of Myanmar continued discriminating against them and later ensured that they do not receive legal citizenship status in the country.

4. India's concerns

- The illegal immigration of Rohingyas into India and their stay here can have serious national security ramifications and poses serious security threats.
- It impacts the interests of local populations in the areas seeing large-scale influxes of illegal immigrants.
- It increases political instability when leaders start mobilizing the perception of the citizens against the migrants.
- The persistent attacks against the Muslims perceived as illegal migrants have given way to radicalization.
- Trafficking of women and human smuggling has become quite rampant across borders.

- The rule of law and integrity of India is undermined by the illegal migrants due to their engagement in illegal and anti-national activities.

5. India's Stance on Rohingyas

- Amid fears of a fresh exodus of Rohingyas from Myanmar, the MHA in 2017 Cautioned all the states about infiltration from the Rakhine State of Myanmar into Indian Territory.
- It cited the Burden on the limited resources of the country that aggravates the security challenges, especially in the Northeast.
- It also said the rise in terrorism in the last few decades is a cause for concern in most nations and that illegal migrants are more vulnerable to getting recruited by terrorist organizations.

6. India's stand on refugees?

India is not a signatory to the 1951 UN Convention relating to the Status of Refugees and the 1967 Protocol.

All foreign undocumented nationals are governed as per the:

- The Foreigner's Act, 1946
- The Registration of Foreigners Act, 1930
- The Passport (Entry into India) Act, of 1920
- The Citizenship Act, 1955.

G-7

1. Context

Prime Minister Narendra Modi is in Germany to attend the Group of Seven (G7) Summit at Schloss Elmau, a century-old retreat in a nature reserve in the Bavarian Alps.

The Prime Minister is expected to speak in two sessions that include Environment, Energy, Climate, Food Security, Health, Gender Equality and Democracy. He holds bilateral meetings with leaders of some of the participating countries.

2. Group of 7

- The G7 is an informal forum of leading industrialised nations, which include **Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.**
- Representatives of the European Union are always present at the annual meeting of the heads of state and government of the G7. Germany holds the presidency of the G7 in 2022.
- German Chancellor Olaf Scholz has invited **India, along with Argentina, Indonesia, Senegal and South Africa to the 2022 Summit as partner countries.**
- Ukrainian President Volodymyr Zelenskyy take part virtually, the G7 Presidency has announced.
- Several international organisations, including the United Nations, the World Health Organization (WHO), the World Trade Organization (WTO), the International Monetary Fund (IMF) and the World Bank, are also participating in the summit.

3. G6, G8, G7

- A short history of the grouping on the G7 Germany website says the first "**World Economic Summit**", which later became the G7, was launched in 1975 by former French President Valery Giscard d'Estaing and then Federal Chancellor Helmut Schmidt.
- The heads of state and government of **Germany, France, Great Britain, Italy, Japan and the US a Group of Six** met for a fireside chat at Rambouillet Castle in France.
- The participants exchanged ideas on the economic problems of the 1970s the first oil crisis and the collapse of the system of fixed exchange rates (Bretton Woods) and agreed on international economic policy and initial measures to fight the global downturn.
- In 1976, **Canada** was added to the group and the first G7 met in Puerto Rico.
- The first talks between the then-European Community and the G7 took place in London in 1977 and since the Ottawa Summit of 1981, the European Community (now European Union) has been part of all working sessions.

- In the 1980s, the interest of the G7 expanded to include foreign and security policy issues.
- Then Soviet General Secretary Mikhail Gorbachev was invited to talks on the sidelines of the London Summit in 1991.
- In 1998, the Group of Eight was constituted as Russia became a member.
- Russia was thrown out of the group after it violated Ukraine's sovereignty and territorial integrity in 2014.
- Germany has the G7 Presidency for the seventh time in 2022. Japan will be president in 2023

4. G7 numbers

- As of 2022, G7 countries make up 10 per cent of the world's population, 31 per cent of the global GDP and 21 per cent of global carbon dioxide emissions.
- China and India, the two most populous countries with the largest GDP figures in the world are not part of the grouping.
- In all G7 countries, annual public sector expenditure exceeded revenue in 2021.
- Most G7 countries also had a high level of gross debt, especially Japan (263 Per cent of GDP), Italy (151 per cent) and the US (133 per cent).
- The G7 countries are important players in global trade. The US and Germany in particular are major export nations. Both sold goods worth well over a trillion US dollars abroad in 2021.

General Studies II: Governance

CIVIL SERVICES DAY

1. Context

The date, April 21, chosen for the celebration of National Civil Service Day, commemorates the day when Sardar Vallabhbhai Patel, Independent India's first home minister, addressed the probationers of the Administrative Services Officers in 1947

2. Historical perspective

- Civil Servants for the East India Company used to be nominated by the Directors of the Company and thereafter trained at Haileybury College in London and then sent to India.
- Following Lord Macaulay's Report of the Select Committee of the British Parliament, the concept of a merit-based modern Civil Service in India was introduced in 1854.
- The report recommended that the patronage-based system of East India Company should be replaced by a permanent Civil Service based on a merit-based system with entry through competitive examinations.
- For this purpose, a Civil Service Commission was set up in 1854 in London and competitive examinations were started in 1855. Initially, the examinations for Indian Civil Service were conducted only in London.
- The maximum age was 23 years and the minimum age was 18 years. The syllabus was designed such that European Classics had a predominant share of marks.
- All this made it difficult for Indian candidates. Nevertheless, in 1864, the first Indian, Shri Satyendranath Tagore brother of Shri Rabindranath Tagore succeeded.
- Three years later 4 other Indians succeeded. Throughout the next 50 years, Indians petitioned for simultaneous examinations to be held in India without success because the British Government did not want many Indians to succeed and enter the ICS.
- It was only after the First World War and the Montagu Chelmsford reforms that this was agreed to. From 1922 onwards the Indian Civil Service Examination began to be held in India also, first in Allahabad and later in Delhi with the setting up of the Federal Public Service Commission.
- The Examination in London continued to be conducted by the Civil Service Commission.

3. Appointments

- Similarly, prior to independence, superior police officers belonged to the Indian (Imperial) Police appointed by the Secretary of State by competitive examination.

- The first open competition for the service was held in England in June 1893, and 10 top candidates were appointed as Probationary Assistant Superintendents of Police.
- Entry into Imperial Police was thrown open to Indians only after 1920 and the following year examinations for the service were conducted both in England and India.
- Indianisation of the police service continued to be very slow despite the pronouncement and recommendations of the Islington Commission and the Lee Commission. Till 1931, Indians were appointed against 20% of the total posts of Superintendents of Police.
- However, because of the non-availability of suitable European candidates, more Indians were appointed to the Indian Police from the year 1939 onwards.

4. Regarding Indian Forest Service

- Regarding Forest Service, British Indian Government started the Imperial Forest Department in 1864 and to organize the affairs of the Imperial Forest Department, the Imperial Forest Service was constituted in 1867.
- From 1867 to 1885, the officers appointed to Imperial Forest Service were trained in France and Germany. Till 1905, they were trained at Coopers Hill, London.
- In 1920, it was decided that further recruitment to the Imperial Forest Service would be made by direct recruitment in England and India and by promotion from the provincial service in India.
- After independence, the Indian Forest Service was created in 1966 under the All India Service Act 1951.

5. Classification of Civil Services

- Regarding Central Civil Services, the Civil Services in British India were classified as covenanted and uncovenanted services on the basis of the nature of work, pay scales, and appointing authority.
- In 1887, the Aitchinson Commission recommended the reorganization of the services on a new pattern and divided the services into three groups- Imperial, Provincial, and Subordinate.

- The recruiting and controlling authority of Imperial Services were the ‘Secretary of State’. Initially, mostly British candidates were recruited for these services.
- The appointing and controlling authority for Provincial services was the respective provincial government, which framed rules for these services with the approval of the Government of India.
- With the passing of the Indian Act of 1919, the Imperial Services headed by the Secretary of State for India were split into two-All India Services and Central Services.
- The central services were concerned with matters under the direct control of the Central Government.
- Apart from the Central Secretariat, the more important of these services were the Railway Services, the Indian Posts and Telegraph Service, and the Imperial Customs Service.
- For some of these, the Secretary of State used to make appointments but in the great majority of cases, their members were appointed and controlled by the Government of India.

6. Origin of Public Services Commission

- The origin of the Public Service Commission in India is found in the First Dispatch of the Government of India on the Indian Constitutional Reforms on the 5th March 1919 which referred to the need for setting up some permanent office charged with the regulation of service matters.
- This concept of a body intended to be charged primarily with the regulation of service matters found a somewhat more practical shape in the Government of India Act, of 1919.
- Section 96(C) of the Act provided for the establishment in India of a Public Service Commission which should “discharge, in regard to recruitment and control of the Public Services in India, such functions as may be assigned thereto by rules made by the Secretary of State in Council”.
- After the passing of the Government of India Act, of 1919, in spite of a prolonged correspondence among various levels on the functions and mechanisms of the body to be set up, no decision was taken on the setting up of the body.

- The subject was then referred to the Royal Commission on the Superior Civil Services in India (also known as Lee Commission).
- The Lee Commission, in their report in the year 1924, recommended that the statutory Public Service Commission contemplated by the Government of India Act, 1919 should be established without delay.
- Subsequent to the provisions of Section 96(C) of the Government of India Act, 1919 and the strong recommendations made by the Lee Commission in 1924 for the early establishment of a Public Service Commission, it was on October 1, 1926, that the Public Service Commission was set up in India for the first time.
- It consisted of four Members in addition to the Chairman. Sir Ross Barker, a member of the Home Civil Service of the United Kingdom was the first Chairman of the Commission.
- The functions of the Public Service Commission were not laid down in the Government of India Act, 1919, but were regulated by the Public Service Commission (Functions) Rules, 1926 framed under sub-section (2) of Section 96(C) of the Government of India Act, 1919.

7. Changes after the Government of India Act, 1935

- Further, the Government of India Act, of 1935 envisaged a Public Service Commission for the Federation and a Provincial Public Service Commission for each Province or group of Provinces.
- Therefore, in terms of the provisions of the Government of India Act, 1935, and with its coming into effect on 1st April 1937, the Public Service Commission became the Federal Public Service Commission.
- With the inauguration of the Constitution of India on January 26, 1950, the Federal Public Service Commission came to be known as the Union Public Service Commission, and the Chairman and Members of the Federal Public Service Commission became Chairman and Members of the Union Public Service Commission by virtue of Clause (1) of Article 378 of the Constitution.

JUVENILE JUSTICE ACT

1. Context

The Juvenile Justice (Care and Protection of Children) Amendment Bill, 2021, which seeks to amend the Juvenile Justice Act, of 2015, was passed in Rajya Sabha. The Bill was tabled in Lok Sabha during the budget session in March 2023 this year where it received overwhelming support from both the ruling party as well as the Opposition.

2. What is the Juvenile Justice (Care and Protection of Children) Act, of 2015, which is being amended through this new Bill?

- The Act was introduced and passed in Parliament in 2015 to replace the Juvenile Delinquency Law and the Juvenile Justice (Care and Protection of Children Act) 2000.
- One of the main provisions of the new Act is allowing the trial of juveniles in conflict with the law in the age group of 16-18 years as adults, in cases where the crimes were to be determined.
- The nature of the crime, and whether the juvenile should be tried as a minor or a child, was to be determined by a Juvenile Justice Board.
- This provision received impetus after the 2012 Delhi gangrape in which one of the accused was just short of 18 years and was therefore tried as a juvenile.
- The second major provision is with regards to adoption, bringing a more universally acceptable adoption law instead of the Hindu Adoptions and Maintenance Act (1956) and Guardians of the Ward Act (1890) which was for Muslims, although the act did not replace these laws.
- The act streamlined adoption procedures for orphans, and abandoned and surrendered children and the existing central Adoption Resource Authority (CARA) has been given the status of a statutory body to enable it to perform its function more effectively.

3. Highlights of Juvenile Justice Act, 2015

- Parliament introduced and passed the Juvenile Justice (Care and Protection of Children) Act in 2015 to replace the Juvenile Delinquency Law and the Juvenile Justice (Care and Protection of Children Act) 2000.
- The act offered provisions to allow trials of juveniles in the age group of 16-18 years as an adult who were found to conflict with the law, especially heinous crimes.
- The Act also offered provisions regarding adoption. The Act replaced the Hindu Adoptions and Maintenance Act (1956) and Guardians of the Ward Act (1890) with a more universally accessible adoption law.
- The Act enabled the smooth functioning of adoption procedures for orphans, surrendered, and abandoned children while making the Central Adoption Resource Authority (CARA) the statutory body for adoption-related matters.
- **Child Care Institutions (CCI):** All Child Care Institutions, whether run by the state government or by a voluntary or non-governmental organization are to be mandatorily registered under the Act within 6 months from the date of commencement of the Act.

4. Why has the Juvenile Justice (Care and Protection Amendment) Bill, 2021 been brought by the government?

- It gives increased powers and responsibilities to District Magistrates, which were being made to not only ensure speedy trials and increased protection of children at the district level, with checks and balances in place but to also speed up the adoption processes in the country.
- According to the amendment, District Magistrates, including Additional District Magistrates, can now issue adoption orders under Section 61 of the JJ Act, to ensure the speedy disposal of cases and enhance accountability.
- Adoption processes were currently under the purview of courts, and with an overwhelming backlog, each adoption case could take years to be passed.
- This change will ensure that more orphans in need of homes will be adopted faster.

5. What powers will District Magistrates now have under the new Act?

- The District Magistrates have been further empowered under the Act to ensure its smooth implementation, as well as garner synergized efforts in favour of children in distress conditions.
- This means that DMs and ADMs will monitor the functioning of various agencies under the JJ Act in every district including the Child Welfare Committees, the Juvenile Justice Boards, the District Child Protection units, and the Special Juvenile Protection Units.
- Now, DMs are also responsible for ensuring that CCIs falling in their district are following all norms and procedures.
- During the NCPCR surveys, for instance, CCIs with large funds, including foreign funding, had been found keeping children in unsanitary conditions in portacabins.

6. How will the Child Welfare Committees be monitored?

- The DM will also carry out background checks of CWC members, who are usually social welfare activists, including educational qualifications, as there is no such provision currently.
- The DMs are also to check possible criminal backgrounds to ensure that no cases of child abuse or child sexual abuse are found against any member before they are appointed.
- The CWCs are also to report regularly to the DMs on their activities in the districts.

7. What are the changes made in offences by juveniles?

- Under the 2015 Act, offences committed by juveniles are categorised as heinous offences, serious offences, and petty offences.
- Serious offences include offences with three to seven years of imprisonment.
- Most heinous crimes have a minimum or maximum sentence of seven years. According to the Juvenile Justice Act 2015, juveniles charged with heinous crimes and who would be between the ages of 16-18 years would be tried as adults and processed through the adult justice system.

- The Bill adds that serious offences will also include offences for which maximum punishment is imprisonment of more than seven years, and minimum punishment is not prescribed or is less than seven years.
- Both heinous and serious crimes have also been clarified for the first time, removing ambiguity.
- This provision has been made to ensure that children, as much as possible, are protected and kept out of the adult justice system.
- Heinous crimes with a maximum imprisonment of seven years pertain mostly to sexual offences and violent sexual crimes.
- Presently, with no mention of a minimum sentence, and only the maximum seven-year sentence, juveniles between the ages of 16-18 years could also be tried as adults for a crime like the possession and sale of an illegal substance, such as drugs or alcohol, which will now fall under the ambit of a "serious crime".
- The Act provides that offences against children that are punishable with imprisonment of more than seven years will be tried in the Children's Court while offences with punishments of less than seven years imprisonment will be tried by a Judicial Magistrate.

8. Way forward

- While the amendments have been welcomed by most, in their attempt to provide better protection to children in the care of the need, the challenge perceived is that of having given too many responsibilities to the DM.
- The DM is in charge of all processes in a district including all task forces and review meetings, and the fear is that the JJ Act amendment may fall through the cracks or not be given priority.
- To ensure proper implementation of the JJ Act, the DM will have to hold regular fortnightly meetings with all five arms – CWC, JJ Board, CCI, district child protection units and special juvenile police units.
- Specific training in child protection rules will also need to be imparted, as district magistrates usually are not trained or equipped to deal with these specific laws.

PM SVANIDHI

1. Context

The PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) scheme, which was launched in June amid the pandemic, is a micro-credit facility that provides street vendors a collateral-free loan of Rs 10,000 with low rates of interest for one year.

2. Why was this scheme rolled out?

- The COVID-19 pandemic and the nationwide lockdown left daily wage workers and street vendors out of work.
- The scheme aims at aiding the vendors in getting back on their feet financially.
- In the long term, it aims at establishing a credit score for the vendors as well as creating a digital record of their socio-economic status, so that they can avail of the central government schemes later.
- The scheme also attempts to formalize the informal sector of the economy and provide them with safety nets and a means of availing loans in the future.

3. Who is a street vendor?

- Any person engaged in vending of articles, goods, wares, food items, or merchandise of daily use or offering services to the public in a street, footpath, pavement, etc., from a temporary built-up structure or by moving from place to place.
- The goods supplied by them include vegetables, fruits, ready-to-eat street food, tea, pakodas, bread, eggs, textile, apparel, artisan products, books/stationary, etc. and the services include barber shops, cobblers, pan shops, laundry services, etc.

4. What is the rationale of the scheme?

- The COVID-19 pandemic and consequent lockdowns have adversely impacted the livelihoods of street vendors.
- They usually work with a small capital base, which they might have consumed during the lockdown.

- Therefore, credit for working capital to street vendors will be helpful to resume their livelihoods.

5. What are the objectives of the scheme?

To facilitate a working capital loan of up to 10,000 at a subsidized rate of interest;

- To incentivize regular repayment of loans; and
- to reward digital transactions.

6. What are the salient features of the scheme?

- Initial working capital of up to 10,000/-
- Interest subsidy on timely/early repayment @ 7%.
- Monthly cash-back incentive on digital transactions
- Higher loan eligibility on timely repayment of the first loan

7. Eligibility criteria of the beneficiaries

- The Scheme is available to all street vendors engaged in vending in urban areas *. The eligible vendors will be identified as per the following criteria:
- Street vendors in possession of a Certificate of Vending / Identity Card issued by Urban Local Bodies (ULBs);
- The vendors, who have been identified in the survey but have not been issued a Certificate of Vending / Identity Card; a Provisional Certificate of Vending would be generated for such vendors through an IT-based Platform. ULBs are encouraged to issue such vendors the permanent Certificate of Vending and Identification Card immediately and positively within one month.
- Street vendors left out of the ULB-led identification survey or who have started vending after completion of the survey and have been issued a Letter of Recommendation (LoR) to that effect by the ULB/ Town Vending Committee (TVC); and
- The vendors of surrounding development/peri-urban/ rural areas vending in the geographical limits of the ULBs have been issued a Letter of Recommendation (LoR) to that effect by the ULB/TVC.

Identification of Beneficiaries Left out of the Survey or Belonging to the Surrounding Rural Areas While identifying the vendors belonging to Category 4 (iii) and (iv), the ULB/ TVC may consider any of the following documents to issue letters of recommendation:

- The list of vendors, prepared by certain States/ UTs, for providing one-time assistance during the period of lockdown; OR
- A system-generated request was sent to ULBs/ TVCs for the issue of LoR based on the recommendation of the Lender after verifying the credentials of the applicant; OR
- The membership details with the vendor's associations including the National Association of Street Vendors of India (NASVI)/ National Hawkers Federation (NHF)/ Self-Employed Women's Association (SEWA) etc.; OR
- (iv) The documents in possession of the vendor buttressing his claim of vending; OR (v) Report of local inquiry conducted by ULB/ TVC involving Self-Help Groups (SHGs), Community-Based Organizations (CBOs), etc. ULB shall complete the verification and issuance of LoR within 15 days of the submission of the application.
- Further, ULBs may adopt any other alternate way for identifying such vendors to ensure that all the eligible vendors are positively covered.
- vendors who have gone back to their native places due to COVID-19 Some of the identified/surveyed or other vendors who have been vending/hawking in urban areas have left for their native places before or during the lockdown period because of the COVID-19 pandemic. Such vendors are likely to come back after the situation normalizes and resume their business.

Once a LOR is issued by the ULBs, its mandate lasts a month, after which the survey for the issuance of the certificate of vending should be undertaken by the ULBs. But since it is a state subject, the central government can only direct or sensitize the state governments on the importance of doing so, and not evict vendors who have availed of the loan but do not have a certificate.

The scheme is already a hit; so far 25 lakh street vendors have come forward seeking the loan. The next stage being contemplated is to make a first-of-its-kind database of the beneficiaries of this scheme to see who they are, and where they

belong vis-à-vis the government's social security net woven through various welfare schemes on education, housing, food, livelihood, etc.,

7. Why is such a study needed?

- The scheme plans to extend the microcredit to over 50 lakh street vendors across India, which is the estimated number of hawkers as per various urban local bodies.
- But, going beyond the mandate of this scheme, the government wants to use the data for comprehensive poverty alleviation.
- However, there is hardly any comprehensive structured data on the socio-economic profile of street vendors and the street vending economy in India, even in government surveys like the National Sample Survey Organisation (NSSO) and the Economic Survey.
- The NSSO, for instance, has defined street vendors through a category of “enterprises without fixed premises” among “Unincorporated Non-Agricultural Enterprises (excluding construction)”, in its 67-68th round report published in 2011- 12.
- The NSSO data estimated that around 200,000 women and 21,500 children were engaged in street vending. Around 1.18 million households were dependent on this sector as their primary source of income, according to a paper by the think-tank Observer Research Foundation.
- Non-governmental organizations and research by scholars have attempted to put together this kind of data several times in the past in bits and pieces.

8. Will this scheme actually work towards poverty alleviation?

- Becoming formal beneficiaries of various government schemes works as a big step towards entering the policy intervention network.
- Officials say it also helps in financial mainstreaming in the long run.
- For example, several banks, bereft of the prior experience of extending loans as little as Rs. 10,000 to someone like a street vendor, are following processes like checking the CIBIL score for the street vendor and seeking PAN card and IT-return, etc.

- While these cases are dealt with as hurdles on the ground, it is a fact that street vendors hardly have creditworthiness in the eyes of India's formal banking system.
- Therefore, the PMSVANidhi is incentivizing digital transactions by street vendors. They will soon be given QR codes to receive payments through the government's BHIM UPI app.
- They are given cash back for digital transactions too. The idea is that with a trail of digital transactions against their names, they will create a formal transaction history in banks and will slowly build their creditworthiness for the future.

General Studies II: Reports

INDIA IS THE MOST POPULOUS NATION

1. Context

A UN report has provided the first official confirmation of something that had been anticipated for months now that **India's population is expected to surpass that of China by the middle of this year** at the latest. The annual State of World Population report by the UN Population Fund (UNFPA) has pegged India's mid-2023 population at 1,428 million, marginally ahead of China's 1,425 million.

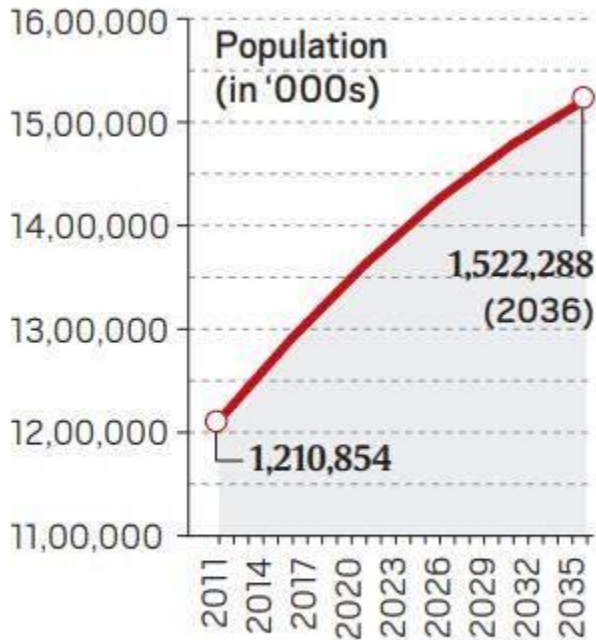
2. Background

- Last year(2022), this same report had estimated China's mid-2022 population at 1,448 million, substantially more than that of India's 1,406 million
- The emergence of India as the world's most populous country this year, therefore, has a lot to do with a relatively sharp drop in China's population a reduction of 23 million (2.3 crores) in just one year
- Of course, these are only estimates, arrived at using indirect methods and a variety of indicators like fertility and mortality rates

- But the UNFPA reports (UNFPA refers to UN Population Fund's original name UN Fund for Population Activities), which have been coming out every year since 1978, are considered a reliable indicator of global population trends
- In any case, population sizes are dynamic and it is difficult to capture an accurate number on any given day

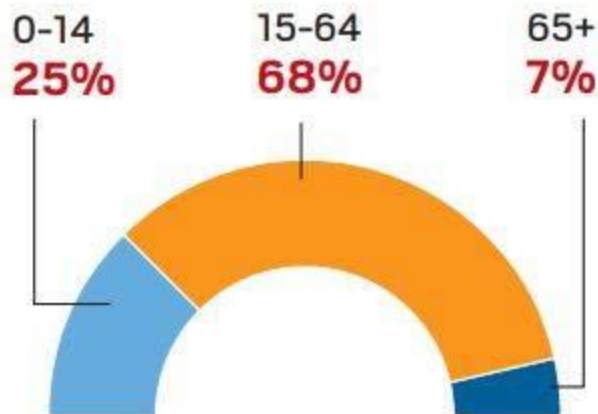
3. India's Estimates

- The most reliable figures for India's population comes from the Census that happens every 10 years
- The last Census took place in 2011, and the 2021 exercise had to be postponed because of the coronavirus pandemic. The process has not yet been initiated.
- The 2011 Census had put India's population at 1,210 million (121.08 crore, 1,210,854,977 to be exact)
- In July 2020, the Census office had released population projections for years 2012-2036, which remain the official estimates of India's current population
- According to these projections, India's population in 2023 was expected to be only 1,388 million (about 139 crore), significantly less than what the UNFPA's State of World Population report and several other estimates have been suggesting
- In fact, according to these projections, India's population even in 2026 would be smaller than what UNFPA has estimated for the middle of this year
- Improvements in life expectancy and decline in mortality rates, both of them positive indicators, could be some of the major reasons for the faster-than-expected growth in population in the short term
- The UNFPA report says that if India's population continues to grow at the current pace a shade below one per cent every year it would double from the present value in the next 75 years
- That would be the case with global population as well, currently slightly above 8 billion
- Of course, both India's and the world's population are expected to stabilise much ahead of that



Source: Report of Technical Group on Population Projections, Census of India

POPULATION, BY AGE GROUP



2 TOTAL FERTILITY RATE,
PER WOMAN, 2023

UN Population Fund (UNFPA)

4. Census

- An authoritative assessment of India's current population has been hampered by an intriguing delay in carrying out the Census 2021 exercise
- The pandemic is no longer an obstacle in carrying out any activity, but even more than a year after normalcy has been restored, there are no indications of the process being initiated in the near future
- The Census exercise, being carried out every 10 years since the 1870s, has never been disrupted for this long
- The intent of the government for conducting Census 2021 was notified in the Gazette of India on 28th March 2019 (before the emergence of the pandemic)
- Subsequently, a notification under Citizenship Rules was published in the Gazette of India on 31st July 2019 to prepare and update the Population Register along with the first phase of the Census, i.e. House listing and Housing Census
- However, due to the outbreak of Covid19 pandemic, the conduct of Census 2021, updating of National Population Register and the related field activities have been postponed until further orders
- In December last year, the office of the Registrar General of India had pushed the deadline to freeze administrative boundaries, the first step in the Census exercise, to June 30 this year (2023)
- It usually takes at least two years for the Census exercise to get completed. Many datasets take several years after the completion of the exercise to come out

CITIZENSHIP

1. Introduction

Citizenship is an allegiance of person to a state. Each state determines the conditions under which it will recognize persons as its citizens, and the conditions under which that status will be withdrawn

Indian citizenship can be acquired by birth, descent, registration, and naturalization.

India does not allow dual citizenship, and taking up the citizenship of another country automatically results in the cancellation of Indian citizenship

2. How to acquire Citizenship

The conditions and procedure for the acquisition of Indian citizenship as per the provision of the Citizenship Act, 1955 are given below:

2.1.By birth

- A person born in India on or after January 26, 1950, but before July 1, 1987, is a citizen of India by birth irrespective of the nationality of his parents
- A person born in India on or after July 1, 1987, but before December 3, 2004, is considered a citizen of India by birth if either of his parents is a citizen of India at the time of his birth
- A person born in India on or after December 3, 2004, is considered a citizen of India by birth if both the parents are citizens of India or one of the parents is a citizen of India and the other is not an illegal migrant at the time of his birth

2.2.By Descent

- A person born outside India on or after January 26, 1950, but before December 10, 1992 is a citizen of India by descent, if his father was a citizen of India by birth at the time of his birth
- A person born outside India on or after December 10, 1992, but before December 3, 2004, is considered a citizen of India if either of his parents was a citizen of India by birth at the time of his birth
- A person born outside India on or after December 3, 2004, shall not be a citizen of India unless the parents declare that the minor does not hold a

passport of another country and his birth is registered at an Indian consulate within one year of the date of birth or with the permission of the Central Government, after the expiry of the said period

2.3. By Registration

- Persons of Indian origin who are ordinarily resident in India for seven years.
- Persons of Indian origin who are ordinarily resident in any country or place outside undivided India.
- Persons who are married to a citizen of India and who are ordinarily resident in India for seven years.
- Minor children whose both parents are Indian citizens.
- Persons of full age whose both parents are registered as citizens of India.
- Persons of full age and capacity who have been registered as an Overseas Citizen of India (OCI) for five years and residing in India for one year.

2.4. By Naturalisation

Citizenship of India by naturalization can be acquired by a foreigner (not illegal migrant) who is ordinarily resident in India for twelve years (throughout the period of twelve months immediately preceding the date of application and for eleven years in the aggregate in the fourteen years preceding the twelve months) and other qualifications as specified in Third Schedule to the Act

General Studies II: Polity

URBAN LOCAL BODIES

1. Context

On March 28 2023, the Neiphiu Rio-led Nagaland government preferred to be in contempt of the Supreme Court than face the wrath of the community-based organisations by repealing the Nagaland Municipal Act of 2001. This led to the cancellation of the State Election Commission's March 9 notification for holding

elections to Nagaland's 39 urban local bodies (ULBs) with 33% of the seats reserved for women

2. Urban Local body Polls in Nagaland

- Nagaland is arguably the only State where ULB seats are not reserved for women as mandated by clause IV of the 74th Amendment to the Constitution of India
- Most of the traditional tribal and urban organisations oppose the 33% reservation of seats for women as they argue that such reservation would violate the special provisions granted by Article 371A of the Constitution to Nagaland
- The Article states that no Act of Parliament would apply to the religious or social practices of the Nagas, Naga customary law and procedure, administration of civil and criminal justice involving decisions according to Naga customary law, and ownership and transfer of land and its resources
- The hohos (apex tribal bodies) point out that women have traditionally not been part of decision-making bodies
- The first and only civic body election in Nagaland was held in 2004 without any reservation of seats for women
- The State government amended the 2001 Municipal Act in 2006 to include 33% reservation for women in line with the 74th Amendment
- This triggered widespread opposition forcing the government to indefinitely postpone the ULB polls in 2009
- Efforts to hold the elections in March 2012 met with strong protests and in September 2012, the State Assembly passed a resolution to exempt Nagaland from Article 243T of the Constitution which is related to the reservation for women
- This resolution was revoked in November 2016 and elections to the civic bodies with 33% reservation were notified a month later
- The notification led to widespread mayhem in which two people were killed in large-scale violence and arson
- This made the government declare the process to conduct election null and void in February 2017
- The tribal bodies and civil society organisations threatened to boycott the polls until the "borrowed" Municipal Act of 2001 factoring in women's

reservation is “reviewed and rewritten in complete consonance of the voice of the Naga people” so that it does not infringe upon Article 371A

- The government succumbed to public pressure and repealed the Municipal Act with immediate effect as the people “cannot be compelled” to participate in the elections

3. Way Forward

The groups against reservation for women want a “guarantee” that the 33% quota would not violate the provisions of Article 371A

Before “rushing to conduct” the ULB elections, they suggested that the duration of the reservation should be capped at two tenures and demanded that the post of chairperson should not be reserved for women

The Naga Mothers’ Association (NMA) said that the State government erred in not listening to or consulting with women’s organisations before taking the decision to repeal the Municipal Act

HAKKI-PIKKI

1. Context

More than 181 members of the Hakki Pikki tribal community from Karnataka are stuck in violence-hit Sudan, even as the government is making efforts to bring them back.

2. About Hakki Pikki

- The Hakki Pikki is a tribe that lives in several states in the west and south of India, especially near forest areas.
- Hakki Pikkis (Hakki in Kannada means “**bird**” and Pikki means “**catchers**”) are a semi-nomadic tribe, traditionally of bird catchers and hunters.
- According to the 2011 census, the Hakki Pikki population in Karnataka is 11, 892 and they live majorly in **Davangere, Mysuru, Kolar, Hassan and Shivmogga** districts.

- In different regions, they are known by different names, such as **MelShikari** in **northern Karnataka and Maharashtra**.
- The Hakki Pikki move in groups from place to place in search of livelihood. They are divided into **four clans, called Gujaratia, Panwar, Kaliwala and Mewaras**.
- These clans can be equated with castes in traditional Hindu society.
- In the olden days, there was a hierarchy among the clans, with the Gujaratia at the top and the Mewaras at the bottom. The forest is the main natural resource of the Hakki Pikki.
- Hakki Pikki people are believed to hail originally from the bordering districts of Gujarat and Rajasthan.
- They came to the South in search of a game. To Karnataka, they seem to have arrived via Andhra Pradesh, as they still remember a place called Jalapally near Hyderabad as their ancestral home, where their forefathers lived for a considerable period. They are now spread across south India.
- Till a few years ago, women used to wear the ghagra (skirt) common in Rajasthan, although now they wear saris and other garments.

3. Traditional jobs

- Traditionally, Hakki Pikkis lived in forest areas, leading a nomadic life for nine months a year and coming back to their permanent camps for three.
- Locals in Pakshirajapura, a Hakki Pikki village in the Mysuru district. Men of the tribe would hunt while women begged in villages.
- But as the wildlife protection laws became stricter, the Hakki Pikkis in Karnataka started selling spices, herbal oils and plastic flowers in local temple fairs.
- The community moved to villages from the forests in the 1950s. Earlier, They killed animals to make a living. But then some of the community members were booked and jailed under wildlife laws.
- So they shifted to selling herbal oils and other materials in villages and towns.
- The herbal oil business took off and now the tribe members go to many places across the globe to sell their products.

- The Hakki Pikkis in Tamil Nadu travelled to Singapore, Thailand and other places about 20-25 years ago to sell some marble, in the process, discovering there was a huge demand for Ayurvedic products in the African continent.
- They started selling their products in Africa and Karnataka Hakki Pikkis followed them.
- People from the state have been travelling to African countries for the past 20 years now.
- Education levels among the Hakki Pikkis are still low. For example, in the 2,000 strong population of Pakshirajapura, only eight people have completed graduate-level courses and one person works as a police constable.

4. Rituals and customs

- Hakki Pikkis in Karnataka follow Hindu traditions and celebrate all Hindu festivals.
- They are non-vegetarians. The eldest son in a family is not supposed to cut his hair so that he can be identified easily.
- The tribe prefers cross-cousin marriages. According to locals, the usual age of marriage is 18 for women and 22 for men.
The society is matriarchal, where the groom gives a dowry to the bride's family.

5. Their earnings in African countries

- African countries offer them an opportunity to escape poverty faster.
- There is a demand for their products in the African continent. If a person invests say Rs 5 lakh or raw materials (hibiscus powder, oil extraction, gooseberry, Ayurvedic plants, etc.), they have a chance to double or triple it in a matter of 3-6 months in African countries.
- But in India, you don't have such a market and business.
- They do sell online and promote products on social media, including Facebook and Youtube.

ASSAM ARUNACHAL BORDER DISPUTE

1. Context

Last month, just days after Assam chief minister Himanta Biswa Sarma met with his Arunachal Pradesh counterpart, Pema Khandu, to discuss a solution to the decades-old boundary dispute between the two states, fresh tensions were reported along the border. While the flashpoint this time was the ongoing construction of the Likabali-Durpai road being built under the Pradhan Mantri Gram Sadak Yojana (PMGSY), the boundary dispute between Assam and Arunachal Pradesh dates back to colonial times.

2. Bone of Contention:1951

- Before Arunachal Pradesh was carved out of Assam, a sub-committee headed by then Assam chief minister Gopinath Bordoloi submitted a report in 1951. The report made some recommendations in relation to the administration of NEFA (under Assam).
- Based on this report, around 3,648 sq km of the plain area of Balipara and Sadiya foothills was transferred from Arunachal Pradesh (then NEFA) to Assam's then Darrang and Lakhimpur districts.
- This remains the bone of contention as Arunachal Pradesh refuses to accept this notification as the basis of demarcation.

3. Historical Background of the Dispute

- The dispute dates back to the British era when in 1873 British announced inner line regulation. British demarcated planes and frontier Hills, which were later designated as North-East frontier tracts in 1915. These Northeast frontier tracts make up today's Arunachal Pradesh.
- The administrative jurisdiction was passed over to Assam, with frontier tracts renamed as Northeast Frontier Agency (NEFA) in 1954.
- Later in 1972, Arunachal Pradesh was declared as a union territory, and it gained statehood in 1987.
- However, in 1951, a subcommittee headed by Assam Chief Minister made some recommendations about the administration of NEFA.

- Based on the committee report, 3648 sq. km of the plain area was transferred from Arunachal Pradesh to Assam's then Darrang and Lakhimpur districts. Arunachal Pradesh refuses to accept this notification, and this has become a bone of contention.

4. Assam-Arunachal Pradesh Border Dispute

- Arunachal Pradesh, which was earlier a part of Assam, shares a boundary of roughly 800 km with the state.
- Disputes between the two states came to the fore after the establishment of Arunachal Pradesh as a Union Territory in 1972.
- The dispute in question is over 123 villages that stretch across 12 districts of Arunachal Pradesh and eight of Assam.
- The Process of demarcation of the boundary between Assam and Arunachal Started in 1972 and by 1979, 396 km of the boundary was demarcated.
- However, a number of anomalies and disputes regarding the border surfaced during the survey. As a result, the process of demarcation had to be suspended.

5. Efforts at demarcation

- Between 1971 and 1974, there were multiple efforts to demarcate the boundary but it did not work out. In April 1979, a high-powered tripartite committee was constituted to delineate the boundary on the basis of Survey of India maps.
- By 1983-84, out of the 800 km, 489 km, mostly in the north bank of the Brahmaputra, were demarcated. However, further demarcation could not commence because Arunachal Pradesh did not accept the recommendations.
- Formal talks over the issue had begun between the CMs of both states in January 2022.
- Following their second meeting in April 2022, it was resolved to set up 12 district-level committees to undertake joint surveys in the disputed areas to find a solution.

6. Legal fighting between the two states

- After Arunachal Pradesh did not accept the recommendations, Assam filed a case in the Supreme Court in 1989, highlighting an “encroachment” made by Arunachal Pradesh.
- The apex court-appointed a local boundary commission in 2006, headed by a retired SC judge. In September 2014, the local commission submitted its report.
- Several recommendations were made and it was suggested that both states should arrive at a consensus through discussions. However, nothing came of it.

7. MoU between the states

- An MoU, aimed at resolving the boundary dispute between Assam and Arunachal Pradesh was signed by Assam CM Himanta Biswa Sarma and his Arunachal Pradesh counterpart Pema Khandu in the presence of the Union Home Minister.
- As per this MoU, disputes over 34 of these villages stand resolved. The disputes over 37 villages had been resolved through the Namsai Declaration of July 2022.
- The state governments agree that no new claim area or village will be added in the future beyond these 123 villages.
- Both governments also agreed to effectively prevent any new encroachment in the border areas.

NATIONAL POPULATION REGISTER (NPR)

1. Context

The Union Cabinet on Tuesday approved a proposal to conduct Census 2021 and update the National Population Register (NPR). While the Census will be conducted in 2021, the NPR update will take place from April to September 2020

in all the States/UTs except Assam. According to the sources, the Union Cabinet has approved a proposal of the Home Ministry to spend Rs 8,754 crore for the Census 2021 and Rs 3,941 crore for updating the NPR.

2. What is the National Population Register (NPR)?

- The NPR is a register of the usual residents of the country. It is mandatory for every usual resident of India to register in the NPR. It includes both Indian citizens as well as foreign citizens.
- The objective of the NPR is to create a comprehensive identity database of every usual resident in the country.
- The first National Population Register was prepared in 2010 and updating this data was done in 2015 by conducting door-to-door surveys.
- The next update of the NPR will take place next year from April to September with the House listing phase of the Census 2021.
- It is being prepared at the local (Village/sub-Town), sub-District, State, and National level under provisions of the Citizenship Act 1955 and the Citizenship (Registration of Citizens and issue of National Identity cards) Rules, 2003.

3. What is the meaning of usual Resident?

According to the Citizenship (Registration of Citizens and the Issue of National Identity Cards) Rules, 2003, a usual resident is a person who has resided in a local area for the past 6 months or more or a person who intends to reside in that area for the next 6 months or more.

4. What is Census?

- The Census is the enumeration of the population of the country. It is being conducted at an interval of 10 years.
- The Census 2021 will be the 16th census in the country since the first census happened in 1872.
- However, it will be the 8th census after the Independence. For the first time, the Census 2021 will use the Mobile App for data collection.
- It will also provide a facility to the public for self-enumeration.

5. What is the difference between NPR and NRC?

- The NPR is different from the National Register of Citizens which excludes foreign citizens.
- According to the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, notified on December 10, 2003, a Population Register is ‘the register containing details of persons usually residing in a village or rural area or town or ward or demarcated area (demarcated by the Registrar General of Citizen Registration) within a ward in a town or urban area.
- Whereas, the ‘National Register of Indian Citizens’ is a register containing details of Indian Citizens living in India and outside India.
- The rules further say that ‘The National Register of Indian Citizens shall contain the particulars of every citizen i.e. Name; Father’s name; Mother’s name; Sex; Date of birth; Place of birth; Residential address (present and permanent); Marital status if ever married, name of the spouse; Visible identification mark; Date of registration of Citizen; Serial number of registration; and National Identity Number.

6. What is the link between NPR and NRC?

- According to the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, notified on December 10, 2003, The Central Government may, by an order issued in this regard, decide a date by which the Population Register shall be prepared by collecting information relating to all persons who are usually residing within the jurisdiction of Local Registrar.
- The Local Register of Indian Citizens shall contain details of persons after due verification made from the Population Register.

7. What makes NPR Controversial?

- Another debate has been about privacy. The NPR intends to collect many details of personal data on residents.
- The NPR is among a host of identity databases such as Aadhaar, voter cards, passports, and more than Home Minister Shah said he would like to see combined into one card. “We will have to end all these separate exercises,”

Shah said at the foundation stone laying ceremony for the new Office of Registrar General of India and Census Commissioner on September 24.

8. If there was a previous NPR, how and when did the idea originate?

- At that time, it had clashed with Aadhaar (UIDAI) over which project would be best suited for transferring government benefits to citizens.
- The Home Ministry then pushed NPR as a better vehicle because it connected every NPR-recorded resident to a household through the Census.
- The ministry pushed even put the UIDAI project on the back burner. The data for NPR was first collected in 2010 along with the house-listing phase of Census 2011. In 2015, this data was updated by conducting door-to-door surveys.
- However, with the NDA government picking out Aadhaar as the key vehicle for the transfer of government benefits in 2016 and putting its weight behind it, NPR took a backseat.
- It was through a notification on August 3 by the RGI that the idea has been revived. The exercise to update the 2015 NPR with additional data has begun.
- The digitization of updated information has been completed.

9. What kind of data will be collected?

The NPR will collect both demographic data and biometric data, although for the latter it will depend upon Aadhaar. In the last NPR in 2010, data were collected on 15 aspects; in the 2020 NPR, there are 21 data points. Again, three of the data points from 2010 (father's name; mother's name; spouse's name) have been clubbed into one in the 2020 exercise, so that, in effect, there are eight new data points, including the contentious "date & place of birth of parents".

- Aadhaar Number (voluntary)
- Mobile Number
- Date & Place of Birth of Parents
- Place of Last Residence
- Passport Number (if Indian passport holder)
- Voter ID Card Number
- Permanent Account Number

- Driving Licence Number

In the test, the RGI is seeking these details and working to update the Civil Registration System of birth and death certificates.

10. Why does the government want so much data?

- While there are concerns about privacy, the government's position is based on two grounds. One is that every country must have a comprehensive identity database of its residents with demographic details.
- In its statement issued after Cabinet approval to NPR, the Home Ministry said the objective of conducting NPR is to “prepare a credible register of every family and individual” living in the country apart from “strengthening security” and “improvement in the targeting of beneficiaries under various Central government schemes”.
- The second ground, largely to justify the collection of data such as driving license, voter ID, and PAN, is that it will ease the life of those residing in India by cutting red tape.
- It is common to find different dates of birth of a person on different government documents. NPR will help eliminate that. With NPR data, residents will not have to furnish various proofs of age, address, and other details in official work. It would also eliminate duplication in voter lists.
- However, insist that NPR information is confidential, meaning it will not be shared with third parties.
- There is as yet no clarity on the mechanism for the protection of this vast amount of data that the government plans to collect.

11. What does one make of the defiance of West Bengal and Kerala?

- These Opposition-ruled states are making a political point. Citizenship, aliens, and naturalization are subject matters listed in List 1 of the Seventh Schedule that fall exclusively under the domain of Parliament.
- Legally, the states have no say in implementing or ruling out NPR. However, given that the manpower is drawn from the states, the defiance could potentially result in a showdown.

CIVIL UNION

1. Context

A five-judge bench of the Supreme Court, headed by Chief Justice of India DY Chandrachud heard a batch of petitions seeking legal recognition of same-sex marriage.

2. Key points

- While the Centre, through Solicitor General Tushar Mehta, Contested the maintainability of the petitions and also the judiciary's right to confer legal recognition of the "**Socio-legal institution**" of marriage.
- The CJI clarified that the hearing's scope would be limited to developing a notion of a "**civil union**" that finds legal recognition to develop a notion of a "civil union" that finds legal recognition under the **Special Marriage Act**.

3. About Civil Union

- A civil union refers to the legal status that allows same-sex couples specific rights and responsibilities normally conferred upon married couples.
- Although a civil union resembles a marriage and brings with it employment, inheritance, property and parental rights, there are some differences between the two.

4. Difference between the Civil Union and Marriage

- Before the 2015 ruling, a majority of the US states had civil union laws that allowed same-sex couples to marry, without providing them formal recognition of the same.
- These civil unions would be accompanied by rights such as inheritance rights, employment benefits to spouses, joint parenting or joint ownership rights and the right to abstain from testifying against one's partner similar to the spousal privilege given under **Section 122 of the Indian Evidence Act** when it comes to disclosure of communication between two spouses.

- A big difference between civil unions and marriages was that the former was recognised solely by issuing states and not by federal law.
- This created a situation where such couples could not enjoy the benefits of being in a civil union, uniformly, across all states.
- Since the US had a system where states had to determine their marriage laws, this disparity of recognition existed.
- In the wake of the legalisation of same-sex marriages, several civil unions were converted into marriages.
- In the year 2015, the Supreme Court of the United States (SCOTUS) legalised same-sex marriages across the nation with its landmark ruling in "**Obergefell v. Hodges**".

5. Countries that allow civil unions

- The United States is just one of the countries that allow same-sex unions.
- Before 2009, the year that Sweden legalised same-sex marriages, LGBTQ couples there could apply for civil unions and enjoy benefits such as the right to adopt.
- Similarly, from 1993, couples in Norway enjoyed the right to enter into civil unions, which gave way to a new law 15 years later, allowing such couples to marry, adopt and undergo state-sponsored artificial insemination.
- In Austria, same-sex couples could form civil partnerships between the years 2010-2017.
- However, this changed with a court ruling that deemed civil unions discriminatory in January 2019, when such marriages were legalised.
- Similarly, countries like Brazil, Uruguay, Andorra and Chile had also recognised the right of same-sex couples to enter into civil unions, even before they formally recognised their legal right to marriage.

MINORITY STATUS IN INDIA

1. Context

The Supreme Court takes up a petition seeking the identification of minorities at the state level and granting minority status to Hindus in states and union territories where their numbers have gone below other communities.

2. What is the case about?

- The petition by Advocate Ashwini Upadhyay has contended that the 2011 census showed that Hindus have become a minority in Lakshadweep (2.5%), Mizoram (2.75%), Nagaland (8.75%), Meghalaya (11.53%), J&K (28.44%), Arunachal Pradesh (29%), Manipur (31.39%), and Punjab (38.40%), but were being denied minority benefits that are currently being enjoyed by the respective majority communities in these places.
- The Plea relies on the Supreme Court's 2002 ruling in the TMA Pai Foundation case (TMA Pai Foundation & Ors vs State of Karnataka & Ors) and the 2005 decision in the Bal Patil case (Bal Patil & Anr vs Union of India & Ors).

3. Notified Minorities in India

- Currently, only those communities notified under section 2(c) of the NCM Act, 1992 by the central government are regarded as minorities.
- In 1993, the first statutory National Commission was set up, and five religious communities Viz. The Muslims, Christians, Sikhs, Buddhists, and Zoroastrians (Parsis) were notified as minority communities.
- In 2014, Jains were also notified as a minority community.
- The expression "minorities" appears in some Articles of the Constitution, but is not defined anywhere.

4. What does the Constitution say about minorities?

Article 29: Article 29 which deals with the "Protection of Interests of Minorities" says that any section of citizens residing in the territory of India or any part thereof having a distinct language, script, or culture of its own shall have the right to conserve the same, and that " no citizen shall be denied admission into any

educational institution maintained by the state or receiving aid out of state funds on grounds only of religion, race, caste, language or any of them.

Article 30: Article 30 deals with the "right of minorities to establish and administer educational institutions. It says that all minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.

It says that "in making any law providing for the compulsory acquisition of any property of an educational institution established and administered by a minority..., the state shall ensure that the amount fixed by or determined under such law for the acquisition of such property is such as would not restrict or abrogate the right guaranteed under that clause", and that "the state shall not, in granting aid to educational institutions, discriminate against any educational institution on the ground that is under the management of a minority, whether based on religion or language".

Article 350(A): Article 350(A) says there shall be a Special Officer for linguistic minorities to be appointed by the President. It shall be the duty of the special officer to investigate all matters relating to the safeguards provided for linguistic minorities under this constitution and report to the President upon those matters at such intervals as the President may direct and the President shall cause all such intervals as the president may direct, and the president shall cause all such reports to be laid before each House of Parliament and sent to the Governments of the states concerned.

5. What have courts said on the subject?

TMA PAI:

- In 'TMA Pai', an 11-judge bench of the Supreme Court dealt with the question of the scope of rights of minorities to establish and administer educational institutions of their choice under the Constitution.

- A majority ruling by six judges in 2002 referred to two other cases pertaining to the DAV College in Punjab, in which the SC had to consider whether Hindus were a religious minority in the State of Punjab.
- It said, “In DAV College v. State of Punjab [1971]...the question posed was as to what constituted a religious or linguistic minority, and how it was to be determined.
- After examining the opinion of this Court in the Kerala Education Bill case [1958], the Court held that the Arya Samajis, who were Hindus, were a religious minority in the State of Punjab, even though they may not have been so in relation to the entire country.
- “In another case, DAV College Bhatinda v. State of Punjab [1971]...the observations in the first DAV College case was explained, and on page 681, it was stated that “what constitutes a linguistic or religious minority must be judged in relation to the State in as much as the impugned Act was a State Act and not in relation to the whole of India.”
- “This Court rejected the contention that since Hindus were a majority in India, they could not be a religious minority in the State of Punjab, as it took the State as the unit to determine whether the Hindus were a minority community.
- There can, therefore, be little doubt that this Court has consistently held that the unit to determine a religious or linguistic minority can only be the State.”

BAL PATIL:

- In 2005, the SC in its judgment in ‘Bal Patil’ referred to the TMA Pai the ruling, and said:
“After the verdict in the eleven judges’ Bench in the TMA Pai Foundation case (supra), the legal position stands clarified that henceforth the unit for determining the status of both linguistic and religious minorities would be ‘state’.
- If, therefore, the State has to be regarded as the unit for determining “linguistic minority” vis-a-vis Article 30, then with “religious minority” being on the same footing, it is the State in relation to which the majority or minority status will have to be determined.
- “The minority for the purpose of Article 30 cannot have different meanings depending upon who is legislating.

- Language is the basis for the establishment of different States for the purposes of Article 30, a “linguistic minority” will have to be determined in relation to the State in which the educational institution is sought to be established.
- The position with regard to the religious minority is similar since both religious and linguistic minorities have been put on a par in Article 30.”

6. Steps Taken by GoI for Minorities

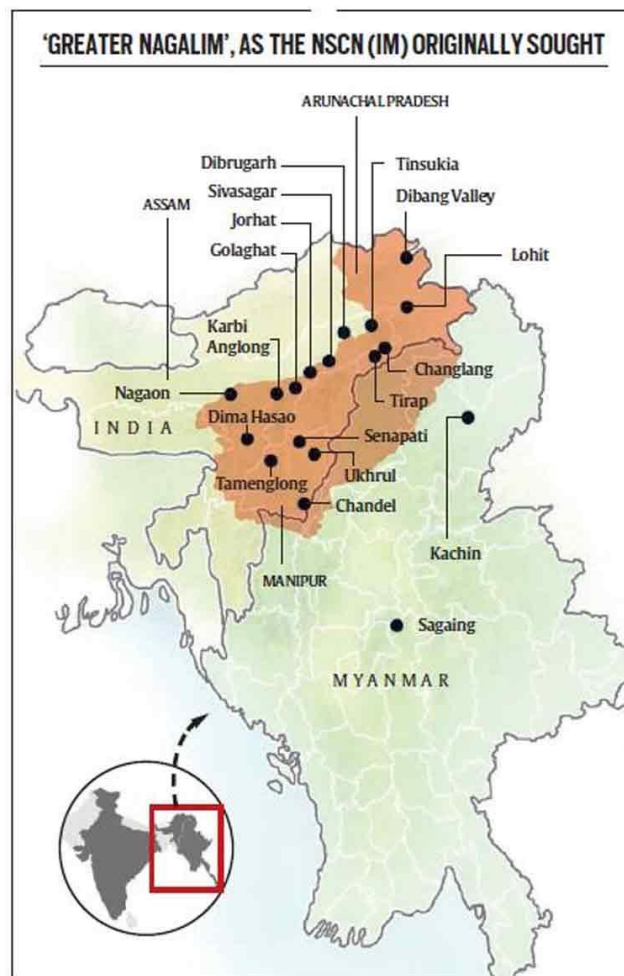
- **Separate Ministry:** The Ministry of Minority Affairs was set up to improve the socio-economic conditions of minorities through affirmative action and inclusive development so that every citizen has an equal opportunity to participate actively in building a vibrant nation.
- **Schemes:** Various schemes, launched, are meant only for the economically weaker sections or underprivileged children and candidates of the minority communities and are not for everyone belonging to the minority community.
- **Article 246:** Parliament under Article 246 of the Constitution, read with Entry 20 in Concurrent List in Schedule Seven, has enacted the National Commission for Minorities Act, 1992.
- **Prime Minister’s 15-Point Programme for the Welfare of Minorities:** An important objective of the Programme is to ensure that an appropriate percentage of the priority sector lending is targeted for the minority communities and that the benefits of various government-sponsored schemes reach the under-privileged, which includes the disadvantaged sections of the minority communities. The Programme is being implemented by the Central Ministries/Departments concerned through State Governments/Union Territories and envisages location of a certain proportion of development projects in minority concentration districts.

NAGA INSURGENCY

1. Background

- The British annexed Assam in 1826 and in 1881, the Naga Hills too became part of British India.

- The first sign of Naga resistance was seen in the formation of the **Naga Club** in 1918, which told the **Simon Commission** in 1929 "to leave us alone to determine for ourselves as in ancient times".
- In 1946 came the **Naga National Council (NNC)**, under the leadership of Agami Zapu Phizo, declared Nagaland an independent state on August 14, 1947.
- The NNC resolved to establish a "**sovereign Naga state**" and conducted a "referendum" in 1951, in which "**99 per cent**" supported an "**independent**" Nagaland.



2. The Armed Movement

- On March 22, 1952, Phizo formed the underground **Naga Federal Government** (NFG) and the **Naga Federal Army** (NFA).
- The Government of India sent in the Army to crush the insurgency and in 1958 enacted the **Armed Forces (Special Powers) Act**.

3. The Peace efforts

- Almost simultaneously with the resistance. On June 29, 1947, Assam Governor Sir Akbar Hyderi Signed a **9-point agreement** with moderates T Sakhrie and Aliba Imti, which was almost immediately rejected by Phizo.
- The Naga Hills, a district of Assam, was upgraded to a state in 1963, by also adding the Tuensang Tract which was then part of NEFA.
- The Peace Mission got the government and NNC to sign an agreement to suspend operations that September.
- But the NNC/NFG/NFA continued to indulge in violence and after six rounds of talks, the Peace Mission was abandoned in 1967 and a massive counter-insurgency operation was launched.

4. The formation of the National Socialist Council of Nagaland (NSCN)

- On November 11, 1975, the government got a section of NNC leaders to sign the **Shillong Accord**, under which this section of NNC and NFG agreed to give up arms.
- A group of about 140 members led by Thuingaleng Muivah, who was at that time in China, refused to accept the Shillong Accord and formed the National Socialist Council of Nagaland (NSCN) in 1980.
- In 1988, the NSCN split into **NSCN (IM) and NSCN (K)** after a violent clash.
- While the NNC began to fade away, and Phizo died in London in 1991, the NSCN (IM) came to be seen as the "**mother of all insurgencies**" in the region.

5. NSCN (IM)

- A "**Greater Nagalim**" comprising "**all contiguous Naga-inhabited areas**", along with Nagaland. That included several districts of Assam, Arunachal and Manipur as also a large tract of Myanmar.
- The map of "Greater Nagalim" has about 1, 20, 000 sq km, while the state of Nagaland consists of 16, 527 sq km.
- The claims have always kept Assam, Manipur and Arunachal Pradesh wary of a peace settlement that might affect their territories.
- The Nagaland Assembly has endorsed the "Greater Nagalim" demand "Integration of all Naga-inhabited contiguous areas under one administrative umbrella as many as five times: in December 1964, August 1970, September 1994, December 2003 and as recently as July 27, 2015.

6. NSCN (IM) Joined in Peace Talks

- Muivah, Swu and Other top NSCN (IM) leaders escaped to Thailand in the early 1990s.
- While Nagaland Governor M M Thomas, a church leader from Kerala, extracted the first positive response from the NSCN (IM), Prime Minister P V Narasimha Rao met Muivah, Swu and others in Paris on June 15, 1995.
- In November 1995, the MoS (Home) met them in Bangkok.
- Subsequently, Prime Minister H D Deve Gowda met them in Zurich on February 3, 1997, which was followed by meetings with officers in Geneva and Bangkok.
- Prime Minister Atal Bihari Vajpayee met them in Paris on September 30, 1998.
- The Government of India signed a ceasefire agreement with NSCN (IM) on July 25, 1997, which came into effect on August 1, 1997.
- Over 80 rounds of talks between the two sides were held subsequently.
- For the NSCN (IM), the Modi Government continues from where Vajpayee left off.

Leaders of Manipur, Assam and Arunachal Pradesh cutting across party lines have preferred to wait and watch. Nobody in these three states would allow even an inch

of their land to be added to a "Greater Nagalim" if at all that term is part of the accord.

- In March 2015, S S Khaplang abrogated the ceasefire he had signed in 2001 and is sure to oppose the accord.

7. Chronicles of Conflict and Attempted Peace

7.1. June 1947: Naga-Akbar Hydari Agreement

- It was Signed by the Naga National Convention and the Governor of Assam.
- The right of the Nagas to develop themselves according to their freely expressed wishes is recognized.
- The Governor of Assam as the Agent of the Government of Indian Union will have a special responsibility for 10 years to ensure the observance of the agreement, at the end of this period the Naga Council will be asked whether they require the above agreement to be extended for a further period or a new agreement regarding the future of Naga People arrived at.

7.2. July 1960: Sixteen-point Agreement

- It was with the Naga People's Convention
- Nagaland formed as a state, under the charge of the Ministry of External Affairs.
- "No act or law passed by the Union Parliament affecting the following provisions shall have legal force in Nagaland unless specially applied to it by a majority vote of the Nagaland Legislative Assembly;
 - a. The Religious or Social Practices of the Nagas
 - b. The Customary Laws and Procedure
 - c. Civil and Criminal Justice so far as these concern decisions according to the Naga Customary Law
- The Naga leaders expressed the view that other Nagas inhabiting contiguous areas should be enabled to join the new state.

- It was pointed out to them on behalf of the Government of India that Articles 3 and 4 of the Constitution provided for increasing the area of any state, but the Government of India couldn't make any commitment in this regard at this stage.

7.3. 1964: Ceasefire Agreement

- The Government of India welcomes the steps intended to bring about peace in Nagaland and with this object in view.. they will depute representatives, with whom will be associated the representatives of the Government of Nagaland, to take part in talks with leaders of the underground.
- To facilitate these talks and take note of the letter of August 10, 1964... it has been ordered that with effect from September 6, 1964, and for a period thereafter of one month at present, the security forces will not undertake:
 - a. Jungle operations
 - b. The raiding of camps of the underground
 - c. Patrolling beyond one thousand yards of Security posts
 - d. Searching of villages
 - e. Aerial action
 - f. Arrest and
 - g. Imposition of labour by way of punishment

Operations will be suspended as above on the understanding that the underground has accepted that during this period they will refrain from;

1. Sniping and ambushing
2. Imposition of fines
3. Kidnapping and recruiting
4. Sabotage activities
5. Raiding and firing on Security posts, towns and administrative centres and
6. Moving with arms or in uniform in towns, villages and administrative centres, wherever there are Security posts and approaching within one thousand yards of Security posts.

7.4. 1975: Shillong Agreement

- Between Nagaland Governor L P Singh and Underground leaders
- The representatives of the underground organisations conveyed their decision, of their own volition, to accept, without condition, the Constitution of India.
- It was agreed that the arms, now underground, would be brought out and deposited at appointed places.
- Details for giving the effect of this agreement will be worked out between them and representatives of the Government, the security forces and members of the Liaison Committee.
- It was agreed that the representatives of the underground organisations should have reasonable time to formulate other issues for discussion for a final settlement.

General Studies III: Science & technology

ENVIRONMENTAL PROTECTION THROUGH ARTIFICIAL INTELLIGENCE (AI)

1. Context

New tools like ChatGPT have generated a huge amount of interest in artificial intelligence in the past few months. But AI-powered technology has already been playing a growing role in our lives and economies for some time. And while there are concerns about the potential downsides that it could lead to job losses, project bias, or be misused AI has also been touted as a powerful tool to help tackle global crises, such as climate change.

2. What is an AI?

AI refers to systems or machines that perform tasks that typically require human intelligence, and can iteratively improve themselves over time, based on the

information they collect, says David Jensen, coordinator of the United Nations Environment Program's (UNEP's) Digital Transformation sub-program.

3. There are six ways AI being put to use to help the environment:

3.1 Saving trees with AI guardians

- Deforestation and land use changes cause more than 10% of global greenhouse gas emissions.
- Trees absorb carbon dioxide and store it for long periods of time, and when they're cut down, much of that CO₂ escapes into the atmosphere.
- To curb illegal land clearing, the nonprofit Rainforest Connection attaches acoustic monitoring sensors to trees that “eavesdrop” on the surrounding forest and transmit that audio in real-time to the cloud.
- The data is analyzed by a machine learning model that has been trained to recognize sounds linked to illegal logging, such as a chainsaw or truck. Alerts are then sent out to authorities on the ground.
- Almost 600 of these devices, dubbed “guardians,” have been installed in 35 countries, from Brazil to Indonesia, Congo to the Philippines. It says they've collected more than 107 million minutes of audio data, covering more than 400,000 hectares of land.

3.2 Shrinking the carbon footprint of steel

- Materials such as steel and cement are important components in construction. But they're also heavy CO₂ emitters, making decarbonizing these industries a priority.
- Steel production alone accounts for around a quarter of greenhouse gas emissions from the manufacturing sector.
- A big part of this share comes from the mining and transportation of ingredients used in the production process.
- US company Fero Labs has been working with five American steel plants and AI to reduce the amount of mined ingredients or alloys by up to a third.
- Fero Labs AI-driven optimization software learns from historical data to recommend the minimum amount of new additional material if any that needs to be added.

3.3 Cutting energy waste in Building

- In Hong Kong, energy use in buildings is responsible for about 60% of the city's carbon emissions.
- With 7.5 million inhabitants, the financial hub is one of the most densely populated places in the world.
- About a quarter of its total electricity consumption comes from heating, ventilation, and air conditioning (HVAC) systems in commercial buildings.
- Design firm Arup came up with an app called Neuron that uses 5G and Internet of Things sensors to gather real-time data from a building's energy management system.
- It then uses an algorithm to analyze this data and optimize the heating and cooling system, as well as make predictions for the building's future energy demand.
- According to the Global Partnership on Artificial Intelligence report, these tweaks can save 10-30% of the energy used in a typical commercial building.

3.4 Fighting poaching with algorithms

- Poaching and habitat destruction caused rhino numbers to dwindle throughout the 20th century. Most species are now considered endangered and mainly survive in protected reserves or sanctuaries, but they're still targeted for their horns.
- The South Africa-based company Rouxcel Technology has developed AI-enabled bracelets that fit around rhinos' ankles to help conservation teams easily locate the animals and monitor their behavior in real time.
- The company's algorithms use machine learning to spot when an animal is exhibiting abnormal movement patterns a signal that it might be distressed, for example, if poachers are close.
- It then sends an alert to wildlife operations centers and anti-poaching teams. The devices are being used at different sites from Kenya down to South Africa.

3.5 Smart farming

- Agriculture is vulnerable to climate change, with unpredictable temperatures, more frequent extreme weather events, and invasive pests all posing a risk to crop yields.
- At the same time, the farming sector itself contributes to the problem—agriculture, forestry, and land use account for around 18% of global CO₂ emissions.
- And then there's the fact that agricultural irrigation is responsible for 70% of water use worldwide.
- Fertilizers and pesticides used on fields can also end up in groundwater and nearby rivers.
Germany-based startup Agvolution has developed an AI system that draws on data from solar-powered sensors monitoring the microclimate around crops.
- The devices measure temperature, humidity, radiation, and soil moisture in the field, while algorithms use these insights to make precise recommendations about plant health and exactly how much water and fertilizer to use.
- This can both boost yields and reduce wasted resources. The company says this can increase ecological and economic efficiency by up to 40%.

3.6 Using computers to plot clouds

- Ramping up renewable energy is a crucial step in transitioning away from fossil fuels. But with clean energy sources such as solar making up a bigger share of the energy mix, ensuring power grids are stable becomes more tricky.
- When clouds move over solar panels, the power supply can suddenly drop off. That's a problem for network operators who are trying to balance the grid and prevent blackouts.
- To fill any gaps, they need to have generation reserves running in the background that can quickly be ramped up when there's a risk of a power shortage.
- And these reserves usually come from fossil fuels. Nonprofit Open Climate Fix has teamed up with the UK's National Grid and uses AI to provide a

precise picture of how clouds develop the goal being to reduce the reliance on fossil-powered reserves.

QUANTUM TECHNOLOGIES AND APPLICATIONS

1. Context

For the first time in South Asia, Indian scientists working in the Garbh-Ini programme, an interdisciplinary group for advanced research on birth outcomes, have identified 19 single nucleotide polymorphisms (SNPs), or genetic markers, that have been found to be associated with preterm or premature birth. The study, published in the Lancet Regional Health-South East Asia journal, reported that five of these SNPs have been found to “confer increased risk of early preterm birth (birth before 33 weeks)” and can predict premature births.

2. Key points

- The new economy is based on innovations that disrupt established business models.
- Artificial intelligence, Internet-of-Things (IoT), 3D printing, drones, DNA data storage, quantum computing, etc., are re-writing the world economic order.
- Quantum technology is opening up new frontiers in computing, communications and cyber security with widespread applications.
- It is expected that lots of commercial applications would emerge from theoretical constructs which are developing in this area.
- It is proposed to provide an outlay of 8000 crores over five years for the National Mission on Quantum Technologies and Applications.

3. Quantum technologies Mission

- Quantum technologies are rapidly developing globally with huge disruptive potential.

- The next-generation transformative technologies that will receive a push under this mission include quantum computers and computing, quantum communication, quantum key distribution, encryption, crypt analysis, quantum devices, quantum sensing, quantum materials, quantum clock and so on.
- The areas of focus for the Mission will be fundamental science, translation, technology development, human and infrastructural resource generation, innovation and start-ups to address issues concerning national priorities.
- Their applications which will receive a boost include those in aerospace engineering, numerical weather prediction, simulations, securing communications and financial transactions, cyber security, advanced manufacturing, health, agriculture, education and other important sectors with a focus on the creation of highly skilled jobs, human resources development, start-ups and entrepreneurship leading to technology lead economic growth.

4. The major technology disruptions

- The range of quantum technologies is expected to be one of the major technology disruptions that will change the entire paradigm of computation, communication and encryption.
- It is perceived that the countries that achieve an edge in this emerging field will have a greater advantage in garnering multifold economic growth and dominant leadership role.
- The transition of quantum science and technology from a field of active interest in research laboratories to one that can be applied in day-to-day life is also the opportune moment that provides the space for many startup companies to form and develop.
- The Mission draws upon the existing deep strengths within academic institutes across India to support interdisciplinary research projects in key verticals involving quantum technology, while simultaneously developing key foundational strengths in important core areas.
- QT research, operational implementations, Human resource availability and technology development are in a rudimentary stage

- It has become imperative both for the government and industries to be prepared to develop these emerging and disruptive technologies to secure our communications and financial transactions, remains competitive, drives societal progress, generate employment, foster economic growth and improves the overall quality of life.

5. The Benefits of the Mission

- The mission will be able to address the ever-increasing technological requirements of society and take into account the international technology trends and road maps of leading countries for the development of next-generation technologies.
- Implementation of the mission would help develop and bring quantum computers, secured communications through fibre and free space, quantum encryption and crypt-analysis and associated technologies within reach in the country and help address India-specific national and regional issues.
- The mission will help prepare next-generation skilled manpower, boost translational research and also encourage entrepreneurship and start-up ecosystem development.
- By promoting advanced research in quantum science and technology, technology development and higher education in science, technology and engineering disciplines India can be brought to par with other advanced countries and can derive several direct and indirect benefits.
- Quantum Technology is based on the principles of quantum theory, which explains the nature of energy and matter on the atomic and subatomic levels.
- It concerns the control and manipulation of quantum systems, to achieve information processing beyond the limits of the classical world.
- Quantum principles will be used for engineering solutions to extremely complex problems in computing, communications, sensing, chemistry, cryptography, imaging and mechanics.
- The Quantum field has not yet matured for commercialization, due to the extreme scientific challenges involved.
- Quantum computers store and process information using quantum two-level systems (quantum bits or qubits) which, unlike classical bits, can be prepared in superposition states.

- This key ability makes quantum computers extremely powerful compared to conventional computers when solving certain kinds of problems like finding prime factors of large numbers and searching large databases.
- The prime factorization quantum algorithm has important implications for security as it can be used to break RSA encryption, a popular method for secure communication.
- Indian physicists and engineers are preparing for a deep dive into the quantum world that holds the secrets for developing exciting technologies for computing, communication, cryptography and many more.

6. The way forward

- With a solid research base and workforce founded on significant and reliable government support, it can lead to the creation of innovative applications by industries, thereby stimulating economic growth and job creation, which will feed back into a growing quantum-based economy.
- The government's financial and organizational support will also ensure that both the public and private sectors will benefit.
- It will establish standards to be applied to all research and help stimulate a pipeline to support research and applications well into the future.

WEB 3

1. Context

It is known as the decentralised web and it caters to the next generation of the Internet, leveraging **blockchain technology** to create a more open and transparent web is called Web3.

Web3 is built on top of existing Internet infrastructure and is not in competition with previous versions of the web platform.

It allows for the creation and exchange of digital assets, **decentralised applications** (d Apps) and smart contracts in the blockchain system.

2. About Blockchain

- Blockchain is a decentralised digital technology that is designed to securely store data in a way where hacking and compromising are not easy like in current mediums and variants of the Internet.
- It is best known for its use in **cryptocurrencies like Bitcoin and Ethereum**, which are used to store and transfer digital currencies securely and transparently.

3. Key features of Web3

- One of the key features of Web3 is that it provides users with greater control over their data and digital assets.
- Instead of relying on centralised intermediaries, it offers options and mediums for an individual to have more privacy and more importantly, security of the content and transactions.
- Web3 allows for peer-to-peer transactions and interactions, which means that users are in control of their data and can choose whom they share it with.
- This also means that Web3 is more secure, as there is no single point of failure that can be exploited by hackers.
- Another key feature of Web3 is the ability to create and use decentralised applications (dApps) and smart contracts.
- These dApps can be used for a variety of purposes, such as social media, finance, gaming and more.
- Many challenges need to be overcome before Web3 can become a mainstream technology, such as scalability, interoperability and user adoption.

4. Difference between Web3 and Web2

- Web2, also known as the centralised web, is the current version of the Internet.
- It is characterised by the dominance of large, centralised platforms such as Google, Facebook and Amazon.
- Among the main differences between Web2 and Web3 are:

4.1. Centralisation vs. Decentralisation

- Web2 IS centralised, meaning that data is stored on centralised servers owned and controlled by large corporations.
- In contrast, web3 is decentralised data that is stored on a decentralised network of computers that are owned and controlled by the users themselves.

4.2. Intermediaries vs peer-to-peer

- Web2 relies heavily on intermediaries such as banks, social media platforms and online marketplaces to facilitate transactions and interactions.
- Web3 enables peer-to-peer transactions and interactions, meaning that users can transact directly with one another without the need for intermediaries like banks, for example.

4.3. Data ownership and control

- In Web2, large corporations like Facebook and Google have significant control over user data and can monetise it in ways that users may not be comfortable with.
- In Web3, users can choose to share data only with those they trust.
- In Web2, users must trust intermediaries to keep their data and transactions secure.
- In Web3, users can trust the network itself to keep their data and transactions secure.

5. Challenges for Web3

- **Scalability:** This is one of the biggest challenges. The current infrastructure of blockchain networks can only handle a limited number of transactions per second.
- **User Adoption:** While blockchain technology has been around for over a decade, it is still relatively unknown.
- **Interoperability:** Web3 is being built by a wide range of developers and organisations, each with its unique vision for how the technology should be implemented.

- **Complexity:** Technology requires a certain level of technical expertise to use and understand.
- This may be a barrier to adoption for some users who are not comfortable with technology or do not have the necessary technical knowledge.

6. Usage of Web3

6.1. Cryptocurrencies

- They are built on blockchain technology, which is a key component of Web3.
- These digital currencies enable secure, decentralised transactions without the need for intermediaries.

6.2. Decentralised Finance (DeFi)

- DeFi is a movement that aims to build a new financial system on top of blockchain technology.
- DeFi applications enable users to borrow, lend and trade cryptocurrencies without the need for traditional financial intermediaries.

6.3. Decentralised Storage

- Web3 is being used to create decentralised social networks like Mastodon, which are designed to be more user-centric.
- Web3 is also being used to develop a decentralised identity verification system.

YZ CETI B

1. Context

An alien world called YZ Ceti b has suddenly become the cynosure of astronomers. YZ Ceti b is a rocky, earthsized exoplanet rotating around a small red dwarf star, YZ Ceti, barely 12 lightyears from Earth. Astronomers have detected a repeating radio signal from this exoplanet, suggesting the presence of a magnetic field one of the prerequisites for a habitable planet around it.

2. How was the Discovery Made?

- The discovery was made by Jackie Villadsen from Bucknell University, Pennsylvania, and Sebastian Pineda from the University of Colorado, Boulder, using the Karl G. Jansky Very Large Array radio telescope in New Mexico.
- They had to make multiple observations before they could detect the radio signals from the star YZ Ceti, which seemed to match the orbital period of the planet YZ Ceti b.
- From this, they deduced that the signals were a result of the interaction between the planet's magnetic field and the star.

3. Why magnetic field is important?

- Just as energy surges from the sun sometimes disrupt telecommunications on Earth and damage orbiting satellites, intense bursts of energy from the YZ Ceti star exoplanet exchange produce spectacular auroral lights.
- These radio waves, strong enough to be picked up on Earth, confirmed the existence of an exoplanetary magnetic field.
- Such signals can only be produced if the exoplanet orbits very close to its parent star and has its magnetic field to influence the stellar wind and generate the signals.

4. What does this mean for YZ Ceti b?

- YZ Ceti b has a small orbit astronomers determined that the planet takes just a couple of Earth days to circle its star.
- Since the mid-1990s, astronomers have found hundreds of planets orbiting stars similar to the sun.
- To have an atmosphere and sustain water, a planet has to be at a certain distance from its star (in orbits said to be in the star's "Goldilocks Zone") or it will get burnt.
- Earth, for example, would have been a lot more like Venus if it had been just a little closer to the sun or cold like Mars if it had been any farther.
- Astronomers believe nearly 30% of all star systems discovered could potentially have "Goldilocks zones".

5. What are Exoplanets?

- Exoplanets are planets that orbit other stars and are beyond our solar system. The first confirmation of the detection of exoplanets occurred in 1992.
- According to NASA, more than 5,000 exoplanets have been discovered.
- Scientists believe there are more planets than stars as each star has at least one planet orbiting it.
- Exoplanets come in a host of different sizes. They can be gas giants bigger than Jupiter or as small and rocky as Earth. They are also known to have different temperatures, from boiling hot to freezing cold.

6. Discovery of Exoplanets

- Exoplanets are very hard to see directly with telescopes. They are hidden by the bright glare of the stars they orbit.
- So, astronomers use other ways to detect and study exoplanets such as looking at the effects these planets have on the stars they orbit.
- Scientists rely on indirect methods, such as the transit method, which is measuring the dimming of a star that happens to have a planet pass in front of it.
- Other detection methods include gravitational microlensing. Light from a distant star is bent and focused by gravity as a planet passes between the Star and Earth. The same method could hypothetically use our sun to see exoplanets.

SURVEY OF INDIA

1. Introduction

Survey of India, The National Survey and Mapping Organization of the country under the Department of Science & Technology, is the oldest scientific department of the GOVT. of INDIA. It was set up in 1767 (India under British Rule) and has evolved rich traditions over the years

In its assigned role as the Nation's principal mapping agency, Survey of India bears a special responsibility to ensure that the country's domain is explored and mapped

suitably to provide base maps for expeditious and integrated development and ensure that all resources contribute their full measure to the progress, prosperity and security of our country now and for generations to come

2. History

- The history of the Survey of India dates back to the 18th Century. Forerunners of army of the East India Company and sometimes in its wake Surveyors had onerous task of exploring the unknown
- Bit by bit the tapestry of Indian terrain was completed by the painstaking efforts of a distinguished line of Surveyors such as Mr Lambton and Sir George Everest
- It is a tribute to the foresight of such Surveyors that at the time of independence the country inherited a survey network built on scientific principles
- The great trigonometric series spanning the country from North to South & East to West are some of the best geodetic control series available in the world
- The scientific principles of surveying have since been augmented by the latest technology to meet the multi-disciplinary requirement of data from planners and scientists
- Organized into only 5 Directorates in 1950, mainly to look after the mapping needs of Defence Forces in North West and North East, the Department has now grown into 18 Directorates spread in all parts of the country to provide the basic map coverage required for the development of the country
- Its technology, the latest in the world, has been oriented to meet the needs of defence forces, planners and scientists in the field of geo-sciences, land and resource management
- Its expert advice is being utilized by various Ministries and undertakings of Govt. of India in many sensitive areas including the settlement of international borders, State boundaries and in assisting the planned development of hitherto underdeveloped areas
- Faced with the requirement of digital topographical data, the department created three Digital centres during late eighties to generate Digital Topographical Data Base for the entire country for use in various planning process and the creation of a geographic information system

- Its specialized Directorates such as the Geodetic and Research Branch, Research & Development Directorate and Survey Training Institute have been further strengthened to meet the growing requirement of the user's community.
- The department is also assisting in many scientific programmes of the nation related to the field of geophysics, remote sensing and digital data transfers

3. Vision & Mission

- Survey Of India will take a leadership role in providing user focused, cost effective, reliable and quality geospatial data, information and intelligence for meeting the needs of national security, sustainable national development, and new information markets
- Survey Of India dedicates itself to the advancement of theory, practice, collection and applications of geospatial data, and promotes an active exchange of information, ideas, and technological innovations amongst the data producers and users who will get access to such data of highest possible resolution at an affordable cost in the near real-time environment

4. Responsibilities

The Survey of India acts as adviser to the Government of India on all survey matters, viz Geodesy, Photogrammetry, Mapping and Map Reproduction. However, the main duties and responsibilities of the Survey of India are enumerated below:

- All Geodetic Control (Horizontal and Vertical) and Geodetic and Geophysical surveys.
- All Topographical Control, Surveys and Mapping within India.
- Mapping and Production of Geographical Maps and Aeronautical Charts.
- Surveys for Developmental Projects.
- Survey of Forests, Cantonments, large scale city surveys, guide maps, cadastral surveys etc.
- Survey and Mapping of special maps.
- Spellings of Geographical names.
- Demarcation of the External Boundaries of the Republic of India, their depiction on maps published in the country and also advice on the demarcation of inter-state boundaries.

- Training of officers and staff required for the Department, trainees from Central Government Departments and States and trainees from Foreign Countries as are sponsored by the Government of India.
- Research and Development in Cartography, Printing, Geodesy, Photogrammetry, Topographical Surveys and Indigenisation.
- Prediction of tides at 44 ports including 14 foreign ports and publication of Tide Tables one year in advance to support navigational activities.
- Scrutiny and Certification of external boundaries of India and Coastline on maps published by other agencies including private publishers

General Studies III: Economy

TARIFFS

1. Context

India is expected to appeal a recent ruling by a panel of the World Trade Organization (WTO) on its imposition of tariffs on mobile phones and electronic components in a bid to ensure that the ruling does not impact the country's domestic manufacturing goals, especially in a sector which has seen capacity building

In 2019, the EU challenged the import duty of 7.5 percent – later increased to 15 percent – levied by India in 2017 on a wide range of IT products, such as mobile phones and components, as well as integrated circuits, to curb imports and step up domestic production

2. What is a Tariff?

- Most countries are limited by their natural resources and ability to produce certain goods and services.
- They trade with other countries to get what their population needs and demands. However, trade isn't always conducted in an amenable manner between trading partners.
- Policies, geopolitics, competition, and many other factors can make trading partners unhappy. One of the ways governments deal with trading partners they disagree with is through tariffs.
- A tariff is a tax imposed by one country on the goods and services imported from another country to influence it, raise revenues, or protect competitive advantages.

3. Key Take Aways

- Governments impose tariffs to raise revenue, protect domestic industries, or exert political leverage over another country.
- Tariffs often result in unwanted side effects, such as higher consumer prices.
- Tariffs have a long and contentious history, and the debate over whether they represent good or bad policy still rages.

4. History of Tariffs

4.1 Pre Modern Europe

- In pre-modern Europe, a nation's wealth was believed to consist of fixed, tangible assets, such as gold, silver, land, and other physical resources.
- Trade was seen as a Zero-sum game that resulted in either a clear net loss or a clear net gain of wealth.
- If a country imported more than it exported, a resource, mainly gold, would flow abroad, thereby draining its wealth. Cross-border trade was viewed with suspicion, and countries preferred to acquire colonies with which they could establish exclusive trading relationships rather than trading with each other.
- This system, known as mercantilism, relied heavily on tariffs and even outright bans on trade. The colonizing country, which saw itself as

competing with other colonizers, would import raw materials from its colonies, which were generally barred from selling their raw materials elsewhere.

- The colonizing country would convert the materials into manufactured wares, which it would sell back to the colonies. High tariffs and other barriers were implemented to ensure that colonies only purchased manufactured goods from their home countries.

4.2 Late 19th and early 20th Centuries

- Relatively free trade enjoyed a heyday in the late 19th and early 20th centuries when the idea took hold that international commerce had made large-scale wars between nations so expensive and counterproductive that they were obsolete.
- World War I proved that idea wrong, and nationalist approaches to trade, including high tariffs, dominated until the end of World War II.
- From that point on, free trade enjoyed a 50-year resurgence, culminating in the creation in 1995 of the World Trade Organisation (WTO), which acts as an international forum for settling disputes and laying down ground rules.
- Free trade agreements, such as the North American Free Trade Agreement (NAFTA) now known as the United States-Mexico-Canada Agreement (USMCA) and the European Union (EU), also proliferated.

4.3 In the 21st Century

- Skepticism of this model sometimes labeled neoliberalism by critics who tie it to 19th-century liberal arguments in favor of free trade grew, however, and Britain in 2016 voted to leave the European Union.
- That same year Donald Trump won the U.S. presidential election on a platform that included a call for tariffs on Chinese and Mexican imports, which he implemented when he took office.
- Critics of tariff-free multilateral trade deals, who come from both ends of the political spectrum, argue that they erode national sovereignty and encourage a race to the bottom regarding wages, worker protections, and product quality and standards.

- Meanwhile, the defenders of such deals counter that tariffs lead to trade wars, hurt consumers, and hamper innovation.

5. Understanding Tariffs

- Tariffs are used to restrict imports. Simply put, they increase the price of goods and services purchased from another country, making them less attractive to domestic consumers.
- A key point to understand is that a tariff affects the exporting country because consumers in the country that imposed the tariff might shy away from imports due to the price increase. However, if the consumer still chooses the imported product, then the tariff has essentially raised the cost to the consumer in another country.

There are two types of tariffs:

- A specific tariff is levied as a fixed fee based on the type of item, such as a \$500 tariff on a car.
- An ad-valorem tariff is levied based on the item's value, such as 5% of an import's value.

6. Why Government Imposes Tariffs?

Governments may impose tariffs for several reasons

6.1 Raise Revenues

Tariffs can be used to raise revenues for governments. This kind of tariff is called a revenue tariff and is not designed to restrict imports. For instance, in 2018 and 2019, President Donald Trump and his administration imposed tariffs on many items to rebalance the trade deficit. In the fiscal year 2019, customs duties received were \$18 billion. In FY 2020, duties received were \$21 billion.

6.2 Protect Domestic Industries

Governments can use tariffs to benefit particular industries, often doing so to protect companies and jobs. For example, in May 2022, President Joe Biden proposed a 25% ad valorem tariff on steel articles from all countries except



Canada, Mexico, and the United Kingdom (the U.K. has a quota of an aggregate of 500,000 metric tons it can trade with the U.S.). This proclamation reopens the trade of specific items with the U.K. while taking measures to protect domestic U.S. steel manufacturing and production jobs.

6.3 Protect Domestic Consumers

By making foreign-produced goods more expensive, tariffs can make domestically-produced alternatives seem more attractive. Some products made in countries with fewer regulations can harm consumers, such as a product coated in lead-based paint. Tariffs can make these products so expensive that consumers won't buy them.

6.4 Protect National Interests

Tariffs can also be used as an extension of foreign policy as their imposition on a trading partner's main exports may be used to exert economic leverage. For example, when Russia invaded Ukraine, much of the world protested by boycotting Russian goods or imposing sanctions. In April 2022, President Joe Biden suspended normal trade with Russia. In June, he raised the tariff on Russian imports not prohibited by the April suspension to 35%.

7. Advantages of Tariffs

- **Produce revenues:** As discussed, tariffs provide a government a chance to bring in more money. This can relieve some of the tax burdens felt by a country's citizens and help the government to reduce deficits.
- **Open negotiations:** Tariffs can be used by countries to open negotiations for trade or other issues. Each side can use tariffs to help them create economic policies and talk with trade partners.
- **Support a nation's goals:** One of the most popular uses for tariffs is to use them to ensure domestic products receive preference within a country to support businesses and the economy.
- **Make a market predictable:** Tariffs can help stabilize a market and make prices predictable.

8. Disadvantages of Tariffs

- **Create issues between governments:** Many nations use tariffs to punish or discourage actions they disapprove of. Unfortunately, doing this can create tensions between two countries and lead to more problems.
- **Initiate trade wars:** A typical response for a country with tariffs imposed on it is to respond similarly, creating a trade war in which neither country benefits from the other.

UNIFIED PAYMENT INTERFACE (UPI)

1. Introduction

It is India's mobile-based fast payment system, which enables a user to send or receive money using a Virtual Payment Address (VPA) created by the customer. It eliminates the risk of sharing bank account details by the remitter. UPI supports both Person-to-Person (P2P) and Person-to-Merchant (P2M) payments.

2. About UPI

- Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
- It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.
- Unified Payment Interface (UPI) is a popular mobile payment method that allows you to transfer funds from one bank account to the other, instantly and free of charge.
- Ever since its inception, UPI has made financial transactions much easier for account holders.
- The UPI ID is a unique identification for a bank account that is used to send and receive funds from one bank to another.

- In UPI payment applications such as Paytm, you don't need to enter the receiver's UPI ID

2.1. Pay Now

- It is a fast payment system in Singapore which enables peer-to-peer funds transfer service, available to retail customers through participating banks and Non-Bank Financial Institutions (NFI)s in Singapore
- It allows users to send and receive instant funds from one bank or e-wallet account to another in Singapore by using just their mobile number, Singapore National Registration Identity Card (NRIC)/Foreign Identification Number (FIN), or VPA

2.2. UPI-Pay Now

- The UPI-PayNow linkage is a significant milestone in the development of infrastructure for cross-border payments between India and Singapore
- It closely aligns with the G20's financial inclusion priorities of driving faster, cheaper and more transparent cross-border payments

INDIA'S MILK PRODUCTION

1. Context

Till mid-October last year, Gujarat Cooperative Milk Marketing Federation (Amul) was charging consumers Rs 10 per liter more for full-cream milk compared to toned milk. The maximum retail price (MRP) for its 'Gold' full-cream milk, containing 6% fat and 9% SNF (solids-not-fat), was Rs 62 per liter in Delhi, as against Rs 52 for 'Taaza' toned milk with 3% fat and 8.5% SNF.

2. Why are milk prices going up?

- **Demand Supply mismatch:** The pandemic-hit dairy industry has reported a complete recovery. This year, the demand for liquid milk is also high compared to previous years. But most dairies in the country are short on their supply of skimmed milk powder (SMP) and white butter.
- **Rise in cattle feed cost:** The reduction in milk yield has come on the back of the rising cost of cattle feed. Cattle feed cost alone has gone up by over 25%.
- **Disease in cattle:** Some major milk-producing states have seen a rise in cases of disease among cattle. Lumpy skin disease which leads to falling in milk output has been reported in Gujarat, Punjab, and Haryana.
- **Rise in logistics cost:** There has also been a rise in transport, logistics, manpower, and energy costs. Due to the rise in input costs, milk procurement rates have increased by 15-25%.

3. Importance of Milk and dairy products in everyday life

- Milk and milk products are rich in protein.
- They are a key source of calcium, vitamins, and protein for a large vegetarian population in India.
- Dairy industry strengthens the rural economy.
- It acts as a source of income for farmers and potential for women empowerment.

4. Present status of the Dairy sector in India

- According to the Food and Agriculture Organisation Corporate Statistical Database (FAOSTAT), India is the highest milk producer in the world contributing 24% of global milk production.
- Top milk-producing states include Rajasthan (15.05%), Uttar Pradesh (14.93%), and Madhya Pradesh (8.6%).
- Indian dairy sector has an annual growth trend of 5-6%.
- In 2022, there was a 39% jump in exports of dairy products.
- Key exporting destinations are Bangladesh, UAE, Bahrain, Malaysia, Saudi Arabia, and Qatar.

5. Government Initiatives to Boost the dairy sector

- **Operation Flood:** It was launched in 1970 by National Dairy Development Board (NDDB). It transformed India from a milk-deficient into the world's largest milk producer. Dr. Varghese Kurien was the architect of Operation Flood.
- **Rashtriya Gokul Mission:** It aims to genetically improve the cattle population and promote and conserve indigenous cattle breeds.
- **National Dairy Development Board (NDDB):** It is monitoring the supply-demand gap in dairy products along with the central government.
- **National Programme for Dairy Development (NPDD):** It aims to strengthen infrastructure for the production of high-quality milk as well as for the procurement, processing, and marketing of milk and milk products.
- **Dairy Entrepreneurship Development Scheme (DEDS):** It aims to create self-employment opportunities in the dairy industry.
- The National Bank for Agriculture and Rural Development (NABARD) is carrying out the programme.

6. Alternative to imports

- October-March is normally the 'flush' season in milk when supply exceeds demand.
- Dairies convert the surplus that they procure into skim milk powder (SMP) and butter fat.
- This is done by separating the cream and removing the water in the skimmed milk through evaporation and spray drying.
- The same SMP and fat are reconstituted into whole milk during the 'lean' summer-monsoon months (April-September) when animals produce less amid rising demand for curd, lassi, and ice cream.
- Such processing into solids and reconstitution by adding water happens in no other farm produce: atta flour and sausages once made cannot be turned back into wheat or pigs.
- The 2022-23 'flush' was a rare season where milk procurement fell, leaving dairies with hardly any surplus for converting into fat and powder.
- And with production bound to fall further in the ongoing 'lean', the dependence on the purchase of milk solids for reconstitution will only go up.

7. Fixing GST Anamoly

- Therein lies a problem. Milk doesn't attract any goods and services tax.
- But SMP is taxed at 5% and milk fat at 12%. So while dairies pay no tax on milk procured from farmers, they have to shell out GST on solids.
- And Input tax credits cannot be claimed, as there's no GST on milk itself. Moreover, the tax incidence goes up as the fat in the reconstituted milk increases.
- For every 100 liters (103 kg) of full-cream milk that dairies process, 6.18 kg of fat and 9.27 kg of SMP are produced.
- Butter contains 82% fat. Taking its price at Rs 425/kg (Rs 518/kg of fat) and SMP's at Rs 325/kg, their combined cost in the reconstitution of 100 liters will be Rs 6,214.
- Adding 12% GST on fat and 5% on SMP takes it to Rs 6,749 or Rs 67.49 per liter.
- Simply put, the total cost of fat and SMP used in the reconstitution of one liter of full cream, and milk is today around Rs 67.5.
- The GST component in that is Rs 5.35/liter-Rs 3.84 on fat and Rs 1.51 on SMP -which is ultimately passed on to the consumer.
- One way to avoid this is by doing away with GST on milk solids used for reconstitution purposes.
- Alternatively, the GST on milk fats can be reduced to 5%. Differential rates on SMP and fat probably make no sense, when both are derived directly from milk.
- A 12% GST on milk fat is also an anomaly when vegetable fat (edible oils) is taxed at 5%.

Mains Corner:

- 1. What is the historical background of the boundary dispute between Assam and Arunachal Pradesh? Why did the demarcation become a bone of contention between the two states? (250 Words).**
- 2. What is National Population Register (NPR)? Discuss its Objectives and how it is different from the National Register of Indian Citizens (NRC). (250 Words)**
- 3. What is Web3? Discuss how Web3 is different from Web2 and Explain the challenges of Web3. (250 Words)**
- 4. What is Greater Nagalim? Discuss the reasons for the Naga insurgency (250 Words)**
- 5. What are the Highlights of the Juvenile Justice Act, 2015 and discuss the Concern Associated with the Juvenile Justice Amendment Act, 2021?(250 Words)**

Prelims Corner:

1. Which of the following is *not* a function of the Reserve Bank of India (RBI)?
 - A. It acts as regulator and supervisor of the financial system.
 - B. It manages foreign exchange.
 - C. It provides a loan facility to the business and ensures economic growth.
 - D. It issues, exchanges, and destroys the currency notes.

Answer (C)

The Reserve Bank of India was established on April 1, 1935 in accordance with the provisions of the Reserve Bank of India Act, 1934.

Main Functions

It formulates, implements and monitors the monetary policy for maintaining price stability while keeping in mind the objective of growth.

It acts as regulator and supervisor of the financial system. It prescribes broad parameters of banking operations within which the country's banking and financial system functions for maintaining public confidence in the system, protecting depositors' interest and providing cost-effective banking services to the public. It manages the Foreign Exchange Management Act, 1999 to facilitate external trade and payment and promote orderly development and maintenance of foreign exchange market in India.

It issues, exchanges and destroys currency notes as well as puts into circulation coins minted by the Government of India to give the public adequate quantity of supplies of currency notes and coins and in good quality.

It introduces and upgrades safe and efficient modes of payment systems in the country to meet the requirements of the public at large for maintaining public confidence in the payment and settlement system.

It acts as Banker to the Government and performs merchant banking functions for the central and the state governments.

It maintains the banking accounts of all scheduled banks.

2. This crop is sown during the early winters in Northern India. The longer the crop is in the field, the more starch and proteins the grains will accumulate, and the higher the yields. The optimum temperature range for ideal germination of its seed is 20-25 degree Celsius though the seeds can germinate in the temperature range 3.5 to 35 degree Celsius.

The above description refers to which of the following crops?

- A. Mustard
- B. Sunflower
- C. Paddy
- D. Wheat

Answer (D)

Wheat is grown in a variety of soils of India. Soils with a clay loam or loam texture, good structure and moderate water holding capacity are ideal for wheat cultivation.

Wheat is sown in Punjab, Haryana and Rajasthan during the first half of November and in Uttar Pradesh by the end of November.

The optimum temperature range for ideal germination of wheat seed is 20-25 C though the seeds can germinate in the temperature range 3.5 to 35 c.

The longer the crop is in the field now, the more starch and proteins the grains will accumulate, and higher the yields.

The crop is ready for harvest once the grains have ripened and moisture levels are reduced to 12-13% by rising temperatures.

3. Consider the following statements about Financial Stability Report, 2022:

1. Gross non-performing loans (GNPAs) of the banking system have declined.
2. The report witnessed improvement in the capital-to-risk-weighted asset ratio.

Select the correct answer using the codes given below:

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

Answer (C)

According to the Reserve Bank of India's latest financial stability report, gross non-performing loans (GNPAs) of the banking system have declined from 7.4 per

cent in March 2021 to a six-year low of 5.9 per cent in March 2022. Hence, statement 1 is correct.

The report shows that banks have witnessed an improvement in their capital position, with the capital to risk weighted assets ratio rising to 16.7 per cent at the end of March 2022. Hence, statement 2 is correct.

Bad loans have also declined even in sectors such as engineering goods, gems and jewellery, and construction.

The report shows that the share of large borrowers in the banks' loan portfolio has been declining, falling to less than 48 per cent of banks total advances, indicating a "reduction in concentration and diversification of borrowers".

4. Consider the following statements about Consumer Price Index (CPI):

1. The CPI-based inflation data is compiled by the Department for Promotion of Industry and Internal Trade and the Ministry of Commerce and Industry.
2. CPI is dominated by the prices of manufactured goods.
3. CPI takes into account the change in the prices of services.

Select the correct answer using the codes given below:

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

Answer (D)

The two most-often used inflation rates in the country are the wholesale price index (WPI) and the consumer price index (CPI) based on inflation rate.

The CPI-based inflation data is compiled by the Ministry of Statistics and Programme Implementation while the WPI-based inflation data is put together by

the Department for Promotion of Industry and Internal Trade and Ministry of Commerce and Industry. Hence, statement 1 is not correct.

The WPI is dominated by the prices of manufactured goods while the CPI is dominated by the prices of food articles. Hence, statement 2 is not correct.

The WPI does not take into account the change in prices of services, but CPI does. Hence, statement 3 is correct.

If services such as transport, education, recreation and amusement gets costlier, then retail inflation will rise but there will be no impact on wholesale price inflation.

5. Consider the following statements about Unified Payment Interface (UPI):

1. It enables a user to send or receive money using a Virtual Payment Address (VPA) created by the customer.
2. It supports Person-to-Person (P2P) payments only.
3. It has been linked with PayNow, a payment system in the UAE.

Select the correct answer using the codes given below:

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

Answer (C)

Unified Payments Interface (UPI)

It is India's mobile-based fast payment system, which enables a user to send or receive money using a Virtual Payment Address (VPA) created by the customer.

It eliminates the risk of sharing bank account details by the remitter. UPI supports both Person-to-Person (P2P) and Person-to-Merchant (P2M) payments.



PayNow

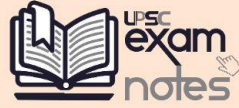
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UPI-PayNow

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It closely aligns with the G20's financial inclusion priorities of driving faster, cheaper and more transparent cross-border payments.



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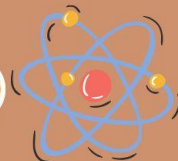
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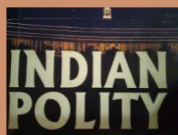
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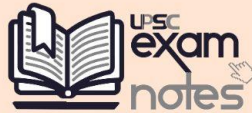
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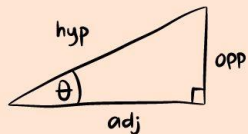
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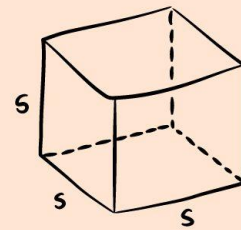
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