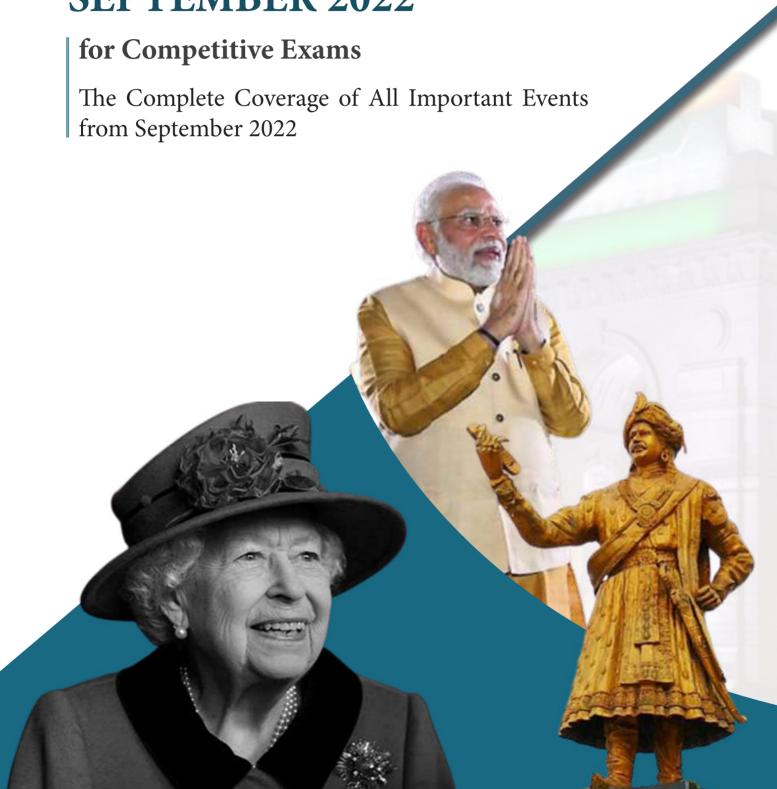


MONTHLY CURRENT AFFAIRS SEPTEMBER 2022





UPSC CSE 2021 ACHIEVERS







Many more...

Foreword

Dear Aspirants,

This magazine by **Plutus IAS team** is designed in such a fashion that it holistically covers all the relevant and important topics for civil services exam or IAS exam to make aspirants battle or exam ready. **Plutus IAS Current Affairs Magazine** is a secondary source of information, the newspaper will always remain the first source for preparation of current affairs.

Now, current affairs no longer remain the current, it is contemporary affairs. Questions asked in prelims as well as mains test the conceptual clarity of an aspirant. This magazine prepared with an aim to help you understand the interlinkage of both statics and current and internalize those concepts required to crack this examination.

Plutus IAS team wishes you all the best. Prepare for UPSC Civil Services Examination with calm, composed and serene mind with some patience to crack this examination in one go.

Team Plutus IAS

Sources:

The Hindu | The Indian Express | The Economic Times | PIB News | CPCB | NDMA | unesco World Heritage Convention | BBC | NCERTs All standard reference books.

Plutus IAS Current Affairs Monthly Magazine covers a wide range of topics that overlaps with the CORE subjects.

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CONTENTS

S.No.	Topics	Page No.	
1.	Universal Basic Insurance - An Alternative to Universal Basic Income	1 - 3	
2.	PATRIARCHAL NATURAL OF THE LEGAL SYSTEM	4 - 6	
3.	Smart farming	7 - 9	
4.	GST : CAN it be consider as a barometer of growth?	10 - 11	
5.	Kurki	12 - 13	
6.	IRAW POLITICAL CRISIS		
7.	'Arya Samaj certificates not proof of marriage'		
8.	A golder memory of Rajamahendravaram by Raja raja Narendra	18 - 19	
9.	LADAKH TO HAVE INDIA'S FIRST 'DARK SKY RESERVE' TO PROMOTE ASTRONOMY TOURISM	20 - 22	
10.	CAPF eAWAS	23 - 24	
11.	BUSTRAD ADAPTED TO PRODUCE 2-EGGS CLUCTH	25 - 27	
12.	INS VIKRANT : " A step towards india's atmanirbharta in defence"	28 - 29	
13.	Teera Dispute	30 - 31	
14.	Court allows hearing of Hindu plea for the right to pray in Gyanvapi mosque	32 - 33	
15.	PM-SHRI Yojana	34 - 36	
16.	"Triple Dip" La Nina	37 - 40	
17.	NASA'S MISSION TO PROTECT EARTH FROM THE HAZARDOUS ASTEROID THAT COULD POSE A THREAT TO IT IN THE FUTURE	41 - 42	
18.	INDIA AND SCO	43 - 45	
19.	SC no to Ganesh puja at Bengaluru Idgah ground, HC allows it in Hubli	46 - 48	
20.	Cabinet approves addition of 4 tribes to ST list	49 - 51	
21.	Statuette of Annabhau Sathe	52 - 54	
22.	After more than 70 years, Cheetahs will again walk on the Indian soil	55 - 57	
23.	India's broken rice export ban	58 - 60	
24.	CRISPR: BEGINNING TO DELIVER	61 -62	
25.	GENENTICALLY MODIFIED PLANTS	63 -64	
26.	NATIONAL LIST OF ESSENTIAL MEDICINES (NLEM): ENSURING ACCESSIBILITY AND AFFORDABILITY OF MEDICINES IN INDIA	65 - 66	
27.	THE DOCTRINE OF ESSENTIAL RELIGIOUS PRACTICES: EVOLUTION AND CHALLENGES	67 - 69	

28.	Instant loan apps	70 - 72	
29.	NASAL VACCINE	73 - 74	
30.	O. Supreme Court permits live streaming of proceedings of all Constitutional Bench		
31.	REPERCUSSIONS OF ALTERNATIONS IN THE CATCHMENT AREA	78 - 79	
32.	HEARING BEFORE DEATH SENTENCE: SC REFERS TO CONSTITUTIONAL BENCH FRAMING GUIDELINES ON MITIGATING CIRCUMSTANCES		
33.	Rules notified for the Criminal Procedure (Identification) Act, 2022	82 - 84	
34.	Human development report 2021-22	85 - 89	
35.	5G ROLLOUT	90 - 92	
36.	The growing need for strengthening Internal democracy in Political Parties	93 - 94	
37.	Draft Indian Telecommunication Bill, 2022	95 - 96	
38.	3. Mid-Day Meal Audit		
39.	9. Chip Shortage: Global Semiconductor Shortage And Ramifications For India		
40.	Low Rainfall In Delhi, Impacting The Life Cycle Of Dragonfly	104 - 105	
41.	THE POWER TO REMOVE ONLINE CONTENT	106 - 107	
42.	RIGHT TO REPRODUCTIVE CHOICE: SUPREME COURT EXTENDS RIGHT TO SAFE AND LEGAL ABORTION TO SINGLE, UNMARRIED WOMEN	108 - 110	
43.	OCEANIC WARNINGS: CHANGING NATURE OF HURRICANES	111 - 114	
44.	Bihar Dialects: Surjapuri And Bajjika	115 - 116	
45.	How The Fall Of The Indian Rupee Hurts Economic Stability Of The Country	117 - 119	



CURRENT AFFAIRS SEPTEMBER 2022

Universal Basic Insurance - An alternative to Universal Basic Income

Universal Basic Income Scheme:

Although, there are hundreds of poverty alleviation programmes in India, aims to cater from cradle to grave. However, their effectiveness and efficiency has been in question.

Brief history of targeting in India:

India's experience with targeted delivery of welfare programs has not been much encouraging. Targeted delivery started in **1990s based on self-reporting income criteria** to identify the poor.

 Later in 2000s multidimensional criteria was used to identify poor. However, all of these endeavours have not been able to remove the issues of manipulation and corruption, which crowd out the poor and the truly deserving BPL cardholder and serves the already uplifted (usually middle class).

Universal/Minimum Basic Income (UBI):

In the developed world, as fears of automation have spurred thinkers to devise some ways to deal with the issue. Similar trends are being observed in India as according to **World Bank 69% jobs** in India are under the threat of automation.

- Also, despite making remarkable progress in bringing down poverty from about 70% at independence to about 22% (Tendulkar Committee), it can safely be said that "wiping tears from every eye" (Gandhi) has not been possible.
- Also, as Nehru exhorted "so long as there are tears and suffering, so long our work will not be over" is very much true nearly 70 years after independence.

State governments efforts:

Sikkim is set to become the first state in India to roll out Universal Basic Income (UBI).

Support:

Economics **Nobel Laureates Peter Diamond and Christopher Pissarides**, and tech leaders Mark Zuckerberg and Elon Musk.

Characteristics of UBI scheme:

A basic income has the five following characteristics:

- **Periodic:** it is paid at regular intervals (for example every month), not as a one-off grant.
- o **Cash payment:** Allowing those who receive it to decide what they spend it on. It is not, therefore, paid either in kind (such as food or services) or in vouchers dedicated to a specific use.
- o **Individual:** It is paid on an individual basis—and not, for instance, to households.
- o **Universal:** It is paid to all, without means test.
- o **Unconditional:** It is paid without a requirement to work or to demonstrate willingness to work.

How does UBI liberates the citizens from paternalistic and clientelistic relationships with the state?

- Clientelistic Relationship: the client (people) gives political or financial support to a patron (as in the form of votes) in exchange for some special privilege or benefit [Demand polity according to Rudolf & Rudolf]. Ex- election freebies. As UBI would be Universal, it will kill all such incentives.
- Paternalism is system in which state acquires too much of power under the argument of making individuals better off or to give protection. UBI would be in cash so the receiver could exercise his discretion to maximize his interests, without state's interference to decide on his/her behalf.

What are the main arguments against a universal basic income?

- It would reduce the motivation for work. However, test experiments done in some villages in MP and in few developing countries like Indonesia and Philippines, shows that it rather improved the standard of living and entrepreneurship.
- Simply unaffordable for India, as it is estimated that paying a basic income equivalent to the poverty line would entail a cost of 11- 12.5% of GDP, which is equivalent to the Union govt. budget. While, govt. total subsidies are about 4-4.5% of GDP.

In discussing the merits and demerits of the UBI or any other development policy, it is important to avoid some standard pitfalls.

No one size does not fit all or a magic pill can cure all problems, as different policies could work well in different contexts in different societies. Cash transfers only make sense if you have ready access to markets, which is not true if you live in remote rural areas. Thus, atleast in such cases there is a need for some in-kind transfers.

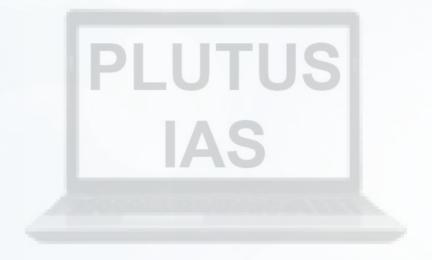
- o So yes, a UBI will provide some relief to the poor, but will not provide a long-term solution to the problem of poverty. For this govt. needs to investment in health, education, and skill-formation.
- Also, it's accused that UBI is being contemplated by the govt. as a replacement to the public distribution system (PDS) and food, fuel, and fertiliser subsidies. On the contrary, it is just about giving cash under one umbrella, what is already being given (in-kind and cash benefits) via different channels. Thus, UBI is not an add-on, which it should be, at least in early stages.

Possible alternative - Universal Basic Insurance:

- Low insurance penetration: The insurance penetration (premium as a percentage of GDP) in India has been hovering around 4% for many years compared to 17%, 9% and 6% in Taiwan, Japan and China, respectively. Thus, insurance can become a need-based safety net for the poor.
- Availability of Data: The economy largely remains informal, data of that informal sector are now available both for businesses (through GSTIN, or Goods and Services Tax Identification Number) and for unorganised workers (through e-Shram, which is the centralised database of all unorganised workers).

Thus, it can be seen that UBI is need a much-needed solution to the issue being faced by the polity, economy and society. For the time being the idea of Universal Basic Insurance can be implemented.

Vikas Gupta



Patriarchal nature of the legal system

Patriarchal nature of the legal system

GS Paper -1 (Society)

Why in news?

According to the Kerala Sessions Court, the de facto complainant's attire in "sexually provocative clothing" did not inherently trigger the offence under Section 354A of the Indian Penal Code.

Background of Issue

- The case involves allegations of sexual harassment.
- A novelist and social activist in Kerala was granted anticipatory release by the Sessions Court.
- The sessions court had relied on images included with the accused's bail application that showed the de facto complainant was donning a "sexually suggestive" garment.
- The statement directly violated a woman's constitutional rights to privacy, life, and personal liberty.
- Other examples: In its rulings on Section 498A (dowry harassment) of the IPC, where it claimed the legislation was being abused, the judiciary's patriarchal mindset was clearly on display.
- In rape cases when the court questioned why the rape occurred, the woman consented and did not object.

Section 354A of IPC

- It has to do with sexual harassment and how it's dealt with.
- The following actions by a man are regarded as sexual offences:
- Physical touch and moves that include unwanted and explicit sexual advances
- request or demand for sexual favours
- displaying pornography against a woman's will
- making remarks with a sexual agenda
- Penalty: strict incarceration for a time that may last up to three years, a fine, or both.
- For comments with sexual overtones, the penalty is a year in jail, a fine, or both.

What is a Freudian slip, exactly?

- The sessions court judge's stated ratio decidendi, or justification for the ruling, is a (patriarchal) Freudian error.
- A Freudian slip is an error in speech, memory, or behaviour that happens as a result of the collision of an unconscious suppressed wish or internal line of thought, according to psychoanalysis.
- The objectification of women as an erotic quiddity leads to the description of a woman's clothing

as "sexually provocative."

• In this instance, a patriarchy was unintentionally ignited, having an impact on not only the specific judicial official but also the entire socio-legal system.

What is the Madhya Pradesh State v. Aprna Bhat Case?

- Eight additional attorneys joined attorney Aparna Bhat in filing an appeal against the Madhya Pradesh High Court's contested ruling.
- As a condition of parole, the accused of sexual assault was required to go to the victim's house on Raksha Bandhan with a rakhi and be tied by her.
- In cases of gender violence, the Supreme Court stated that it is especially important to avoid using language that minimises the crime and trivialises the victim.
- The Kerala Sessions Court judge's contentious remark clearly contravenes the Supreme Court of India's directive.

What obstacles do women encounter when seeking justice?

- For women, the court process is difficult.
- It is much more difficult when women lack support from their families, society, or the law as it currently stands, either financially or emotionally.
- Women are also underrepresented in the Indian judicial system.
- Only 11 women have served on the Supreme Court since its founding in 1950, according to Justice Indira Banerjee, the court's senior-most female judge.
- The statement continued, "It belonged to men to formulate, apply, and execute laws, and considered it as an axiomatic truth."
- The actual situation was that Myra Bradwell, an Illinois resident, applied to the judges of the state's Supreme Court for a licence to practise law.
- Her request for permission was rejected by the Supreme Court, which stated that "the primary destiny and duty of woman is to fulfil the noble and benevolent offices of wife and mother."
- According to the Hadiya Case ruling, Hadiya's parents could choose who to give her to after she was
 declared property in the case.
- In India, the ancient belief that women are descended from a lower god still dominates the legal system.

What is the purpose of feminist law?

- It is a legal concept that is centred on the social, political, and economic equality of the sexes.
- Feminist jurisprudence should be taught to law students as a corrective approach to combat the patriarchal mindset that permeates the socio-legal system.
- The feminist philosophy of law incorporates ideas from feminist political theory, relational metaphysics, and progressive social ontology.

- Understanding how legal systems impose prevailing gendered and masculinist norms is useful.
- In an effort to build human concepts and institutions for the future, legal doctrine is being examined and reformulated to overcome historical prejudice and enforced inequality.
- The choice of attire is essential to a person's right to privacy and

What has the position of women's clothing been historically?

- France's King Henry III ruled in 1583 that textiles like velvet, satin, and damask were only appropriate for the upper class.
- The monarch emphasised that god was upset because he couldn't tell someone's position by looking at their garments.
- King Edward IV of England issued a similar royal proclamation in 1463 declaring that extravagant and exorbitant clothing made God angry.
- When Joan of Arc was put on trial by the Bishop of Beauvais in 1429, one of the accusations against her was that she had begun wearing masculine clothing.
- Wearing male clothing was against women's modesty and against divine law.

What should we do next?

- A more responsive, inclusive, and participatory decision-making process would be achieved at all levels if women were represented in the courts.
- A judge of the Indian Republic should not be a reincarnation of Henry III, Edward IV, or the Bishop of Beauvais if they are dedicated to the trinity of liberty, equality, and fraternity.
- The judiciary is expected to be impartial when interpreting legislation passed by legislative authorities.
- Sensitization to gender issues and awareness could result in change.

Vivek Raj

Smart Farming

Smart Farming

Government is promoting adoption of smart farming methods through the use of technology and innovation in the agriculture sector in the country. Government is implementing a Digital Agriculture Mission (DAM) which includes India Digital Ecosystem of Agriculture (IDEA), Farmers Database, Unified Farmers Service Interface (UFSI), Funding to the States on the new Technology (NeGPA), Revamping Mahalanobis National Crop Forecast Center (MNCFC), Soil Health, Fertility and profile mapping.

Under the NeGPA programme funding is given to State Governments for Digital Agriculture projects using emerging technologies like Artificial Intelligence and Machine Learning (AI/ML), Internet of Things (IOT), Block chain etc. Adoption of drone technologies is being done. To promote smart farming, the Government promotes Startups in the Agriculture sector and nurtures agri-entrepreneurs.

The Per Drop More Crop component of the Pradhan Mantri Krishi Sichai Yojana (PMKSY-PDMC) aims to increase water use efficiency at the farm level through micro irrigation technologies, *i.e.*, drip and sprinkler irrigation systems. The GoI started eNAM (National Agriculture Market), an electronic trading portal which creates networks between the existing Agricultural Produce Market Committee (APMC) mandis for the farmers.

The Indian Council of Agricultural Research (ICAR) promotes innovation, extension and education in agriculture. A total of 1575 field crop varieties were released for different agricultural crops during 2014-21. During 2014-21, 91.43 crore agro-advisories were provided to farmers through mobiles. ICAR developed 187 mobile apps on different farm and farmer related services during 2014-21. These ICAR apps are now integrated on one common platform called KISAAN. The Farmer FIRST (Farm, Innovations, Resources, Science and Technology) initiative was launched during this period by ICAR with an enhanced farmers-scientist interface to move beyond production and productivity.

This information was given by the Union Minister of Agriculture and Farmers Welfare, Shri Narendra Singh Tomar in a written reply in Rajya Sabha.

INDIA'S SMART AGRICULTURE STRATEGIES

India's Agriculture Sector

The agriculture sector plays a vital role in enriching India's economy. Agriculture accounted for almost 17.8% of India's Gross Value Added (GVA) in 2019–20. According to the World Bank's collection of development indicators, the employment rate in the Indian agriculture sector stood at 41.5% in 2020. From a socio-economic standpoint, agriculture is a vital sector which requires focus and awareness at all levels.

In recent years, the agriculture sector has been facing various challenges such as yield plateaus, soil degradation, water stress, high imports on oilseeds, nutrition deficiency, volatile prices, inadequate infrastructure linkages, post-harvest loss, and information asymmetry.

However, adverse climate changes remain one of the most significant issues faced by this sector. According to a report, India lost approximately 5.04 million hectares of crop area due to cyclones, floods, cloudbursts, and landslides until November 25, 2021. Such calamities have had a severe impact on farmers, especially small farmers who constitute close to 85% of the total farmers in India.

Thus, there is a dire need for smart agriculture in India. The Indian government has taken several measures for developing the sector, considering its importance. Notably, the government is exploring

ways to enhance agricultural efficiency and profitability of farmers, and to help farmers double their incomes by 2022 compared to the base year 2015–16.

Smart Agriculture in India

Smart farming has emerged to be the need of the hour for the Indian agriculture sector . It is much more efficient than the traditional methods of farming. Smart farming, which involves the application of sensors and automated irrigation practices, can help monitor agricultural land, temperature, soil moisture, etc. This would enable farmers to monitor crops from anywhere. Moreover, smart farming can help integrate digital and physical infrastructures which would benefit small farmers.

The small and marginal farmers of India find it challenging to integrate digital and physical infrastructures which hampers their revenue growth. Agro-based start-ups can reach out to the farmers and help them gain access to such viable and cost-effective solutions. According to a report published by the National Association of Software and Services Companies (NASSCOM) in 2019, there were more than 450 argo-based tech driven start-ups in India as of 2019.

This number has skyrocketed in the last two years as the sector witnessed a surge in investments and funding. Agri-based tech-driven start-ups have been very innovative in assisting farmers and revolutionizing farming techniques. They have also addressed one of the most powerful headwinds (climate change) through climate-smart farming.

Climate-smart Agriculture

The rising population and changing diets have created a huge pressure on land in India. Farmers are struggling to keep up as crop yields level off, soil degradation rises, water shortage increases, biodiversity declines, and natural calamities become more frequent. Furthermore, agriculture accounts for almost 14% of India's total greenhouse gas emissions.

Climate-smart agriculture (CSA) can help transform agri-food systems in a responsive manner and mitigate the devastating effects of climate changes while producing food and energy in a sustainable manner. Farmers in India are gradually realizing the benefits of CSA. CSA is an integrated approach of managing cropland, livestock, forest, and fisheries. CSA also addresses the interconnected challenges of food security and rapid climate change. CSA can help India in achieving the following outcomes:

- Enhanced productivity: CSA can help in producing more food without compromising the quality which would promote nutrition security and boost growth in income among farmers, especially the poor and marginal groups.
- Improved resilience: CSA can reduce vulnerability to pests, drought diseases and climate-related shocks and risks. It can also help farmers nurture and develop the long stressed and unfavorable environment.
- Reduced emissions: One of the most important benefits of CSA is expected to be emission reduction. Automation leads to less labor-intensive activities which would help reduce emissions per calorie of food produced, prevent deforestation, and reduce emission of greenhouse gasses such as carbon dioxide into the atmosphere. This will lead to a human power reduction from non-environment friendly sources.

India is slowly adapting to climate-smart techniques of farming which will help to change the environment of India and reduce greenhouse gasses from agriculture practices. For instance, the farmers of Dhundi village in Gujarat have started using clean energy sources like solar power for irrigation. The solar power programme benefits farmers in two ways:

• Under the programme, farmers transfer electricity to the local grid; for this, they are provided in-

centives.

• Smart farming enables crop diversification which helps farmers reduce their dependence on monsoon for water.

Government Partnerships

According to the Ministry of Agriculture, the government is taking various smart agriculture initiatives such as:

- Crop yield prediction model using artificial intelligence (AI): In 2018, the National Institution for Transforming India (NITI Aayog) partnered with IBM for developing a crop yield prediction model using AI. This helps in providing real-time advisory to farmers.
- AI sensors for smart farming: The Indian government has partnered with Microsoft for empowering small-holder farmers in India. The partnership seeks to increase the income of the farmers through greater crop yield and superior price control using AI sensors. The partnership would help boost the adoption of AI in farming.
- Drones for monitoring soil and crop health: The government has launched a project, Sensor-based Smart Agriculture (SENSAGRI), involving six institutes. In this project, drones would be used for smooth scouting over landfills, for collecting precious information and transferring the data to farmers on a real-time basis. The project would be funded by institutes such as the Ministry of Communication and Information Technology (MCIT), Department of Electronics and Information Technology (DEITY), Information Technology Research Academy (ITRA) and Indian Council of Agricultural Research (ICAR).

Impact of Budget 2022

Budget 2022 focuses on smart and modern agricultural practices. According to the Prime Minister of India, agricultural loans have surged 2.5 times over the past seven years. These loans will help modernize agriculture significantly and enhance natural farming, with a prime focus on Agri-waste management. Furthermore, under the PM Kisan Samman Nidhi scheme, US\$ 26.4 billion (Rs. 2,00,000 crore) has been disbursed to 11 crore farmers. Also, the government's efforts towards promoting the use of organic products have driven expansion in the organic products market to US\$ 1.5 billion (Rs. 11,000 crore). The government is also providing financial support to Agri-tech startups and promoting the adoption of AI to revolutionize agricultural and farming trends.

Climate change majorly affects the poor and marginal farmers who make their livelihoods from agriculture. Technology and smart practices can help mitigate risks caused by climate change, among others.

India is constantly making efforts to formulate and implement policies to make agriculture more sustainable. AI has the potential to completely revolutionize the existing trends in agriculture and farming. Given India's vibrant corporate structure, partnerships between the corporates and the government can help create a smart agriculture industry.

Puneet Bhatia

GST: CAN IT BE CONSIDER AS A BAROMETER OF GROWTH?

The GST tax collection has achieved a record tax collection of 1.4 lakh crore rupees in 2022. This is straight sixth month tax collection in the history of GST which is above 1.4 lack cr mark. Economists and experts are happy to see such great collections on the ground after COVID-19 crisis which made the world standstill. It is considered as a new indicator to trace economic growth and as a reliable dataset also.

WHAT IS GST?

It is a Goods and service tax which is an indirect tax. It is an end based tax system which is ultimately collected by the customer. GST was started in India after a long discussion and stiff resistance in 2017. The core idea behind its implementation is **'ONE NATION,ONE TAX'**. Thus it subsumed the majority of indirect taxes like electricity, entertainment, sales tax, excise duty etc. and brought out only one single tax named GST.

One thing we have to consider is the single tax but still it has multiple tax slabs (05) which still, partially retains its nature of multiple tax in existence.

WHY IS A BAROMETER OF GROWTH?

There are many reasons why its is considered as growth barometer as

- 1. The indirect taxes are inherently considered as good representatives of economic growth. Due to the fact that almost all strata of society contribute it and participate in its outcome.
- 2. The GST on that line is more strong as it is the only indirect tax except electricity and petroleum in its ambit which takes credit for all participants and their tax contribution.
- 3. The higher GST collection shows that the household is spending more and that happens when the income is increasing, showing the **revival of the economy**.
- 4. The higher or lowering of collection also attached with the employment generation as it has direct bearing on the expenditure potential of the households. That's why many experts also consider the GST as **an employment measure**.
- 5. The higher GST tax collection in its aftermath also shows that as government revenue income increases it is going for more spending in the economy which further promotes the **vicious cycle of growth.**
- 6. The new mechanism of **e-way bills** has further added a potential to reflect growth.

BUT WHAT ARE THE PROBLEMS WITH IT?

- 1. The GST was never evolved to measure growth thus using it may not give correct results.
- 2. As it is a tax, the increase or decrease in tax rate may alter the overall collection. However, it does not necessarily indicate a growth in the economy or a recession.
- 3. The collection amount can change even at change in the registration number.
- 4. Even if we consider it as an indicator the exact sector wise growth is not reliably reflected due

inter-mixed tax slabs. So, we are not certain which sectors are at revival while which are lagging behind.

5. Even, sometimes, the inferences drawn by GST are not matching on real time on the ground as observed during uncertain times in COVID waves.

SO, WHAT GAT TO BE USED AS?

GST is a tax which is designed to make the tax system in the country simple. It is with the intention to avoid cascading effects on the consumer and to make ease of doing business. It should be considered as a **directional indicator of the growth** i.e., in which direction the economy is heading like recession or growth.

But drawing a more detailed conclusion from the present structure of the GST won't give the correct idea about the status and thus, approach to be adopted by the policymakers.

WHAT ARE OTHER INDICATORS?

There are other sector specific and overall indicators used for the purpose of growth calculations. The GDP data by MoSPI, Economic ministry, CPI-WPI inflation data, International statistics like by IMF, WB development report etc.

Thus, it's a good sign that its overall collection is increasing and it is the best way to read the directional sign of the economy and **need further transparency of data sector wise and region wise** to consider it as a real barometer of the growth.

Akshay gurubhaiye

Kurki



Why is it news?: A 65-year-old farmer, Balwinder Singh, died by suicide outside the office of the Muktsar DC on August 29, protesting against kukri.

What is the "kurki"?



- Kukri is the attachment of marginal/small farmers' land by banks or sahukar/ traders (commission agents and private money lenders) in the event of nonpayment of loan or debt.
- It is a hoary practice for farmers to take debt from different agencies, including banks and money lenders. also, attach their land as collateral.

What happens when a farmer fails to pay the loan?

- In the event of non-repayment of the loan, the land pledged by the farmers gets registered in the name of the bank or the individual through the court order
- In some cases, the land is auctioned as well. The process begins after the money lender moves court to get kurki orders in case the farmer cannot pay back his loan. In kurki, the attachment of the farmer's land and tractor can be done as per Section 60 of Civil Procedure Code, 1908.
- Akali Dal and Congress governments claimed to have banned kurki.
- Congress fought the 2017 Assembly polls on the slogan 'karza kurki khatam, fasal di poori rakam'.
- Accordingly, after the formation of Congress government, it declared the abolition of kukri by issuing a notification on July 21, 2017. The government abolished Section 67-A of the Punjab

Cooperative Societies Act which enabled cooperatives to recover unpaid loans through auctioning of land mortgaged by farmers. However, Sections 63-B and 63-C of the Act were not dropped to prevent the attachment of land.

Kukri is still practiced in Punjab, the ground reality?

- In 2017, the total agricultural debt in Punjab was pegged at Rs 85000 crore. Out of which total loan to farmers including marginal and small growers was Rs 72,700 crore.
- The main drawback of this notification was that it covered only cooperative banks and does not cover commercial banks and private money lenders
- Loans from cooperative banks from only 10-15% there are, therefore, obtaining decrees from the courts to attach the lands of defaulting farmers.
- In 2019, it was in the news that banks are also using dishonored post-dated cheques 6aken from farmers against their loans to initiate a criminal case against defaulters.
- A plea filed in the Punjab and Haryana High Court in 2018 sought a complete ban on kurki.
- In spite of that, the Punjab government in its affidavit stated that there was no need to ban kurki as relief was being given to farmers in terms of loan waiver, compensation, etc. Moreover, it stated that Section 60 of the Civil Procedure Code, 1908 under which kurki takes place was over 110 years old and needed complete revision.

Way forward:

- There are numerous cases where farmers have repaid twice or thrice the amount taken on loan.
- Experts want the strict implementation of the **Sir Chhotu Ram formula** that is The loan taken by farmers who have paid as much interest as the principal amount borrowed to be waived completely; Debt conciliation boards to be set up in each district; Centre to share the financial burden with the state
- Sir Chhotu Ram formula also bans the interest and repayment of loans to be more than twice the principal amount this will help in ending the majority of kukri cases.

Iraq political crisis

Context: Sadr's followers storm the Iraq govt. palace.

A power struggle in Iraq between the influential **Shi'ite cleric Moqtada Sadr** and Iran-backed Shi'ite rivals has escalated with his supporters breaking into parliament and beginning an open-ended sit-in protest.

What is the tussle?

The tussle over who would form the next government has deepened a breach in the Shi'ite community that has dominated Iraqi politics since the U.S.-led invasion that toppled Sunni dictator Saddam Hussein in 2003.

Who is Sdr and who is opposing him?

- Sadr was the son of Grand Ayatollah Muhammad Sadiq al-Sadr, one of the most prominent religious figures in the Islamic world in the late 20th century. Sadr was greatly influenced by his father's conservative thoughts and ideas and by those of his father-in-law, Ayatollah Muhammad Baqir al-Sadr, founder of the Islamic Da'wah Party, who in 1980 was executed for his opposition to Iraqi strongman Saddam Hussein.
- He holds great power in the state, where his supporters hold many positions. He has emphasized
 his credentials as an Iraqi nationalist in recent years, opposing the influence of both the United
 States and Iran.
- His Shi'ite rivals form an alliance called the **Coordination Framework**, which includes Tehran-aligned politicians such as former prime minister Nouri al-Maliki and paramilitary groups armed and trained by Iran.
- Many of these groups' ties to Tehran date to the Iran-Iraq war, when Iran supported Shi'ite insurgents against Saddam. Each side accuses the other of corruption.

Why has the standoff escalated?

- Even after getting most of the votes in the October -2021 polls, Al-Sadr's party was short of a majority.
- Al- Sadr has also refused to work with rivals
- This party is opposed to Iranian influences on home politics.
- Shia parties supported by Iran, became popular after they helped. Defeated ISIS between 2014 and 2017.
- Recently, the Islamic Dawa party's Mohamad al Sudani was nominated for the PM's post of the coordination framework.
- Al Sadr and his supporters opposed the nomination.
- Islamic Dawa party backed the Iranian revolution and even supported Iraq -Iran was also majorly founded by Iran.
- Mohammed Shia' al-Sudani's nomination provoked protests.

• He would need 165 out of 329 votes in the parliament to form govt.

What does this mean for Iraq?

- There is no government for the last nine months in Iraq-a record in the post-Saddam era.
- The standoff adds to political dysfunction in a country suffering dire public services, high poverty, and widespread unemployment despite huge oil wealth and no major conflict since Islamic State's defeat five years ago.
- Ordinary people in Iraq meanwhile suffer power and water cuts. The World Food Programme says 2.4 million of the population of 39 million are in acute need of food and livelihood assistance.

How can it trigger violence?

- Disputes between Iraqi Shi'ites would be bad news for Iran, which has paved out major influence in Iraq through its Shi'ite allies since the United States toppled its rival Saddam.
- Iran, which has yet to comment on the latest developments, has previously intervened to quell internal unrest in Iraq.



'Arya Samaj certificates not proof of marriage'



- Arya Samaj means "Society of Nobles" in Sanskrit, is a vigorous reform movement of modern Hinduism.
- It was founded by Maharshi Dayanand Saraswati in 1875, whose vision was to reestablish the Vedas, the earliest Hindu scriptures, as revealed truth.
- The Arya Samaj is against the worship of murtis (images), animal sacrifice, shraddha (rituals on behalf of ancestors), considering caste upon birth rather than upon merit, untouchability, child marriage, pilgrimages, priestly craft, and temple offerings.
- It upholds the infallibility of the Vedas, the doctrines of karma (the accumulated effect of past deeds) and samsara (the process of death and rebirth), the sanctity of the cow, the importance of the samskaras (individual sacraments), the efficacy of Vedic oblations to the fire, and programs of social reform.

What is Arya Samaj Marriage Certificate And Why Does the Supreme Court Consider It Invalid?



- Arya Samaj marriage acquires its validity from the Arya Samaj Marriage Validation Act, 1937, and also under some of the provisions of the Hindu Marriage Act, 1955.
- A certificate of marriage can be issued by any Arya samaj temple to a groom of age 21 or older and a bride of age 18 or older. Similar to the Hindu marriage (sacred fire) ceremony, the marriage ceremony is conducted according to the Vedic rituals.
- Significantly, Inter-Caste Marriages and Inter-Religious Marriages are allowed to perform in an Arya Samaj Marriage but the marrying persons should not be Muslims, Christians, Parsis, or Jews. If any non-Hindu couple wants to perform the marriage according to the Arya Samajh, Samaj allows them to get converted by the process called Shuddhi.

Is Arya Samaj's marriage certificate valid?

- A marriage certificate issued by Arya samaj is not equivalent to getting the marriage legally registered. The marriage is required to be registered under the applicable laws at the office of the sub-divisional magistrate after getting the certificate from Arya Samaj.
- Reports say that if both the groom and bride are Hindu, it falls under the Hindu Marriage Act while the Special Marriage Act may apply in the case of other religions. However, the validity of such marriages is still open before the apex court and recently the Supreme Court remarked on the invalid status of Arya Samaj marriage certificates.

What was the verdict of the MP high court?

- In April, this year, the Supreme Court put up an order of the Madhya Pradesh high court directing the Arya Samaj to solemnize marriages in accordance with the provisions of the Special Marriage Act, 1954.
- The Madhya Bharat Arya Pratinidhi Sabha filed a plea seeking a reply from the Madhya Pradesh government on the issue. On December 17, 2021, the Madhya Bharat Arya Pratinidhi Sabha challenged the High court verdict in the Supreme court and directed the organization to amend its 2016 norms and incorporate provisions of the Special Marriage Act.
- Further, the court noted that marriage certificates could only be issued by a competent authority under the Special Marriage Act. In this regard, the Sabha argued that the Hindu Marriage Act and Arya Marriage Act of 1937 holds the field of Arya Samaj marriage, not the Special Marriage Act.

Recent News: The Allahabad High Court has recently dismissed a **habeas corpus** petition filed by a man to get back his wife. The petitioner had submitted a marriage certificate issued by an Arya Samaj temple as proof.

What is habeas corpus?

'Habeas Corpus' means "to have a body of". This writ is used to release a person who has been unlawfully detained or imprisoned. On the strength of this writ, the Court directs the person so detained to be brought before it to examine the legality of his detention. If the Court comes to a conclusion that the detention was not according to the law i.e. unlawful, then it directs the person to be released immediately. Circumstances of unlawful detention are:

- The detention was not done in accordance with the procedure laid down. For instance, the person was not produced before a Magistrate within 24 hours of his arrest.
- The person was arrested when he did not violate any law.
- An arrest was made under a law that is unconstitutional.

Habeas Corpus ensures swift judicial review of the alleged unlawful detention of the prisoner and immediate determination of his right to freedom. However, Habeas corpus cannot be granted where a person has been arrested under an order from a competent court and when prima facie the order does not appear to be wholly illegal or without jurisdiction. This writ can be filed by the detained person himself or his relatives or friends on his behalf. It can be issued against both public authorities and individuals

A golden memory of Rajamahendravaram by Raja raja Narendra



Rajaraja Narendra (r. 1019 – 1061 AD) was the Eastern Chalukya king of the Vengi kingdom in Southern India. Rajaraja Narendra established the city Rajahmahendravaram (Rajahmundry).

His period was famous for its Social and Cultural heritage. During the time of Rajaraja Chola I, Rajahmundry was devastated by Western Chalukya. The region has seen a war between Western Chalukya and other neighboring dynasties and political support from the Chola dynasty.

History of the city Rajahmahaendravaram

Rajahmundry was established by Ammaraja Vishnuvardhana the First (919–934 AD). The city as a prominent settlement can be traced back to the rule of the Eastern Chalukya king Rajaraja Narendra, who reigned around 1022 AD. Remains of 11th-century palaces and forts still exist

Rulers:

- Eastern Chalukyas
 - Cholas
 - Kakatiyas
 - Eastern Ganga Dynasty
 - Reddies
 - Gajapati Empire
 - Vijayanagar Rulers
 - Bahmani Sultanate
 - Golconda Sultanate
 - Nizam Rule
 - European Rulers and Zamindars

Rajahmundry was run under Dutch rule for some time. the Dutch, 1602 constructed a fort there. In

1857, the British conquered the Dutch. They converted it into a jail in 1864 and elevated it into a central jail in 1870.

Rajahmundry is geographically located at the center of Godavari Districts. There is paddy, sugarcane, and various varieties of flower cultivation in the area. River Godavari flows through the west of Rajahmundry.

The Rajahmundry traps, part of the Deccan Traps, are located on the Godavari river and are particularly interesting to geologists.

Seven gold coins dated to the Eastern Chalukya dynasty belong to the proud city Rajahmahaendravaram.



The city of Rajamahendravaram still contains a memory of his king Rajaraja Narendra

This past August, Rajamahendravaram also celebrated the completion of one thousand years of the coronation of Raja Raja Narendra, who ruled the city in 1022. His regime came to an end in 1061.

Seven gold coins that date back to the Eastern Chalukya dynasty, including the regime of Raja Raja Narendra, are a proud possession of the city.

The seven gold coins are now preserved at the Rallabandi SubbaRao Archaeological Museum by the archaeological department.

Of the seven gold coins, only one is big in size compared to the others.

The big coin contains the image of 'Varaha' (boar), an official symbol of the Eastern Chalukyas.

The big coin also contains some text in early Telugu script.

It is believed to be minted marking 'some donation' by the Eastern Chalukya.

But there was no evidence of the location of the coins.

Ladakh to have India's first 'Dark Sky Reserve' to promote astronomy tourism

News: Dr. Jitendra Singh, Minister of State (Independent Charge) for Science and Technology stated that by the end of this year 2022, India will establish the country's first Dark Sky Reserve in the cold desert regions of Ladakh.

GS Paper 3: Science and Technology- Developments and their Applications and Effects in Everyday Life



What is a Dark Sky Reserve?

- A Dark Sky Reserve is public or private land with a distinguished nocturnal environment and starry nights that have been developed responsibly to prevent light pollution.
- Dark sky reserves "consist of a core area meeting minimum criteria for sky quality and natural darkness, and a peripheral area that supports dark sky preservation in the core." as per the International Dark Sky Association (IDSA) website.
- These reserves are formed through a "partnership of multiple land managers who have recognized the value of the natural nighttime environment through regulations and long-term planning" as stated on the website.
- India is still in the process of filing its nomination to IDSA.



Why was Ladakh chosen for the project?

- <u>Ladakh is a unique cold desert of India located about 3,000 meters above sea level with high mountainous terrains.</u>
- Long and harsh winters with minimum temperatures dropping to minus 40 degrees Celcius make large parts of the Union Territory highly inhabitable.
- This barrenness, limited vegetation, high elevation, and large areas with sparse populations all

make it the perfect setting for long-term astronomical observatories and dark sky places.

- But the main objective of the proposed Dark Sky Reserve is to promote astronomy tourism in a sustainable and environment-friendly manner.
- Scientific methods will be used here to preserve the night sky from ever-increasing light pollution.
- With metros, cities, and peripheral areas experiencing light pollution and remaining constantly lit up, there are diminishing areas that offer a view of clear skies on cloudless nights, experts have noted.

Who is responsible for developing India's first Dark Sky Reserve?

- The Ladakh Union Territory administration has taken the responsibility of establishing the country's first Dark Sky Reserve.
- To be situated at a height of 4,500 meters above sea level, the Hanle Dark Sky Reserve (HDSR) will come up within the Changthang Wildlife Sanctuary.
- The Department of Science and Technology and experts from the Indian Institute of Astrophysics (IIA), Bengaluru, are providing scientific and technological support in developing this first-of-its-kind facility. The IIA already manages the Indian Astronomical Observatory (IAO) complex at Hanle, Ladakh.
- Now, here, scientists have been carrying out astronomical observations using the existing gamma ray, an infrared, and an optical telescope to study exoplanets, galaxies, and stars through the pristine skies of Hanle.
- The formal decision to set up this Dark Sky Reserve was made through a Memorandum of Understanding (MoU) signed between officials from the IIA, Bengaluru, the Ladakh UT, and the Ladakh Autonomous Hill Development Council in June this year.

How does it help Ladakh tourism?

- When Ladakh got its Union territory status, tourism in Ladakh has seen a boost during favorable months.
- Although, its insubstantial environment is vulnerable to rising carbon footprint and in-coming vehicles.
- The Ladakh Tourism Vision Document 2022 underlined the need for efforts to increase the use of green fuels and boost carbon-neutral activities.
- The locals in Ladakh are sensitive to the conservation of the ecosystem. They are keen to protect the environment from getting deteriorated. A number of initiatives are underway ahead of opening the **Hazardous Discharge Site Remediation** (environmental protection) HDSR to the public.
- In the first phase, the IIA has acquired ten small and easy-to-handle telescopes and light-reflecting shields.
- IIA's scientists and outreach experts will identify locals and train them to use these telescopes, which will include basic sky gazing, identification of constellations, and locating the pole star, among others.

•	These telescopes will be installed	at the homestays,	which is a popul	ar option for	tourist accommo-
	dation in Ladakh.			•	

• The 22-km radius around the Hanle observatory, where the core Dark Sky Reserve will stand, will have restrictions imposed on outdoor lighting. All vehicles will be barred from using high-beam headlights. Houses here will be encouraged to use curtains of darker shades, install light reflecting shields and switch off all unwanted illumination.



CAPF eAWAS

"CAPF eAWAS" web portal

Why in News: Union Home & Cooperation Minister Shri Amit Shah launched the "CAPF eAWAS" web portal. Central Armed Police Forces have always been a strong pillar in every aspect for the country's internal security.

Under the leadership of Prime Minister Narendra Modi, a new era of development has begun and India is becoming a global production hub, CAPF personnel who ensure internal security have a big role in this. The Government led by Prime Minister Shri Narendra Modi believes that it is its job to care for the families of Jawans, so that Jawans who guard our borders in difficult circumstances, can do their work without worries. Prime Minister Narendra Modi is concerned about Jawans and especially their families and has taken many unprecedented decisions in the last 8 years. Housing Satisfaction Ratio (HSR) was around 33 per cent in 2014, which is 48 percent today.

The launch of the CAPF e-Awas portal will increase HSR by 13 per cent without construction of new buildings. Government is confident that with these meaningful efforts by MHA, the HSR will be 73 percent by November 2024, which will be a great achievement. There Was system in the CAPFs that only the Forces for which houses had been constructed would be allotted to their personnel, this created several thousand vacant houses, now this will be changed by the e-accommodation portal and vacant houses will be available for personnel of other CAPFs. e-Transfer Software has been created to bring transparency in transfer of CAPF personnel, now ITBP and CISF have started using this software on an experimental basis.

So far, about three crore saplings have been planted in the MHA's plantation drive, however it is the responsibility of senior officers to inculcate an attachment in the Jawan's for saplings they have planted, this attachment will be life changing for them. Union Home and Cooperation Minister, Shri Amit Shah launched the "CAPF e-AWAS" web portal in New Delhi.

In his address, Shri Amit Shah said that the Central Armed Police Forces have always been a strong pillar of the country's internal security and this day is a very important day for their personnel. A new era of development has begun

Under the leadership of Prime Minister Narendra Modi, India is becoming the global production hub and CAPF personnel who ensure internal security have a big role in this. He said since Independence till date, more than 35,000 police personnel have lost their lives while ensuring internal security and due to their sacrifices citizens sleep in peace with a sense of security. Shri Shah said that the government led by Prime Minister Shri Narendra Modi believes that it is its responsibility to care for the families of Jawans who protect the nation's borders in difficult circumstances, so that they can serve the country without worry. He said that the CAPF e-Awas portal launched today is another step in the same direction.

The Union Home Minister said a system had been created in the CAPFs under which only personnel of the Forcefor which houses had been constructed could be allotted these houses. This had left many thousands of houses vacant. This has now been changed through the e-Awas portal and houses lying vacant will also be available for personnel of other CAPFs.

This will increase the Housing Satisfaction Ratio by 13 percent without even constructing a building. Shri Amit Shah said since Shri Narendra Modi became the Prime Minister in 2014, the Ministry of Home Affairs has developed various schemes to increase the Housing Satisfaction Ratio. These include building offices, strengthening hospitals and increasing the number of residences. He said that in the last eight years more than 31,000 houses have been constructed, more than 17,000 houses are

under construction and about 15,000 additional houses are proposed to be constructed.

The Housing Satisfaction Ratio was around 33 per cent in 2014, which is 48 percent today, with the launch of the CAPF e-Awas portal, the Housing Satisfaction Ratio will increase by 13 per cent without construction of new buildings. Shri Amit Shah expressed confidence that with these meaningful efforts of the Ministry of Home Affairs, the Housing Satisfaction Ratio will reach 73 percent by November 2024, which will be a great achievement.

The Union Home Minister said Prime Minister Narendra Modi is concerned about Jawans and especially their families and many unprecedented steps have been taken in this direction in the last 8 years. Under the leadership of Prime Minister Modi, the Government of India has started the 'Ayushman CAPF' scheme to provide better medical facilities to families of Jawans, under which more than 35 lakh Ayushman Cards have been distributed to 10 lakh personnel. Under this scheme, about 56,000 bills worth more than Rs. 31 crore have been paid so far.

Shri Amit Shah said that an e-Transfer software has been developed to bring transparency in the transfer of CAPF personnel. At present, ITBP and CISF have started using this software on an experimental basis. With the e-Transfer software, the posting can be linked with the age and health status of Jawans. Shri Shah said earlier there were 42 courses in the Prime Minister's Scholarship Scheme and now more than 80 new courses have been added. Central ex-gratia has also been increased by making it more scientific. Air courier services have also been implemented and several steps have been taken to strengthen the Kendriya Police Kalyan Bhandar.

The Union Home Minister said the government under the leadership of Prime Minister Shri Narendra Modi is ready to consider any positive suggestion for the welfare of Jawans. But we also have to do our part to keep our work environment in proper condition.

So far about three crore saplings have been planted in the plantation drive of the Ministry of Home Affairs, but it is the responsibility of senior officers to inculcate the spirit of attachment in the Jawans to the saplings they have planted, the attachment with a sapling which will become a tree would change the Jawan's life.

While starting the tree plantation drive, the thinking was to create a good environment at the workplace, but at the same time there is a need to promote creative and positive thinking, which brings change and a feeling of satisfaction in human nature. Shri Amit Shah said the Prime Minister has always taken efforts for the welfare of soldiers and especially their families and the Ministry of Home Affairs is always ready to implement his thoughts.

Puneet Bhatia

Bustrad adapted to produce 2 -eggs clutch

GS Paper 3

Mains: Project Great Indian Bustard

Prelims: the great Indian bustard, The desert national park.



Why is it in the news?: The perceived belief and recorded observation of egg-laying habits of the Great Indian bustard have been changed due to recent excessive rain in western Rajasthan.

About Great Indian Bustard

- **Great Indian Bustard**, scientifically known as *Ardeotis nigriceps, locally known as Godovan*, is a large bird of the bustard family (Otididae), one of the heaviest flying birds in the world.
- It is the **State bird of Rajasthan** and is considered **India's most critically endangered bird.**
- The great Indian bustard is an inhabitant of dry grasslands and scrublands on the Indian subcontinent; its largest population is found in the Indian state of **Rajasthan in the Desert National Park**.
- Also, it is found in small populations in Maharashtra, Karnataka, and Andhra Pradesh.

Their reproduction behavior

- Some of the reproductive behaviors of great Indian bustards are known, and the finer details of nesting and mating, as well as migratory activities related to mating and nesting, are thought to vary greatly among populations and individuals.
- They are usually capable of year-round breeding, and for most populations, the breeding season lasts from March through September, which largely sums up the monsoon season.
- They do not return to the same nests year after year, and prefer to create a new one instead, and sometimes prefer to use the nests made in previous years by other great Indian bustards.
- This year it has been observed that 4 female **Great Indian Bustards** laid two eggs at a time during the current rainy season in the **Desert National Park** after heavy rainfall in western Rajasthan.
- It is a result of having a diet with additional proteins during the monsoon season.
- The main threats to the Great Indian bustard are bird hunting, intensification of agriculture, and power lines.

Protection status of the Bird and measures are taken.

- o **International Union for Conservation of Nature Red List:** Critically Endangered.
- As per the research done by the Wildlife Institute of India, there are around 150 Great Indian Bustards left across the country which includes about 128 birds in Rajasthan and less than 10 birds each in the rest of the States like Gujarat, Maharashtra, Andhra Pradesh, and Karnataka.
- o The Great Indian Bustard comes under both in situ and ex-situ conversations.
- o In 2019, the WII, in collaboration with the government of Rajasthan and the International Fund for Houbara Conservation, Abu Dhabi, is implementing the ex-situ conservation initiative.
- The Ministry of Environment, Forests, and Wildlife have taken up an initiative on conservation breeding of the Great Indian Bustard in collaboration with Rajasthan, Gujarat, and Maharashtra Forest Departments and technical support from the Wildlife Institute of India, Dehradun implementing the in-situ conservation.
- Species Recovery Programme: It is kept under the species recovery program under the Integrated Development of Wildlife Habitats of the Ministry of Environment, Forests and Climate Change (MoEFCC).

About The Desert National Park

- This National Park is situated in Rajasthan, India, near the towns of Jaisalmer and Barmer.
- The Park is an exceptional example of the ecosystem of the Thar Desert. Sand dunes form around 44% of the Park.
- It covers an area of 3162 km², considered one of the largest national parks.
- The park was gazetted in 1980.
- Common Fauna found in this park are
- 1. The Chinkara or Indian Gazelle (Gazella bennettii) is a common antelope of this region.
- 2. Rare inhabitants are the desert fox, wolf, and desert cat.
- 3. Birds like sandgrouse, partridges, bee-eaters, larks, and shrikes are commonly seen.
- 4. In the winter, the birdlife is augmented by species such as the demoiselle crane and MacQueen's bustard.
 - Common Flora found in this park are
- 1. The park includes open grassland, thorny bushes, and dunes.
- 2. 168 plant species have been recorded in the park. Some species of trees that inhabit the park include *Tecomella undulata*, *Moringa concanensis*, *Helitropium rariflorum*, and *Ammannie desertorum*.

About project Basturd

• On World Environment Day 2019, the Rajasthan forest department announced its Project Great Indian Bustard.

• In order to, protect the remaining bustard population, the state government of Rajasthan initiated Project Great India Bustard on World Environment Day in 2013, this effort attempted to locate the Indian bustard's exclusive habitat, fence it off to prevent human intrusion, and provide enclosed breeding habitat.



INS VIKRANT: "A step towards India's Atmanirbharta in Defence"

INS VIKRANT

Why in News?

Recently PM Modi commissioned India's first Indigenous Aircraft Carrier (IAC), INS Vikrant (IAC-1), which is a part of **Atma Nirbhar Bharat**

About the INS Vikrant

- INS Vikrant (IAC-I) is the first aircraft carrier to be built in India and the first Vikrant-class aircraft carrier built for the Indian Navy.
- The motto of the ship is "Jayema Sam Yudhi Sprdhah" which is taken from Rig Veda and can be translated as "I defeat those who fight against me".

• Specifications:

- There are 14 decks in all, including five in the superstructure. The carrier is 262 m long, 62 m at the widest part and with a depth of 30 m minus the superstructure.
- The deck is designed to enable aircraft such as the MiG-29K to operate from the carrier.
- It can carry an air group of up to thirty aircraft, which will include up to 24–26 fixed-wing combat aircraft, primarily the MiG-29K.
- Vikrant is powered by four General Electric LM2500+gas turbines on two shafts, generating over 80 megawatts (110,000 hp) of power.
- Once Vikrant is having sport a gender-sensitive living environment and infrastructure, with provision to accommodate eight women officers. The ship will then accommodate 1,645 personnel in all, including 196 officers.
- It will join INS Vikramaditya, contracted from Russia under a \$2.3-billion deal and inducted into service in November 2013..
- The first Vikrant displaced 20,000 tonnes and operated a mix of Westland Sea Kings, HAL Chetak and Sea Harrier jets. Viraat displaced 28,500 tonnes and Vikramaditya displaces 45,400 tonnes. The new Vikrant will displace 40,000 tonnes.

Significance:

GEOSTRATEGIC SIGNIFICANCE

- It would offer an incomparable military instrument with its ability to project air power over long distances, offensive and defensive counter-air, including air interdiction, anti-surface warfare, air-borne anti-submarine warfare and airborne early warning.
- The combat capability, reach and versatility of the aircraft carrier will add formidable capabilities in the defence in the country and help secure India's interests in the maritime domain.

GEO POLITICAL SIGNIFICANCE

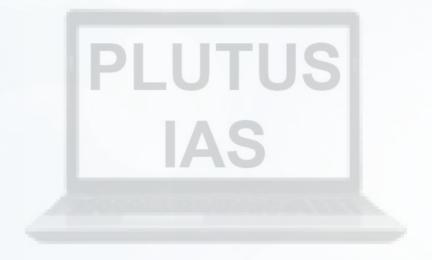
- It would ensure India's application of SAGAR Doctrine in India's neighborhood i.e. SECURITY AND GROWTH FOR ALL IN THE REGION.
- It would also ensure India's transformation from the Brown Water Navy to Blue Water Navy.
- It would also showcase India's seriousness for Neighborhood First Policy.
- It would enhance India's presence in the Indo Pacific region.

GEO ECONOMIC SIGNIFICANCE:

- It would ensure India's Atma Nirbharta in Defence.
- It would also be step forward in reducing Current Account Deficit which is caused due to India's enhanced imports of Defense Equipment's.

India's road to the "self reliance in defence" is long, but the projects such as INS VIKRANT, Tejas can be a step forward in this direction.

samarth singh



Teesta Dispute

Why in the news?

Sheikh Hasina, Bangladesh Prime Minister, recently came to Delhi for a 4-day visit. Solving the long-standing, unresolved dispute over the sharing of the waters of the Teesta is back in the news.

About Teesta river:



- Water sharing of the Teesta river, which originates in the Himalayas and flows through Sikkim
 and West Bengal to merge with the Brahmaputra in Assam and (known as Jamuna in Bangladesh),
 was one the most contentious issue between two friendly neighbors, India and Bangladesh.
- The river covers nearly the entire floodplains of Sikkim while **draining 2,800 sq km of Bangla-desh,** governing the lives of hundreds of thousands of people.

Location

Country	India, Bangladesh
State	Sikkim, West Bengal, Rangpur Division
Districts	Kurigram District, Nilphamari District, Gangtok District, Pakyong District, Mangan District, Kalimpong district, Darjeeling district, Cooch Behar district, and Jalpaiguri district
City	Singtam, Rangpo, Kalimpong, Jalpaiguri, Mekhliganj

Physical characteristics

• location	Sikkim, India
Mouth	Brahmaputra river
• location	Phulchhari Upazila, Gaibandha, Bangladesh
Length	414 km (257 mi)[1]
Basin size	12,540 km2 (4,840 sq mi)[2]

What is the history of the Teesta dispute?

- In West Bengal, Teesta is considered the **lifeline** of half-a-dozen districts in North Bengal. Teesta is very important for those districts.
- Bangladesh has sought an "equitable" distribution of Teesta waters from India, on the lines of the Ganga Water Treaty of 1996 (an agreement to share surface waters at the Farakka Barrage near their mutual border), but to no avail.
- In 2015, Prime Minister Narendra Modi's visit to Dhaka generated some expectations to take forward to resolve the previous issues on fair and equitable water sharing agreement.
- But Teesta remains an unfinished project, as in India individual states have significant influence over transboundary agreements. This arrangement sometimes holds back the policymaking process.

What is the recent status of the Teesta dispute between India and Bangladesh?

In 2015 when PM, Modi visited Dhaka accompanied by the Chief Minister of West Bengal Mamta Banerji. There PM Modi gave Prime Minister Hasina the confidence of resolving the issue in a "fair solution" to the dispute through cooperation between the central and the state governments. But, Seven years later, the Teesta issue remains unresolved.

The zombie Ice

Why is it in the News?

Recently, Scientists predicted that the melting of Zombie Ice will raise the global sea level by 10 inches.



What is Zombie Ice?

- It is also referred to as dead or doomed ice.
- Zombie ice is one that does not accumulate fresh snow even while continuing to be part of the parent ice sheet.
- This type of ice is prone to melting and rising sea levels.

What has led to this?

- This is a result of global warming that has affected the climate already.
- The study focuses on an equipoise condition where snowfall from the northerly extremes of the Greenland ice cap melts down to the recharge edges of the snow glaciers and hardens them.
- The study states that over the past several decades there has been less replenishment and more melting.

What will happen next?

- By calculating the minimum committed ice loss based on the ratio of recharge to loss, scientists have projected that 3.3% of Greenland's total ice volume will melt, and this will happen even if the global temperature is stabilized at the current level.
- Considering that global warming is anticipated to worsen, the melting and its direct impact on the rising sea level could get worse as well. It could climb up to 30 inches if Greenland's melting record year (2012) works as a regular phenomenon.

What could a 10-inch rise in sea level mean?

- The inescapable rise in the sea level, as predicted by the researchers, is precisely a piece of unpleasant news for millions, who are residing in coastal zones.
- The **UN Atlas of Oceans** says that 8 out of the 10 world's largest cities are close to the coast. Increasing sea levels will cause high tides, floods, and storms to occur more frequently.
- It will lead to threats to local economies and infrastructure.

- The low-lying coastal regions will have to have to bear a harder hit.
- According to the World Economic Forum's 2019 Global Risks Report, approximately 800 million people in 570 coastal cities are already endangered by a rise in the sea level by 0.5 meters by 2050.



Leaving behind the symbols of slavery: Kartavya Path

Why it is in the News?

Recently the Kingsway, or Rajpath, was renamed Kartavya Path, by the honorary Prime Minister of India, Sri Narendra Modi. Stating that the symbol of slavery has become a matter of history from today and has been erased forever.

How did Delhi become the capital?



- In 1911 the British Imperial Government and the Viceregal administration intended that the capital of the British Indian Empire should be shifted to Delhi, from Calcutta.
- The British government believed that ruling India from Delhi believed India from Delhi was easier and more convenient than from Calcutta
- As a consequence, New Delhi was constructed according to a New capital that year, so that it would serve as the purpose-built administrative capital of the Indian Empire.
- The British Raj duly gave responsibility to Sir Edwin Lutyens to construct the new city.
- New Delhi was inaugurated by Lord Irwin as the capital of India, on February 13, 1931, 86 years ago.

The story behind Rajpath:



- Rajpath runs in an east-west direction. Roads from Connaught Place, the financial center of Delhi, run into Rajpath from the north.
- When the road was built, it was named King's Way, or Kingsway, in honor of the Emperor of India George V, who had visited Delhi during the Delhi Durbar of 1911.
- After Independence, the name was changed to Rajpath, the Hindi translation of the world Kingsway.

- Edwin Lutyens the architect of that time, came up with a modern imperial city centered around a "ceremonial axis", such axis being the large boulevard now named Kartavya Path.
- Lutyens wanted a panoramic view of the city of Delhi from the viceregal palace.
- Most of the buildings surrounding the Kartavya Path were designed by Lutyens and the second architect of the project, Sir Herbert Baker. The importance of such buildings in the government of India ensures the road's importance.

The Kartayva Path



- PM Modi renamed it Kartavya path on the 7th of Sept 2022 which means the duty to serve
- It was redeveloped under The Central Vista Redevelopment Project, which started construction on 4 February 2021 and is planned to be finished in 2026 in phases.
- A statue of Netaji subash Chandra Bose was installed, 28 feet tall, that is, a little taller than a two-story building.
- The jet black granite statue was placed under the Grand Canopy to the east of the India gate, half-way on the east-west axis to the National War Memorial.
- The statue has been carved out of a monolithic block of granite weighing 280 tonnes.

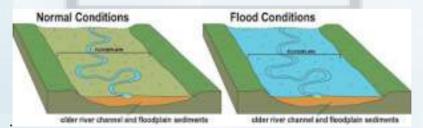
Flash flood and its risk in coming years (9th Sept 2022)

Why in the news?

Death toll in Himachal downpour rises to 21, railway bridge collapses

What are they, and how are they different?

- **Flash Floods:- Flash Floods refer to** such environmental situations where outrageous or continuous rainfall over a period of days, or during particular seasons can lead to stagnation of water and cause flooding in a much shorter span of time.
- A study by the US's meteorological agency, the National Weather Service, says flash floods are caused when rainfall creates flooding in less than 6 hours.
- It adds that flash floods can also be caused by factors apart from rainfall, like when water goes beyond the levels of a dam.
- In the Indian climate, flash floods are often associated with cloudbursts sudden, intense rainfall in a short period of time.
- Himalayan states further face the challenge of overflowing glacial lakes, formed due to the melting
 of glaciers, and their numbers have been increasing in the last few years.
- Flash flooding generally occurs more where rivers are narrow and steep, so they flow more quickly,
- They can also occur in urban areas located near small rivers since hard surfaces such as roads and concrete do not allow the water to absorb into the ground



How common are these floods and normal floods?

- Flash floods have been frequently witnessed in cities like Chennai and Mumbai.
- India is the worst flood-affected country in the world after Bangladesh and accounts for one-fifth
 of the global death count due to floods, as per government data issued from a project by the Assam
 State Disaster Management Authority.
- Depression and cyclonic storms in the coastal areas of Orissa, West Bengal, Andhra Pradesh, and others also cause flash floods.
- Also, the data from the National Disaster Management Authority, stated that one of the primary reasons for flood situations occurring so commonly is that nearly 75 percent of the total Indian rainfall is concentrated over a short monsoon season of four months (June to September).which results, the rivers witness a heavy discharge during these months.

Consequences of Flash Flood



- Loss of the natural environment (including vegetation, agriculture, geomorphology, and pollution)
- Loss of the human population (entrapments, injuries, fatalities).
- Loss of infrastructure in the particular area.

Way forward.

As stated by the Indian geologist there is one way of dealing with the current situation is a comprehensive strategy of monitoring the ground in hilly areas, planning development works in a way that is sensitive to the region's ecology, and mitigation to reduce the extent of damages.

COVID VACCINATION: TRACING TARGETS

CONTEXT: Its now relieving time for the world as we have now passed the crucial waves of the COVID-19 virus which rattled the world for long. The vaccine is the most effective tool to deal with the unprecedented threat of the virus. WHO (World Health Organisation) has set the target to vaccinate 70% of the humanity by mid-2022 i.e., June/July 2022. The timeline has lapsed and we are ahead now to check the status and India's contribution and possible solution for it.

WHAT IS THE STATUS OF TARGET?

In October 2021, WHO has decided **to vaccinate 70% of the world population** with COVID-19 protection dose to spread its further spread and to make it a dwarf disease. This target was set with the view to promote vaccine equity and justice specially keeping poor and underdeveloped countries in mind.

By the month of September 2022, we are having only 3% of global vaccination in underdeveloped countries with one dose and if overall this figure stands below 10% of all. Thus, it is clear that WHO missed it's target by a considerable margin and there are many possible reasons as-

- 1. The time taken for research and approval of the vaccine
- 2. **Vaccine hesitancy and reservation** is still major factor in the African and Asiatic societies.
- 3. The adaptability of the COVID-19 virus which modified in different strains, India was impacted huge by Omicron strain.
- 4. The **Poor funding** commitments and its non-followance which made WHOs target a distant dream.
- 5. **The geopolitics** involved makes the process further complicated and thus, delayed.

Hence it is clear that world agency has failed its target but attributed to many socio-economic reasons making the humanity deprived of 'Herd immunity' and to remain under constant threat of micro virus.

INDIAS HELPING HANDS

India, being the **Pharmacy of the world** is the producer of **60 % of world** vaccine and is said to be 60-80% supplier of UNO vaccine procurement. There is hardly any doubt that India can solve the problem we as a humanity is facing, even now.

On her part, India contributed **594.35 lakhs** of COVID doses by 2021 to almost 72 countries in need. Most of them are poor and underdeveloped countries. It's also interesting to know, of this supply 82 lakh were as gifts and 175 lakh were under GAVI's COVAX programme – which shows the classic example of global vaccine responsibility. Even in severe rattling strain of 2nd wave the supply was continued considering the India's role to save the Humanity. India also moved proposal to keep IPR –patents out for vaccine related to COVID-19.

INDIA'S GAIN

• India, the follower of 'Vasudhaiv kutumbakam' (the whole world is our family) benefitted by

saving thousands of life as moral duty.

- Apart from it also benefitted by **vaccine diplomacy and gaining diplomatic advantage** as acted as friend in need is friend indeed.
- It also provide more **market access** to Indian vaccine, even in developed countries.
- The production created **employment and taxation** to the government.
- There are many tangible and intangible benefits with this timely help.

WHAT FURTHER NEEDS TO DONE?

- The production need to promote and accelerated so that supply can be consistent.
- There is need to strengthened global vaccine supply chain to fast forward the process.
- There is need to keep patent and rights away from the global danger and to promote its free use.
- Geopolitics has to keep aside and free responsible funding has to ensure so that the drive to save could never be halted.
- For future, there is need for a treaty including all cooperation, sharing of data, genome sequencing to avoid any regional disease to become mammothic like COVID.

Though, target deadline passed but still the threat is active and it's better to late than never. The world has to unite, to accelerate the vaccination drive. The global co-operation and responsible contribution can shield the world form current and future emerging dangers

Akshay gurubhaiye

Court allows hearing of Hindu plea for the right to pray in Gyanvapi mosque

Prelim: International and national and Indian history and culture

Mains Examination: GS paper II: Structure, organization, and functioning of the Executive and the Judiciary

Why it is in the news?

Varanasi court allows hearing of Hindu plea for the right to pray in Gyanvapi mosque



The backstory:

- The Gyanvapi Mosque was built during the reign of the Mughal emperor Aurangzeb, in 1669,
- He ordered the demolition of the existing **Vishweshwar temple** at the site, and build a mosque in place of it.
- This is mentioned in the 1937 book, 'History of Benares: From the Earliest Times Down to 1937', by A S Altekar,
- The pedestal of the temple was not changed and served as the courtyard of the mosque.
- One of the walls too was spared, and it became the qibla wall of the mosque, a wall in a mosque that faces Mecca.
- Debris from the destroyed temple was used to build the mosque, evidence of which can still be seen.
- The name of the mosque is said to have derived from an adjoining wall, the Gyanvapi, or Well of Knowledge.
- An old sculpture of the Nandi bull inside the compound of the present Kashi Vishwanath Temple faces the wall of the mosque instead of the sanctum sanctorum of the temple.
- It is believed that Nandi is in fact, facing the sanctum sanctorum of the original Vishweshwar temple.

About the Temple

• For more than a century, after the mosque was built by Aurangzeb in 1669, there was no temple at the site.

- The present Kashi Vishwanath Temple was built by Rani Ahilyabai Holkar of Indore, immediately to the south of the mosque, in the 18th century.
- It is a long belief of the Hindu community, the original lingam of the erstwhile Vishwerhwar temple was hidden by the priest inside the GyanVapi well, during Aurangzeb's raid.

The present story -

- On August 18, 2021, in Varanasi court, five women filed a petition demanding to worship in the temple of Mother Makeup Gauri, a hearing to which the court constituted a commission to know more about the present situation of the Makeup Gauri Temple.
- In this regard, the court had asked the commission head, Vijay Shankar Rastogi, to give the survey report by video graphing the idol of Makeup Gauri and the Gyanvapi complex, brought a cause to outburst, raising questions about the impartiality of the court commissioner appointed by the Muslim side for the survey.
- Vijay Shankar Rastogi, appearing on behalf of Hindus, has submitted a map of the entire Gyanvapi
 complex as evidence in the court, which mentions the temples of Hindu deities around after the
 entrance of the mosque, as well as the Vishweshwar temple, Gyankoop, the big Nandi and the
 basement of the Vyas family. There has been a controversy over the survey and videography of
 this basement.
- In the meanwhile, the Muslim side says that no decision can be given on the dispute under the Religious Places Act of 1991.

What is The Religious Place Act of 1991?

The act states that, "An Act to prohibit conversion of any place of worship and to provide for the maintenance of the religious character of any place of worship as it existed on the 15th day of August, 1947, and for matters connected therewith or incidental thereto.

The provisions of **The Religious Place Act of 1991**

- **Section 3**: Section 3 of this Act, bars the conversion, in full or part, of a place of worship of any religious denomination into a place of worship of a different religious denomination or even a different segment of the same religious denomination.
- **Section 4(1)**: It states that the religious character of a place of worship "shall continue to be the same as it existed" on 15th August 1947.
- **Section 4(2):** It says any suit or legal proceeding with respect to the conversion of the religious character of any place of worship existing on 15th August 1947, pending before any court, shall abate and no fresh suit or legal proceedings shall be instituted.
- **Section 5:** It specifies that the Act shall not apply to the Ramjanmabhoomi-Babri Masjid case, and to any suit, appeal, or proceeding relating to it.

PM-SHRI Yojana

PM announces PM-SHRI Yojana



Development and Upgradation of 14,500 schools cross India under the Pradhan Mantri Schools For Rising India (PM-SHRI) Yojana

Why in News: On the occasion of Teacher's Day today, the Prime Minister, Shri Narendra Modi has announced development and upgradation of 14,500 schools across India under the Pradhan Mantri Schools For Rising India (PM-SHRI) Yojana.

The PM-SHRI schools will have a modern, transformational and holistic method of imparting education. Shri Modi said that he is certain that the PM-SHRI schools will further benefit lakhs of students across India in the spirit of NEP.

The Prime Minister tweeted; "Today, on #TeachersDay I am glad to announce a new initiative – the development and upgradation of 14,500 schools across India under the Pradhan Mantri Schools For Rising India (PM-SHRI) Yojana. These will become model schools which will encapsulate the full spirit of NEP."

"The PM-SHRI schools will have a modern, transformational and holistic method of imparting education. Emphasis will be on a discovery oriented, learning centric way of teaching. Focus will also be on modern infra including latest technology, smart classrooms, sports and more."

"The National Education Policy has transformed the education sector in recent years. I am certain that the PM-SHRI schools will further benefit lakhs of students across India in the spirit of NEP." These will become model schools which will encapsulate the full spirit of NEP.

In News

The Prime Minister has announced that under the PM SHRI Scheme, as many as 14,500 schools will be "upgraded" across India to showcase the components of the National Education Policy, 2020.

What is the PM SHRI scheme?

- 14,500 schools across states and Union Territories will be redeveloped to reflect the key features
 of the NEP, 2020 under the centrally sponsored scheme known as PM SHRI Schools (PM Schools
 for Rising India).
- The plan was first discussed with the education ministers of states and UTs during a conference organized by the Ministry of Education in June at Gandhinagar in Gujarat.
- While there are exemplary schools like Navodaya Vidyalayas, Kendriya Vidyalayas, the PM SHRI will act as "NEP labs".

Features of NEP in school education

- The NEP envisages a curricular structure and teaching style divided into various stages foundational, preparatory, middle and secondary.
- The foundational years (pre-school and grades I, II) will involve play-based learning.
- At the preparatory level (III-V), light textbooks are to be introduced along with some formal class-room teaching. Subject teachers are to be introduced at the middle level (VI-VIII).
- The secondary stage (IX-XII) will be multidisciplinary in nature with no hard separation between arts and sciences or other disciplines.

How will PM SHRI schools be different from Kendriya Vidyalayas or Jawahar Navodaya Vidyalayas?

- Kendriya Vidyalayas or Jawahar Navodaya Vidyalayas come entirely under the Center's Ministry of Education and are fully funded by the Union government under Central Sector Schemes.
- While KVs largely cater to children of Union government employees posted in states and UTs, JNVs were set up to nurture talented students in rural parts of the country.
- In contrast, PM SHRI schools will be an upgrade of existing schools run by the Center, states, UTs and local bodies.
- This essentially means that PM SHRI schools can either be KVs, JNVs, state government schools or even those run by municipal corporations.

Where will the PM SHRI schools come up?

- The Center has not yet released the list of schools that have been chosen for this purpose though it has been announced that the PM SHRI schools will also "offer mentorship" to other schools in their vicinity.
- These schools will be equipped with modern infrastructure including labs, smart classrooms, libraries, sports equipment, art room etc.
- It shall also be developed as green schools with water conservation, waste recycling, energy-efficient infrastructure and integration of organic lifestyle in curriculum.

What is a Centrally Sponsored Scheme?

• A centrally sponsored scheme is one where the cost of implementation is likely to split in the 60:40 ratio among the Union government and the states/Union Territories.

•	For instance, the mid-day meal scheme (PM Poshan) or the PM Awas Yojana are examples of centrally sponsored schemes.

• In the case of the Northeastern states, Himachal Pradesh, Uttarakhand, Jammu and Kashmir and UTs without legislatures, the Centre's contribution can go up to 90 per cent.

Puneet Bhatia



"Triple Dip" La Nina

Why is it in the news?

The occurrence of the La Nina phenomenon for the third consecutive year in the Pacific Ocean, confirmed by The Australian Bureau of Meteorology

For the very first time in this century, spanning three consecutive northern hemisphere winters to become a 'triple dip' La Nina, stated by The World Meteorological Organization (WMO) on August 31.

Paper: GS-I: Geography (Climatology, Important Geophysical Phenomena),

GS-III: Environment and Ecology (Environmental Pollution and Degradation, Impact of Climate Change)

What are La- Nina and El-Nino?

- El- Nino which means "the boy" and La Nina which means "the girl" in Spanish are two mutually opposite phenomena.
- During the occurrence of this phenomenon, an abnormal rise or cooling of sea surface temperatures is observed in the Pacific Ocean along the equator, off the coast of South America.
- Together they constitute, called as El Niño-Southern Oscillation system, or ENSO
- The impact of ENSO conditions can affect both temperatures and rainfall globally, due to their strong interference with global atmospheric circulations.
- Usually, it has been seen that El Nino and La Nina occur every four to five years.
- El Nino is more frequent than La Nina.
- Neutral: These years are not associated with any of the above phenomena.

La Nina.



- La Nina is a complex weather pattern that occurs in an interval of 4 to 5 years, as a consequence of variations in ocean temperatures in the Equatorial Pacific.
- It is a coupled ocean-atmosphere occurrence, which is the colder counterpart of El Niño, as part of the broader EL Nino–Southern Oscillation (ENSO) climate pattern.

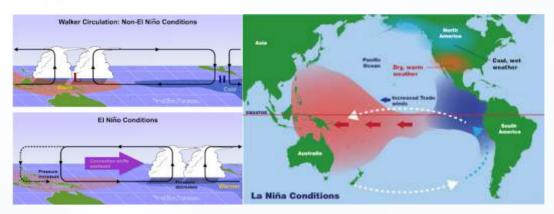
- An appearance of La Nina can continue for at least 5 months.
- During a period of La Nina, the sea surface temperature over the equatorial Eastern Central Pacific Ocean will be lower than normal by 3 to 5 °C.
- An appearance of La Nina persists for at least five months.
- It has extensive effects on the global weather, particularly in North America, even affecting the Atlantic and Pacific hurricane seasons, in which more tropical cyclones occur in the Atlantic basin due to low wind shear and warmer sea surface temperatures, while reducing tropical cyclogenesis in the Pacific Ocean.
- It comes out as strong winds blow warm water at the ocean's surface from South America across the Pacific Ocean towards Indonesia.
- As this warm water moves towards the west, cold water from the deep sea rises to the surface near South America.
- Consequently, it is considered to be the cold phase of the broader El Nino–Southern Oscillation weather pattern and the opposite of the El Niño weather pattern.
- La Nino impacts the global climate and disrupts normal weather patterns, which as a result can lead to intense storms in some places and droughts in others.

El-Nino

- The warming phase of the sea temperature is known as El Nino and is linked to a band of warm
 ocean water that evolves in the central and east-central equatorial Pacific, including the area off
 the Pacific coast of South America.
- El Nino is accompanied by high air pressure in the western Pacific and low air pressure in the eastern Pacific.
- During the evolution of El Nino, rain falls between September–November.

ENSO

- El Nino and the Southern Oscillation, also known as ENSO, is a periodic disturbance in sea surface temperature (El Niño) and the air pressure of the overlying atmosphere (Southern Oscillation) across the equatorial Pacific Ocean.
- The ENSO is the cycle of warm and cold sea surface temperature (SST) of the tropical central and eastern Pacific oceans.
- The cool phase of ENSO is La Niña, with SSTs in the eastern Pacific below average, and air pressure high in the eastern Pacific and low in the western Pacific.
- The ENSO cycle, including El Niño and La Niña, causes global changes in temperature and rainfall.



Impact of ENSO on the Indian Subcontinent

- Weather:
- El-Nino causes temperature rise and reduces rainfall over the Indian subcontinent, during the monsoon season. On the other hand, la-Nina brings rainfall and decreases the temperature. Hence, this is why La-Nina is heartily welcomed in the Indian subcontinent.
- Environmental Disasters like Drought and Floods:
- Although El-Nino leads to drought events in the subcontinent, La-Nina is primarily associated with flood events. These disasters affect the socio-economic status of the affected countries.
- Health:
- El-Nino brings droughts to lead to forest fires, and wildfires, thus aggravating respiratory causes by air pollution. While, La-Nina brings flooding, as well as water-borne diseases like Cholera, Malaria, Jaundice, etc.
- Irrigation:
- The irrigated area accounts for 48.8% of the total agricultural area of the country. The remaining 51.2% is rainfed. This rainfed area is primarily dependent upon monsoonal rains. Therefore, the El-Nino-induced rainfall-deficit year brings worries for Indian farmers, while La-Nina induced surplus year is widely welcomed by the Indian farmers.
- Economy:
- As Indian agriculture primarily depends upon the monsoons, also the fact that India is a primarily agricultural country, impacts the Indian economy.
- ENSO affects the Indian economy in a major way. Better agricultural output means better returns for the Indian farmers and rural population. This induces demand and raises the economic output of the country. Since the ENSO impacts farmers and rural poor more, it also has an important role in the reduction or exacerbation of inequality in the country.
- Ecosystem: ENSO causes warmer and colder temperatures in the sea surface waters. Since the corals are a delicate ecosystem, the temperature change potentially affects their ecosystem.

Why have La Nina conditions continued for 3 years?

This behavior is termed "abnormal "by the scientist.

•	It is surprising that it has continued for the last three years. It may be good for India but not for
	some other countries.

• Under climate change conditions, one must expect more such instances. Climate change could be a factor driving such anomalous conditions.



NASA's mission to protect Earth from the hazardous asteroid that could pose a threat to it in the future

Why it is in the news?

Paper: GS paper III, science and technology.

NASA's DART spacecraft is scheduled to crash into the asteroid **Dimorphos** at approximately 7.14 PM EDT on September 26 (4.44 AM IST on September 27).

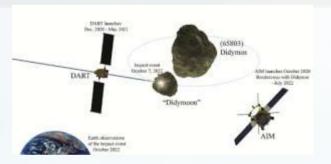
About the DART Mission

- NASA's DART which stands for Double Asteroid Redirection Test is the world's first full-scale mission developed in defence of Earth
- It is a planetary defense-driven test of technologies for defence against an impact on Earth by a hazardous asteroid.
- The spacecraft was launched on a SpaceX Falcon 9 rocket from Vandenberg Space Force Base in California on 24th November 2021.

Objectives of DART:

- DART is the first technology that exhibits the kinetic impact or technique that could be used to mitigate the threat of an asteroid hitting Earth.
- The kinetic impactor mitigation technique is the impulsive deflection of the asteroid through the sudden addition of momentum. In simpler terms, DART is being sent to collide with an asteroid to change its orbital period

Configuration of DART:



Weight:

• It is a low-cost spacecraft DART, weighs about 610 KG at the time of its launch and will discard some of its weight during its flight and will weigh around 550 KG during the impact.

Structure:

• The main structure is a box holding dimensions $1.2 \times 1.3 \times 1.3$ meters.

- It has two solar arrays and uses hydrazine propellant for maneuvering the spacecraft.
- The spacecraft has been attached with a high-resolution imager called **Didymos Reconnaissance** and **Asteroid Camera for Optical Navigation (DRACO)** which is expected to provide precise
 images and information to the scientists to study the impact of the collision on the trajectory of
 the asteroid.
- DART will also carry a small satellite which is a CubeSat named LICIACube (Light Italian CubeSat for Imaging of Asteroids).

DART"s Target

- DART is programmed to target Dimorphos, the much smaller "moonlet" of a binary (two-body) asteroid system.
- Dimorphos orbits a larger asteroid named Didymos which means Greek for "twin" with a diameter of 780 meters.

Importance of DART's crash with Dimorphos

- Didymos is a perfect system to examine the mission because it is an eclipsing binary which means it has a moonlet that regularly orbits the asteroid and it can be seen when it passes in front of the main asteroid.
- With the help of a telescope from Earth, it can study this variation in brightness to understand how long it takes Dimorphos to orbit Didymos.

Does Earth really need a planetary defence system?

NASA has set up the Planetary Defense Coordination Office (PDCO) to look after its ongoing mission of planetary defence.

- The PDCO's aims are to give early detection of potentially hazardous objects, track and characterize the objects, study strategies, and technologies for mitigating possible impacts, and play a leading role in U.S. government response planning for an actual impact.
- DART is the first planetary defence test mission for PDCO.

INDIA AND SCO

Context

Prime Minister Narendra Modi will land in Samarkand, Uzbekistan today to attend the 22nd Heads of State Summit of the Shanghai Cooperation Organization (SCO). The PM is also likely to meet Russian President Vladimir Putin as well as Iranian President Ebrahim Raisi.



What is Shanghai Cooperation Organization (SCO)

SCO is a permanent international intergovernmental Organization headquartered at Beijing, China and was formed in 2001 by China, Kazakhstan, Kyrgyzstan, Uzbekistan, Russia and Tajikistan. India and Pakistan became permanent members in 2017 in the SCO Astana Summit. As of now, it includes 9 Permanent members, 3 observer states as members and 6 dialogue partner states.

Aims and Objectives of SCO

SCO was formed with the objective of promoting **political**, **economic and security cooperation** among its member nations. It aims to **safeguard regional peace**, **security**, **and stability** and create a democratic and equitable international, political and economic order. It has a multi dimensional approach to ensure cooperation and synergy in the field of political affairs, trade, education, culture, energy, transport, tourism and environment protection.

Organizational Structure:

The major bodies of SCO are given below:

- The Heads of State Council (HSC): It is the supreme decision making body of SCO which meets once a year. It decides the major areas of functioning of SCO and also determines its internal functioning as well as its dealings with other states and international organizations.
- **The Heads of Government Council**: is the second-highest organ of SCO, with a dual mandate to decide on budgetary matters and devise details of economic cooperation.
- **The Council of Ministers of Foreign Affairs**: Considers issues related to day-to-day activities and holding of consultations on international problems within the Organization.
- **Regional Anti-Terrorist Structure (RATS):** Established to fight against terrorism, separatism and extremism.

Importance of the SCO meet

- **Rebuilding economy:** It is the first in-person meeting of Heads of SCO after the onset of the Covid-19 pandemic. Countries will have to find a way to come out of the economic recession hitting the world.
- **Combating terrorism**: With the coming of Taliban into power in Afghanistan coupled with the rise of extreme fundamentalist groups and terrorism sparked by ISIS and other groups, states will have to come together to combat security threats.
- **Resolving Ukraine- Russia conflicts:** The Ukraine-Russia military escalations pose a threat to global stability. The SCO meet needs to address this.
- **De-escalation of Taiwan-China tensions**: The relations have strained all the more ever since US speaker Nancy Pelosi visited Taiwan which was eyed with suspicion by China. There is growing fear of a Chinese invasion as military tensions increased in the Taiwan Strait and USA is considering imposing sanctions against China.
- **Finding solutions to Iran Nuclear Deal:** The negotiations between USA and Iran have continuously reached no conclusion with the USA now imposing new sanctions against Iran.

Significance of SCO for India

- **Support for permanent membership of the UN Security Council:** India can channelize SCO to gain support for permanent seat in UNSC. Uzbekistan already sports India's candidature for it.
- Connectivity to Central Asia and harnessing relations with Iran: India showed support to admit Iran as a full member in SCO. Further, during the foreign ministerial meeting of SCO last year, India highlighted the important role of Chabahar Port in increasing the connectivity in the region.
- **Trade and Investment:** India has the opportunity for development of startups, exchange of science and technology and traditional medicine with SCO member states. India is already a major source of medicines and pharmaceuticals in Tajikistan.
- **Natural Resources:** The Central Asian region is rich in natural resources like crude oil, natural gas, gold, iron, aluminum, and copper.
- **Security and stability**: The issues arising from Taliban takeover and conflicts in West Asia can cause spillover effects in India. SCO is a strong platform to resolve such challenges.
- **Combating terrorism, narcotics trade and weapons trafficking**: India has earlier called for "zero tolerance for terrorism in all its manifestations". The RATS of SCO offers a mechanism to deal with terrorism and address issues of state sponsored terrorism also.
- **Tourism diplomacy**: SCO Heads of State have already expressed their admiration for India's joint digital exhibition on Shared Buddhist Heritage earlier. There can be further expansion of tourism in terms of Buddhist connections.

Way Forward

With more than 22% of global GDP and 45% of global population, SCO has immense potential to decide the future world order and balance of power. It can play a significant role in Asia and counter the influence of western countries in the region. Hence, it is imperative for India to utilize SCO in line

with India's policy of "multi-alignments". With India hosting the next SCO summit by assuming the rotational presidency, it can demonstrate its ability of being a responsible great power. Saumya khedwal

SC no to Ganesh puja at Bengaluru Idgah ground, HC allows it in Hubli

Preliminary Examination:

Indian Polity and Governance-Constitution, Political System, Panchayati Raj, Public Policy, Rights Issues, etc.

Mains Examination:

General Studies I: Communalism, Regionalism & Secularism.

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

Why is it in the news?



The Supreme court of India didn't permit the celebration of Ganesh Chaturthi at the Idgah Ground in Bengaluru.

At the same time, the Dharwad bench of the Karnataka high court, declined the stay order of the Hubli Mayor, allowing the celebration at Idgah maidan in Hubli.

What is an idgah?

Idgah is a term used in south Asian Islamic culture to refer to an open-air enclosure, usually outside the city. The land is reserved for eid prayers, offered in the morning of eid-al-Fitr and eid-al- adha

These reserved lands are usually not used for daily prayers at other times of the year.

Idgah Maidan in Bangalore is 2.1 acres of land in the heart of Chamrajpet, one of the oldest localities of Bengaluru.

The ground is used as a playground, with an Idgah for prayers on the festivals of Eid al-Fitr and Eid al-Adha.

The map of Bengaluru and documents from 1871 and 1938 also state that the land has an Idgah and burial ground.

What are the controversies?

- The particular land was secured by the Hubli Municipality in the early years of the 20th century.
- In 1921, the Anjuman-e-Islam petitioned the municipality to authorities the Muslim community to hold prayers in the maidan.
- The municipality accepted the representation, and the land was leased to the Anjuman for 999 years. The lease agreement was subsequently confirmed by the then government of the Bombay Presidency.
- But recently, the revenue minister of Karnataka R. Ashoka, stated that "The land, which is referred to by different names by people, actually belongs to the revenue department. The revenue records show that it does not belong to the Bruhat Bengaluru Mahanagara Palike (BBMP) or any 'Board'.



What is Anjuman-e-Islam?

Dr. Badruddin Tyabji, !st acting chief justice of Bombay High court and, the 3rd president of the Indian national congress was the founder of the Anjuman –I-Islam, he founded this educational and social organization in India in 1874, with a vision of providing better educational and social opportunities to the Muslim community.

What Anjuman-e-Islam and 999 years lease agreement?

- The government permitted the Anjuman-e-Islam, in the 1960s to construct a commercial building on the land, under some specified terms and conditions.
- In 1972, the Anjuman-e-Islam tried to execute the commercial plan under the guidelines given by the government, and subsequently, a structure was erected,
- But there came legal challenges to The Anuman-e-Islam's executions of the permissions from the government, stating, that the lease agreement does not include any construction work, and the matter went through many decades of litigation.
- In the supreme court in 2010, Court confirmed the order of the Karnataka High Court and the lower courts, ruling that the Idgah maidan was the exclusive property of the Hubli-Dharwad Municipal Corporation and that the Anjuman had the license only to hold prayers on the ground twice a year, and not to build any permanent structure on it.

The current situation

Recently The High Court has seen that the Idgah maidan in Hubbali actually belongs to the Hubbali

Dharwad Municipal Corporation and that the land has been leased for 999 years to the Anjuman-i-Islam, is true.

So the High court has declared that HDMC has all the rights over the use of land.

What is a Wakf property?

The Wakf Act defines Wakf as a permanent dedication by a person professing Islam, of any movable or immovable property for any purpose recognized by Muslim law as pious, religious, or charitable.



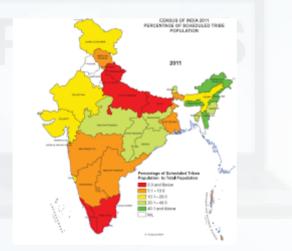
Cabinet approves addition of 4 tribes to ST list

Context

The Union Cabinet approved the addition of 4 tribes from Himachal Pradesh, Tamil Nadu, and Chhattisgarh to the Scheduled Tribe list. These include **Hatti tribe of Himachal Pradesh**, **Binjhia tribe of Chhattisgarh**, and **Narikoravan and Kurivikkaran hill tribes of Tamil Nadu**. The move is in continuation of **Constitution (Scheduled Tribes) Order (Amendment) Bill 2022** which was earlier passed by the Parliament to amend the Constitution (Scheduled Tribes) Order, 1950 for the inclusion of certain communities in the list of Scheduled Tribes in relation to the State of Tripura.

What are Scheduled Tribes (STs)?

Due to the social, economic and educational backwardness and exclusion of certain communities in India, the framers of the Constitution recognized the need to grant these communities special consideration for safeguarding their interests and for their accelerated socio-economic development. These communities were notified as Scheduled Tribes as per provisions contained in **Article 342** of the Constitution of India. **As per Census 2011**, the ST population in the country is **104 million** which accounts for **8.6%** of the nation's total population.



Criteria to be identified as ST

Government of India has adopted the following five criteria to identify a community as a Scheduled Tribe:

- (i) indications of primitive traits,
- (ii) distinctive culture,
- (iii) geographical isolation,
- (iv) shyness of contact with the community at large, and
- (v) backwardness

How are STs notified?

According to the Constitution of India, under **Article 342(1)**, The **President of India**, may with respect to any State or Union territory, and where it is a State, after consultation with the Governor thereof, by public notification, specify the tribes or tribal communities or parts of or groups within tribes or tribal communities which shall for the purposes of this Constitution be deemed to be Scheduled Tribes in relation to that State or Union territory.

However, under **Article 342(2)**, the **Parliament of India** by law can include or exclude the above-mentioned groups from the list of Scheduled Tribes specified in a notification issued under clause(1)

Based on Article 342, Parliament enacted **The Constitution (Scheduled Tribe) Order, 1950** which contains a list of tribes designated as Scheduled Tribes.

National Commission of Scheduled Tribes (NCST)

The National Commission of Scheduled Tribes(NCST) is a **constitutional body** formed through the **89th Constitution Amendment Act, 2003** by insertion of **Article 338A** in the Constitution. It essentially works to protect and promote interests and welfare of STs by monitoring safeguards for them, inquiring into complaints of deprivation of rights of STs and making recommendations for their socio-economic development. Additionally, it also presents annual report to the President upon working of safeguards for STs.

Issues faced by STs

Land alienation: STs were traditionally land holders. Due to fast paced development and stringent laws, their land has been taken away for industrial and mining purposes. They have also been ousted due to laws regulating wildlife sanctuaries and reserve forests

Loss of community forest rights: The Tribal rely on minor forest produce for their sustenance, fuel, fodder and livelihood. British rule led to them losing these rights.

Poverty and exploitation: They do not possess employment opportunities and often live in poverty and indebtedness. Due to their seclusion, they are often exploited and forced into bonded labor or trafficking.

Low level of Health and Nutrition: There is a high infant mortality rate and low levels of life expectancy among STs and prevalence of disease burden like anemia, malaria, cholera, tuberculosis, etc due to poor nutrition.

Loss of identity: The modern institutions and laws are different from the traditional laws and lifestyle of tribal. There is also extinction of their language and dialect in some cases which all culminates to feelings of alienation and loss of identity.

Way Forward:

There needs to be understanding and respect of tribal culture and practices and promote them. Economic development should not exclude tribal population and it should not be at the cost of uprooting

them. Various constitutional and legal safeguards in the form of insertion of 5th and 6th Schedule in the Constitution, creation of Tribal Advisory Council, the Forest Rights Act (FRA), 2006 which recognizes the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources, Pradhan Mantri Van Dhan Yojana (PMVDY), etc go a long way in promoting their welfare.

Saumya Khedwal



Statuette of Annabhau Sathe

Why it is in news?

Recently, statuette Activist-author Annabhau Sathe is unveiled by Devendra Fadnavis in Moscow.

The unveiling of the statuette is a part of the celebration of 75 years of independence of India, and also to celebrate India –Russia's relationship.



Who was Annahhau Sathe?

- Annabhau Sathe, who was originally named, Tukaram Bhauro, Sathe.
- He was born to a Dalit family in wategaon village, of Satara district of Maharastra on 1st August 1920.
- 10 years later in 1930, he along with his family moved to Mumbai, where he did some odd jobs like a porter, a hawker, and also a cotton mill helper.
- In 1934, he participated in a worker's strike, under the leadership of Lal Batwa mill workers Union, where he met an associate of Dr. Ambedkar in the famous "Chavdar lake Satyagraha" at Mahad, R.B. More.
- Under his influence, he joined the labour study circle, where he first learned to read and write.

His journey from a laborer to an author.

- He developed his interest to write poems when he was in the labour camp.
- His 1st poem was on the menace of the mosquitoes in the labour camp.
- Then he formed a Dalit Yuvak Sangh, a cultural group that used to perform in front of mill gates during worker's protests, on the poems written by him

- At the same time, the progressive writers association was formed, with writers like Premchand, Faiz Ahmad Faiz, Manto, Ismat Chugtai, Rahul Sankrutyayan, and Mulkraj Anand as its members.
- The association would translate the Russian work of Maxim Gorky, Anton Chekhov, Leo Tolstoy, and Ivan Turgenev into Marathi, by which Sathe got inspired.
- It put an ideological impact on him, and he got the inspiration of writing street plays, stories, and novels. Etc.
- He wrote his first *ballad* (a long song or poem that tells a story, often about love) 'Spanish Povada', in 1939

The popularity of his work

- He lived for 49 years, he began to write when he was 20 years old.
- In just 29 years, of his writing, he penned about, 32 novels, 13 collections of short stories, four plays, a travelogue, and 11 Povadas(ballad).
- Along this, he and his group traveled across Mumbai campaigning for workers' rights.
- Several of his works like 'Aklechi Goshta,' 'Stalingradacha Povada,' 'Mazi Maina Gavavar Rahili,' and 'And Jag Badal Ghaluni Ghav' were popular across the state. Almost six of his novels were turned into films and many were translated into other languages, including Russian. His 'Bangalchi Hak' (Bengal's Call) on the Bengal famine was translated into Bengali and later presented at London's Royal Theatre. His literature depicted the caste and class reality of Indian society at that time.
- Many of his works like 'Aklechi Goshta,' 'Stalingradacha Povada,' 'Mazi Maina Gavavar Rahili,' and 'And Jag Badal Ghaluni Ghav' were well-liked across the state.
- About 6 of his novels were turned into films and many of them were translated into many other Indian languages and foreign languages, including Russian.
- One of his famous literary creations, Bangalchi Hak' on the Bengal famine was translated into Bengali and later presented at London's Royal Theatre.
- His works depict the caste and class reality of Indian society at that time.
- In 1943, he formed the Lal Bawta Kala Pathak, along with Amar Sheikh and Datta Gavhankar.
- The group traveled across the Maharastra, presenting awareness programs on caste atrocities, class conflicts, and workers' rights.
- He dedicated his most popular novel "Fakira" to his Idol Dr. Ambedkar.
- He was also associated with the formation of the Indian People's Theatre Association in 1943 and became the president in 1949.
- His works were highly influenced by Marxism, but he also portrayed the harsh realities of the caste system

The Russian connection of Annabhau

• Sathe was greatly stimulated by Gorky's 'The Mother 'and the Russian revolution, which can be

seen in his writings.

- So once Annabhau was called Sathe, the Maxim Gorky of Maharastra by The Famous Marathi Poet Baburao Bagul.
- As per Associate Professor of Russian Head, Department of Foreign Languages, Shivaji University, Kolhapur, Dr. Megha Pansare, Annabhau's literature has a very close resemblance to the then Communist Russian literature which was a mixture of reality and art.
- In that era, Russia use to invite representative Indian literature translated into Russian.
- Some of the writings of Sathe's like Chitra and his famous Stalingradcha Povada based on the battle of Stalingrad battle were translated into Russian.
- In 1961, Sathe visited Russia.
- 'Maza Russiacha Pravas' (My Travel to Russia), his travelogue,in which he wrote about how workers of India has come to see him off and how the worker wanted him to go and see slums to Russia and describe them after he returned back to home.
- He was well known in Russia because of his translation and received a warm reception there.

What was the reason behind the statue in Moscow?

- Sathe hails from a Dalit community called Matang.
- The failure to negotiate Annabhau's artistic legacy, Sathe is now confined as a symbol of a separate community.
- The ruling party is aiming to get the credit for making the Sathe global icon.
- Installing Sathe's oil painting at the Indian consulate in Moscow also shows that the central; government, utilized this occasion to increase cultural dialogue between the two countries.

After more than 70 years, Cheetahs will again walk on the Indian soil

Context

After more than 7 decades of extinction from India, Cheetahs have returned to Indian soil. This morning saw a landmark event – the arrival of 8 African Cheetahs in India. The Cheetahs arrived from Namibia and landed in Gwalior for being taken to the Kuno Palpur National Park. Out of the 8 Cheetahs that arrived, 5 are females while 3 are male.



(Image Courtesy: livemint)

Background

- Cheetahs have an ancient history in India with the first reference dating back to the Neolithic period. A Neolithic cave painting at Chaturbunj Nala in MP depicts a 'slender spotted feline being hunted'.
- 'Cheetah' is believed to have originated from Sanskrit word chitrak, which means 'the spotted one'.
- In the medieval era, the Mughal emperor Akbar is believed to possess 1,000 cheetahs which were used for hunting blackbucks and gazelles. This move was continued by Jahangir.
- The British rule didn't help for protection of Cheetahs either and some British even shot them for trophy hunting.
- By the beginning of the 20th century, only a few hundred Indian Cheetahs were left, rest were wiped out.
- Maharaja Ramanuj Pratap Singh Deo of Koriya princely state is believed to have hunted down and shot the last three recorded Asiatic cheetahs in India.
- In 1952, The cheetah was officially declared extinct by the Indian government.



Re-introduction and Project Cheetah

- India has been trying to bring back Cheetah since a long time. Talks were carried out with Iran in 1970s to bring Asiatic cheetah to India in exchange for Asiatic lions but this couldn't manifest into any action.
- Attempts were again made in 2009 when the then Environment Minister endorsed plan to reintroduce Cheetah but this was stayed by the Supreme Court citing that a detailed study needs to be conducted and produced before taking this big step.
- Project Cheetah is an ambitious project undertaken by the Government of India with the objective to re-establish the species in its historical range in India. This was approved by the Supreme Court as a pilot program and allowed reintroduction of cheetahs on an "experimental basis"
- India signed an MOU with the Republic of Namibia in 2020 whereby the latter agreed to donate the eight Cheetahs to start the program. Another batch is expected to arrive from South Africa once details between the two countries are finalized.
- Amongst the 10 surveyed sites of the central Indian states, Kuno Palpur National Park (KNP) in Madhya Pradesh was identified as the best suited one. The reasons for this were its suitable habitat and adequate prey base, lack of human settlements and ample deciduous open forest landscape.

Translocation and associated issues

Translocation is not a rare phenomena and is often done to preserve species and re-populate its old habit or that of a similar kind. For example the southern white rhinos were transported in various places in Africa from KwaZulu-Natal. Similarly, Kaziranga Rhinos were translocated to Manas to build a new population in recent times. Such have been success stories. However, inter-continental translocations are no so common and certain risks are associated with translocation namely:

- **Genetic Diversity**: A genetically diverse population of species is ideally suited for building a new population elsewhere. But when the source population is itself small in number, it becomes difficult to build a new population of genetically suitable animals due to lack of gene diversity and inbreeding further increases health risks.
- **Habitat**: The habitat should match the original one from where the animals are brought as any difference can cause stress and difficulty to cope in the new environment.
- **Prey Base**: There should be sufficient prey base and density for the Carnivorous population to survive.
- **Area**: a single cheetah requires 100 sq km as its territory. Due to large scale construction, deforestation and industrialisation, it may become difficult to sustain a stable cheetah population.
- **Homing instinct**: It refers to an animal's innate ability to return to its territory after traveling away from it. This can lead to man-animal conflict as the animal displaced from its original site wanders in new areas in search of its old habitat. This was witnessed in 2009 when a young tiger was moved from Pench to Panna and it set its journey of over 400 km to travel back to Pench when authorities had to intervene to intercept it and bring it back to Panna.

Preparations made for successful Cheetah Translocation

- Extensive health check ups were done of the 8 Cheetahs in Namibia to ensure they were fit to be flown to India. They were checked for diseases and completion of vaccination.
- Indian forest officers and wildlife experts were trained by expert teams from Namibia and South Africa on the handling, breeding, rehabilitation, medical treatment and conservation of cheetahs.
- After arrival, they will be radio collared and monitoring would be done through satellites
- Each Cheetah will have a dedicated monitoring unit 24 hours a day.
- Heavy security arrangements are made like presence of drone squads and military personnel to prevent poaching
- Government has launched the 'Cheetah Mitra' campaign whereby volunteers would work to increase awareness about Cheetah among people.
- Cheetahs will be first released into a quarantine enclosure where they will be kept for a month
 after which they will be shifted to bigger enclosure till they adapt to the new environment before
 being released into Kuno Palpur National Park

Significance of the Cheetah reintroduction

- It will help Restore India's historic evolutionary balance. Cheetah had been an integral part of India and this move will restore it to its historic glory.
- It will help in developing a Cheetah metapopulation within India and contribute to increasing the global Cheetah number.
- The cheetah is a flagship grassland species and its conservation will also help to preserve other grassland species in the predator food chain.
- It will also help to protect the grasslands of India which is the habitat of Cheetahs

Way Forward

While a successful Cheetah diplomacy has ensured in getting the big cat back to India, the future course will be determined by proactive conservation efforts and coordination of all stakeholders. Once the population in Kuno National Park adapts to the region and population increases, the Indian government will expand the efforts to reserves in other parts of the country also. It is hoped that Project Cheetah will follow the footsteps of Project Tiger to be a success story.

Saumya Khedwal

India's broken rice export ban.

Prelims: Indian economy and Indian social development

Mains: GS paper III: Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment, major crop pattern In India.

Why in news?

• The ruling government of India, not more than 4 months ago put banned the export of wheat from India, because of unexpected crop failure resulting in low procurement and a decrease in public stocks. Concerns over a similar situation arising have now led it to impose curbs, albeit not an outright ban, on rice shipments as well

What are the restriction

- India exports four categories of Rice, and out of those, two of them –basmati rice and parboiled non-basmati rice are openly allowed.
- The restriction is only for the other two: raw(white), and broken non-basmati rice.
- Recently, the Revenue Department to the Ministry of Finance informed the slapping of 20% duty export on rice "other than the parboiled and basmati rice "which was supposed to come into effect from Sept 9.
- It will include all the raw non-basmati rice shipments, whether full or broken grains.
- Another notification of the Directorate General of Foreign Trade in the Ministry of Commerce and Industry puts a blanket ban on broken rice export.
- It concludes that only nonbroken basmati of full-grained will be allowed for export on payment of 20% duty
- The restrictions noticed will come into effect just under half of India's rice exports in terms of quantity and over a third by value.

Why these bans?

There are prime reasons:

- **The 1st** is the significant decline of India's rice production due to the deficient monsoon rainfall in the northern states of India, like Uttar Pradesh, Bihar, Jharkhand, and Gegatic West Bengal.
- The 2nd reason is It the production of rice in Punjab and Haryana also affected the virus that has caused the "dwarfing" of paddy plants in many fields there.
- The 3rd reason is during current the Kharif season some of the farmers have planted the lower—yielding shorter duration varieties, which is bound to reflect the output.

- The 4th reason is, that rice export is being restricted, as to sustain the public duration system with the low public wheat.
- Broken rice can be used to boost India's ethanol production.

What are Parboiled rice and broken rice?

- The type of rice that is obtained, from the milling of paddy grains produced by farmers. In general, paddy has 20-20% husk and 10-11% bran. Remnant of the husk and bran white raw rice that contains 68-69% of paddy. The milled rice at the end has both whole grains and broken grains.
- The paddy with its outer husk is soaked in water, steamed, and dried, hence the rice becomes harder and breakage during milling is called parboiled rice.
- India exports parboiled rice which contains 5-15% broken grains. In raw rice, it is about 25%.
- Rice which is 100% broken exports have been prohibited.

Rice export in India

- According to the data, last year more than 70% of basmati has been exported to Iran and Arabian countries.
- Some more percent were being added to it by the countries like UK, USA, Canada, Australia.
- Almost 55% of non-basmati rice has been exported to African countries. Including countries of south America like Cameroon, Djibouti, Guinea, Madagascar, Somalia Benin, Ivory Coast, Senegal, Togo, and Liberia.
- Most exports to Africa and Bangladesh consist of parboiled rice, while China imports broken rice that has now been banned.

What is promising about the selective ban on rice exports?

- The central government of India has determined to make sure the availability of broken rice for various industrial uses and for its own poultry.
- The Eastern countries depend upon Indian cheap rice, mainly for feed purposes depend. so the Rice shipment to the nations in the East has been restricted.
- The central government of India's indirect message for these countries is to import corn from us.
- Saving the domestic stocks of food grains in a country like India holding a large population is very essential at a time of fears of a global food crisis precipitated by fertilizer shortages and droughts.
- This will help the producer to stand a benefit with corn prices ruling at ₹22,000-23,000 a ton.

What are the criticisms against this government move?

There is fear that the restrictions,

• can affect the supplies in a negative way when the demand will increase in hr global market for Indian rice.

- Bring shortage to the global food.
- Surplus the inflation in the poor countries.

What is the way ahead?

- 1st is to reduce export prices can be announced to intercept any under-invoicing.
- 2nd, There should be periodic checks to make sure premium non-Basmati and other types of rice are not get shipped as Basmati rice to avoid the 20% tax by hawala traders.
- The 3rd, will be to ensure that other types of rice are not mixed with Basmati and shipped out to evade the tax. In both these cases, there is a lurking danger of *hawala* traders operating through this channel.

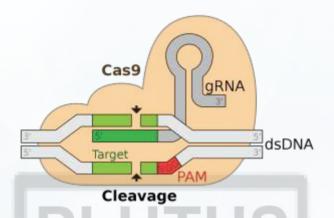


CRISPR: beginning to deliver

Prelims: the importance of national and international relation

Mains: GS paper III, IT and space field awareness.

Why is it in the news?



- For the last 3 years, the gene–editing technology also known as CRISPR (Clustered regularly interspaced short palindromic repeats), with about unlimited abilities has produced flawless results in Clinical Trials.
- India permitted a 5-year Project to develop CRISPR to eradicate, sickle cell anemia.

What is genome editing?

- These are a kind of DNA editing technology.
- By using genome editing technologies, scientists can change DNA, change the physical features of eye colour, and reduce the disease risk.
- These technologies work like scissors, they cut the DNA in a particular spot, and after that scientists can add or remove, or can replace the DNA, where it was cut.
- During the late 1900s CRISPR technologies were developed around the world.s.

CRISPR technology?

- CRISPR (Clustered regularly interspaced short palindromic repeats) is a new genome editing tool developed in 2009.
- After the development of the CRISPR tool, it becomes easier to work with DNA than before.
- Advantages of CRISPR: It is simpler, faster, low cost, and has more accuracy than the earlier invented editing tools.
- It is a kind of unique technology, by which geneticists and medicine researchers edit the parts of the genome adding or altering portions of the DNA in living organisms of DNA sequence

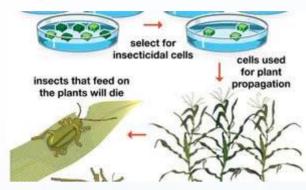
• It is made of two molecules that introduced the change in DNA

What is CRISPR-Cas9?

- They are kind of an enzyme named Cas9.
- It works as a pair of "molecular scissors", which can cut the two strands of DNA at a particular location in the genome so that bits of DNA can alter.
- A small piece of RNA is known as RNA (gRNA).
- It is made of a small piece of pre-designed RNA sequence (about 20 bases long) located in a longer RNA scaffold.
- The scaffold part binds to DNA and the pre-designed sequence 'guides' Cas9 to the right part of the genome
- This ensures that the Cas9 enzyme cuts the DNA at the correct point in the genome.
- Scientists can use DNA repair machinery to introduce changes to one or more genes. in the genome of a cell of interest.
- The guide RNA is structured in a way to locate and find the binds to a specific sequence in the DNA.
- The guide RNA has the RNA bases that complement that targeted DNA sequence in the genome.
- The Cas9 follows the guide RNA to the exact location, in the DNA sequence and makes a cut across both strands of the DNA.
- In this stage, the cell recognizes the damaged DNA and then tries to repair it.

Genentically modified plants

What are genetically modified plants and how are they modified?



- These are kinds of living organisms, whose genetic material has been artificially changed in a laboratory through genetic engineering, in a way to favour the expression of desired physiological traits or the creation of wished biological products.
- This is created by the combinations of plants, animals, bacteria, and virus genes that generally do not occur in nature or by traditional cross-breeding methods.
- Most GMOs are designed to withstand the direct application of herbicide or to produce an insecticide.
- Nevertheless, some new technologies are now used to create artificial traits in plants, for example, to resist the browning in apples, and to make new organisms using biology.
- These are a kind of plant, in which the DNAs are modified by genetic engineering for embedding a new trait in the plants which do not happen naturally in the species.
- The purpose of genetic engineering is to transcend the genus barriers by inserting an alien gene in the seed to achieve the desired effect and the alien gene could be from a plant, animal, or even a soil bacterium.
- A few genetically modified variants of maize, canola, soybean, etc are available.

GM crops in India:

- The only GM crop that is allowed in India since 2002, is BT cotton, which has two foreign genes from the soil, *Bacterium Bacillus thuringiensis* (**Bt**), that allows the crop to build a protein toxic to the common pest *pink bollworm* and another one is Ht Bt which is obtained by the insertion of an additional gene, from another soil bacterium, it permits the plants to resist the common herbicide glyphosate.
- In Bt Brinjal, a gene allows the plant to withstand the attacks of fruit and shoot borers.
- Earlier to this, the government of India restricted the commercial release of genetically modified mustard due to very strong opposition from anti-GMO activists and NGOs.

The legal status of GM crops in India

- The Genetic Engineering Appraisal Committee (GEAC), is the supreme body in India, that checks the commercial release of GM crops under the aegis of the Ministry of Environment, Forest and Climate Change (MoEF&CC).
- This committee is responsible for the growing activities which involve the use of large-scale involvement of hazardous microorganisms and recombinants in research and from the environmental perspective.
- It is also responsible for increasing proposals for releasing genetically engineered (GE) organisms and products into the environment, including experimental field trials.
- It also takes care of the increase in uses of the unapproved GM variant, which can lead to an imprisonment of 5 years and a fine of 1 lakh fine under the Environment Protection Act, 1989

Issue related to the Genetically Modified Crops

Agriculture Genetic Modification conflict: there are possibilities of getting some undesired consequential effect like the resulting food can have an allergic reaction.

• A study by Karolinska Institute Sweden and another study of Biopharmaceutical Company Novartis, have pointed out that the CRISPR-Cas9-modified cells can trigger cancer.

<u>The Germline Modification</u>: in this modification process, the gene which is too passed on to the children and future generations is intentionally changed- in a way to create genetically modified people.

- It is the most correct righteous debate related to genome editing centers about human germline modification. This is so because it made the germline can transfer to the future generation also.
- For both safety and social reasons, Human germline modifications have not been considered appropriate for many years.

Genetic Inequality:

- The wealthy families of the society will be able to buy the latest upgraded offspring for their children. consequently, it will bring genetic inequality, and even it will be a greater inequality than the present world already has.
- Many key scientists in this field, have arisen concerns about the misuse of possible misuse of the technology, which can be used for eugenics, to build genetic discrimination.

Regulation of Imported Crops:

- Initially, the Genetic Engineering Appraisal Committee (GEAC) was responsible for regulating the GMO levels in imported consumables, under the Union environment ministry.
- Later, the role of the committee was mitigated with the enactment of the Food Safety and Standard Act, 2006, and the Food Safety and Standards Authority of India (FSSAI) was allotted to check imported goods.

National List of Essential Medicines (NLEM): ensuring accessibility and affordability of medicines in India

Prelims: National List of Essential Medicines (NLEM), National Pharmaceuticals Pricing Authority (NPPA)

Mains: GS Paper II - Health, Government Policies and Interventions

Context

The new revised National List of Essential Medicines has been released by the Union Health Ministry after 7 years. National List of Essential Medicines (NLEM), 2022, has 34 new drugs which include 4 patented drugs.



What is the National List of Essential Medicines (NLEM)?

These are medicines to address the priority health care needs of the majority of the population and thereby treat diseases that are a public health concern. For a medicine to be included in NLEM, it must satisfy conditions of affordability, safety and efficacy and must be approved by the Drugs Controller General (DCGI).

It usually contains those medicines which are recommended under the National Health Programs of India. (ex. Bedaquiline used in TB Elimination Program)

It is published by the Ministry of Health and Family Welfare and is revised from time to time depending on the changing public health priorities as well as advancement in pharmaceutical knowledge.

NLEM falls under First Schedule of The Drugs (Price Control) Order, 2013.

So far, it has been revised four times since its inception in 1996,- 2003,2011,2015 and now in 2022.

Pricing of drugs under NLEM

Under the powers conferred under the Essential Commodities Act, 1955, the Government issues Drug Price Control Orders (DPCO) which allows it to set a ceiling price for lifesaving medicines. This ensures that the general public can access these medicines at an affordable price.

NLEM contains medicine which fall under Schedule I of DPCO and are hence subject to price control

Pricing is fixed by National Pharmaceutical Pricing Authority (NPPA)

Once a drug falls into NLEM, its price cannot be changed by the drug manufacturing company.

The prices are increased or decreased every year based on Wholesale Price Index (WPI)

Need for Revisions

While some medicines may become redundant and obsolete, or are found to be hazardous for health with significant side effects and hence removed from the list-for example, the anti-TB drug kanamycin was removed from the revised list due to its side effects on kidney and hearing impairment.

It may also be removed from the list if the disease it aims to treat is no longer a public health concern.

On the other hand, new treatment protocols may emerge or new drugs may be made which are more efficacious and affordable due to scientific advancement in the pharmaceutical sector .

Hence the NELM must match the concerns and relevancy of the public health system.

The most significant feature of the 2022 list is the addition of some patented drugs. Generally, NELM consists of generic drugs only, but this time, these patented drugs are added due to their effectiveness in treating serious health diseases like Bedaquiline and Delaminid for TB, Dolutegravir for HIV, and Daclatasvir for the treatment of Hepatitis C.

Significance of NLEM

The NLEM ensures accessibility and availability of medicines at affordable prices. It thus reduces the out of pocket expenditure of the common man and promotes rational usage of medicines.

Saumya khedwal

The Doctrine of Essential Religious Practices: Evolution and challenges

Context

The Supreme Court is hearing appeals against the Karnataka High Court verdict in the case of Fathima Bushra vs State of Karnataka which effectively upheld the ban on wearing hijab in government schools and colleges. The Karnataka High Court had upheld Government Order pertaining to uniforms which indirectly led to a ban on wearing hijab. Supreme Court Judge Justice Sudhanshu Dhulia orally remarked in the hearing that the Karnataka High Court should not have gone into the question of essential religious practice.

The Karnataka HC ruling:

Wearing of Hijab does not form part of essential religious practice in Islam. Hence, the Right to Freedom of Religion under Articles 25-28 of the Constitution is not violated by the ban.

Dress is not at the "core" of free expression and privacy rights, but is a "derivative" right, and therefore weaker.

Classrooms are "qualified public spaces" where individual rights must give way to the interest of general discipline and decorum .

Ban is not targeting any particular religion as the Government's order only directed students to wear the uniforms prescribed by their educational institutions.

The object of prescribing uniforms will be defeated if there is non-uniformity in the matter of uniforms.



The evolution of the doctrine of Essential Religious Practices (ERP)

The doctrine of ERP determines which religious practices would be protected under Article 25 and 26 of the Constitution. Article 25 which guarantees Right to Religion does not prescribe what all is protected by it; the courts, over the years, have developed the doctrine of "essential religious practices" to determine which religious practices would be protected under the Constitution. For this purpose they either rely on religious texts or whether the practice which is under challenge existed when the religion originated.

Dr. B.R Ambedkar's speech in the Constituent Assembly

The beginning of the doctrine traces its origin to a speech made by Dr. B.R Ambedkar in the Constituent Assembly where he argued that the definition of religion should be restricted to those beliefs and rituals relating to ceremonies that are essentially religious. The State should be allowed to intervene in matters that touch upon religion or are connected with it but are not intrinsically religious. Such an

approach helped to differentiate between what was secular from what was religious.

State Of Bombay vs Narasu Appa Mali, 1951

Earlier position was such that Courts refrained from interfering in question of religious practices. In the Narasu Appa case, the court held personal law, religious customs, usages and beliefs to be outside of the ambit of fundamental rights of equality, life and dignity. The judgment made personal law immune from constitutional scrutiny. This position was later changed by the Shirur Mutt case though the Narasu judgment was not explicitly overruled.

Shri Shirur Mutt Case, 1954

A seven judge bench of the Supreme Court held that the term "religion" will cover all rituals and practices "integral" to a religion. Article 25(2)(a) allows regulation of the economic, political or commercial activities which are associated with religious practices. But the responsibility of determining what all constitutes integral religious practices was left on the Courts. This was decided based upon what practices were considered essential or crucial by religious denominations.

Ram Prasad Seth vs State Of U.P. And Ors, 1957

The Allahabad High Court ruled bigamy cannot be considered an integral part of the Hindu religion, and hence not an essential religious practice of Hinduism.

Mohd. Hanif Quareshi & Others vs The State Of Bihar, 1958

The apex court held that the sacrifice of a cow on the occasion of Eid was not an essential religious practice for Muslims.

Sri Venkataramana Devaru v. State of Mysore, 1958

The court held that the exclusion of some people outside Hindu temples was not an essential religious practice and held the temple in question was to be opened for all hindus

Dr. M. Ismail Faruqui Etc, Mohd. v Union Of India And Others, 1994

The court decided on the question whether praying at the mosque is an essential Islamic practice and held that while offering prayers is an essential practice, the offering of such prayers at the mosque is not and namaz (prayer) by Muslims can be offered anywhere.

Commissioner of Police v. Acharya Jagadisharananda Avadhuta, 2004

The court applied the doctrine to decide that the Tandava Dance was not an essential religious practice of the Ananda Marga Faith. The dance was not performed till 10 years after the establishment of the Anand Marga faith and hence could not be held to be essential practice. Court further observed that in order to determine whether or not a particular practice is an essential part of religion, the test must be whether the absence of the practice itself fundamentally alters the religion.

Dr. Noorjehan Safia Niaz And 1 Anr vs State Of Maharashtra And Ors, 2016

The Bombay High Court permitted women to enter the sanctum sanctorum of the Haji Ali Dargah. The court stated that exclusion of women from dargahs was not as essential feature of Islam.

Shayara Bano v Union of India, 2017 (Triple Talaq case)

The Supreme Court rejected the argument that Triple Talaq was an essential practice under Islam.

Court refused to give it Constitutional protection under Article 25. It further held that a practice which is merely permitted or not prohibited by a religion cannot be termed as essential practice. In the instant case, triple talaq was held to be against the basic tenets of the Quran and thus violative of the Shariat.

Indian Young Lawyers' Association v State of Kerala, 2017 (Sabarimala Case)

Sabarimala case rejected the claim of 'Ayyappans' (pilgrims) that the exclusion of women between the age of 10 and 50 from entering the temple constituted an essential practice and allowed all Women from entering the temple. Justice Chandrachud criticized the Narasu Appa judgment stating. "Those activities that are inherently connected with the civil status of individuals cannot be granted constitutional immunity merely because they may have some associational features which have a religious nature," and "the immunity given to personal law customs deviates from the vision of social transformation of the Constitution"

Issues with the test of essential religious practices(ELP)

Courts have assumed grave power to decide whether a practice which was religious in nature was also "essential" to that religion. It is alleged in doing so, courts become "ecclesiastical authorities" which was never intended.

Courts infringe on the autonomy of religious groups to decide what they consider inviolate. This leads to erosion of Freedom of religion.

It also prevents social reforms which happen organically in a society as once a court holds a practice as essential to the religion, no law can be passed to change it regardless of the fact if it is against social reforms. For example, the Court held excommunications made by the Dai of the Dawoodi Bohra community as part of essential religious practice.

Justice Indu Malhotra, in the dissenting opinion in the Sabarimala case raised concerns about this. She was of the view that it is not for courts to determine which religious practices are to be struck down. She stated that "Notions of rationality cannot be invoked in matters of religion," adding: "What constitutes essential religious practice is for the religious community to decide, not for the court" and "Present judgment won't be limited to Sabarimala, it will have wide ramifications. Issues of deep religious sentiments shouldn't be ordinarily interfered into."

Way Forward

There is no clarity in the Constitution regarding what forms part of essential religious practices and the Courts have become the sole authority to decide on this question. Lack of certainty leads to chaos many times. A nine judge bench will soon re-evaluate the "essential religious practice test" in the review petitions filed against the judgment in the Sabarimala case. It is hoped that the judgment will give some clarity on the doctrine and its interplay with Article 13 and Right to Freedom of Religion.

Saumya khedwal

Instant loan apps

Why in the news?



- Recently, Wan Chenghua, 32 years old Chinese national was arrested by the Chandigarh police, along with 20 others. It was reported to Chandigarh police that through instant mobile applications these accused were blackmailing and extorting money from people.
- As per the official of the Chandigarh cyber cell, the racket of luring people to take easy instant loans by mobile applications and then extorting money from them was stimulated by the COVID-19 pandemic.

How do these instant loan mobile applications provide you with loans?

- These mobile applications came up with the idea of providing small amounts of easy loans but at very high-interest rates varying from 15 % to 20%.
- These easy loan applications do not follow the inflexible procedures followed by the banks before providing the loans, such as the verification of consumers.
- A person, who is looking for some accessible loan applications, has to fill out an online form, after downloading the application.
- After that, the person has to provide permission to the applications to access the contacts, photos, videos and other digital content present on the mobile phone.
- Many applications give the loan amount after deducting the interest from the principal amount, but some applications recover the interest on, a weekly or daily basis.
- When loans to the customers are issued from the app, they divide the customers into a different list of categories,
- Based on the due dates.
- On a due date, it is called the D-0 bucket, after the due dates from day 1 to 2, it comes under the S1 bucket: from day 4 to 10, it comes under the S2 bucket, and from day 11 to 30, it is the S3 bucket.

- They treat their customers depending upon which bucket they fall into.
- Abusive calls and threatening calls to a family member is their way to recover money.

The legality of these apps

According to the head of Central Detective Training School (CDTS) in Chandigarh,

- Almost 90% of these kinds of mobile applications are not legally approved.
- The Reserve Bank of India has no control over these.
- These kinds of applications open the doors of extortion for borrowers.
- The app handlers get access to the digital content of the borrowers through the applications.
- The moment when the debtor fails to return the money due to high interest, the app handlers morph their picture, and blackmail to defame the debtor.
- It was reported that these apps are often put up by Chinese firms, and the callers used to trap the debtors are usually Indian.
- Some of these unauthorised apps are Cash Mama, Loan Zone, Dhana Dhan Loan, Cash Up, Cash bus, Mera Loan, Hey Fish, Monkey cash, Cash Elephant, Water Elephant, QuickCash, Kissht, Loan-Cloud, InstaRupee Loan, Flash Rupee-Cash Loan, Mastermelon Cashtrain, GetRupee, ePay Loan, Panda iCredit, EasyLoan, RupeeClick, OCash, Cashmap, Snapit, RapidRupee, ReadyCash, Loan Bazaar, Loanbro, Cash Post, Rupeego, Cash Port, RsRush, Pro Fortune Bag, Rupee Loan, Robocash, CashTM, Udhaar Loan, Credit Free.

When does it start?

- The trend of getting easy loans and extorting was started during the period of the COVID -19 pandemic and continued.
- In a survey, it was found that 58% of citizens of India, who used an instant loan app in the last 2 years were charged 25% interest.
- Around, 150 complaints of extortion and blackmailing by instant loan mobile apps have been filed, in Chandigarh only.
- Two Chinese nationals, along with 115 Nepali nationals, were arrested in Nepal for their involvement in running an online fraud loan scheme that targeted Indians, back in February this year,

The action was taken by Government:

- In June 2022, the Governor of the Reserve bank of India, Shaktikanta Das, alerted the Indian public about non-registered digital money lending apps, and hence if people have complaints related to such entities, then they must have to lodge police complaints.
- However, if RBI receives complaints against any registered Digital Platform, Then RBI will take action against them,
- The governor also stated that it will set some guidelines against digital money lending apps.

- In order to protect the people's data, The RBI has a portal'Cyber Boost '- which has information, which can help citizens verify lending companies.
- RBI has also guaranteed that law enforcement agencies are taking action, and requested citizens to file complaints against these unregistered apps that provide easy loans on the digital platform.
- Also asked the citizens to borrow loans from dRBI registered digital lending apps only



NASAL VACCINE

Why in news?

COVID-19 recombinant nasal vaccine of Bharat Biotech's got its approval from the Ministry of Health's central Drugs Standard Control Organisation, for primary immunization of those who are under the age of 18 years and above in a situation of emergency.

Manusukh Mandaviya the Health Minister has shared this information on Twitter

The nasal vaccine is a

- The vaccines are generally given through different routes, among all of them the most common is to deliver the vaccine through injection shorts into the muscles (intramuscular), or into the tissue just between the skin and the Muscles.
- There are two other ways to deliver the vaccine into the body administering the liquid solution orally into the body, which is generally practised for infants in some vaccines.
- In some cases, the intranasal route is used, in which the vaccine is sprayed into the nostrils and inhaled.
- Most of the viruses, like the coronavirus, enter the body through mucosa-wet, squishy tissues that line the nose, mouth, lungs and digestive tract-triggering a unique immune response from cells and molecules there.
- Many viruses, including the coronavirus, enter the body through mucosa wet, squishy tissues that line the nose, mouth, lungs and digestive tract triggering a unique immune response from cells and molecules there.
- Scientists believe an intranasal vaccine can act against the virus more effectively to break the body's barrier.
- on the other hand, intramuscular vaccine sometimes fails to elicit this mucosal response, as they rely on the immune cells mobilized

The nasal vaccine works



- The vaccine stimulates the response in the blood, in both the case of delivery routes,
- For example, B cells would churn out the antibodies Including a particular potent disease fighter called IgG- to move in the body in search of the virus.

- The T-Cell, another cell, would either help B cells produce antibodies or seek out and destroy the infected cells.
- However, the vaccine, which is injected through the nose or mouth, also traps another set of immune cells that hangs around mucosal tissue.
- The B cells that live there can produce another type of antibody, called IgA, that plays a prime role in killing airway pathogens.
- In addition to this, the cell that is residing nearby will be able to memorise the pathogens that it encountered and will lifelong scout the areas where these were 1st encountered.

What are the advantages of NASAL Vaccine:

- The nasal route has supreme possibilities for vaccination because of the organized immune systems of the nasal mucosa.
- It is non-invasive and needle-free, painless.
- It is easy to insert into the body, as it does not require trained health care workers.
- it can help to get rid of needle-associated risks (injuries and infections).
- It will be suitable for children as well as for adults.
- Scalable manufacturing, will possibly be able to meet the global demand.

Intranasal vaccines may be most beneficial for special populations:

- o It can be used in children and elderly people as it is easy to use, non-invasive
- o For HIV-infected patients with no fear of needle stick injuries
- o The multi-morbid patients who are exhausted from injections
- From a manufacturing point of view.
- The prime advantage of using an intranasal route is. the dry or liquids form of the formulation can be used
- This gives advantages to transportation and wastage issues, because a cold chain may not be required.
- Longer shelf life can be achieved.

What are the Concerns:

- There is a very low chance to back the effectiveness of this route of delivery till now and except for some flu.
- They are safe but, their efficacy is tough to achieve as it deepens on multiple bioengineering approaches.

Supreme Court permits live streaming of proceedings of all Constitutional Bench

CONTEXT

The Supreme Court recently allowed live streaming of its proceedings in important Constitutional Bench cases from September 27. Constitutional Bench is a bench of the Supreme Court having five or more judges on it.



BACKGROUND

- In 2018, The Apex Court in *Swapnil Tripathi v Supreme Court of India* declared live telecast of Court Proceedings as part of Right to Access Justice under **Article 21 of the Constitution** which deals with Protection of Life and Personal Liberty.
- Consequently, "Draft Model Rules for Live-streaming and Recording of Court Proceedings" were released to regulate live streaming of court proceedings.
- Virtual hearings of court proceedings became common with the onset of COVID pandemic but these were restricted to the parties to dispute and were not accessible for the general public.
- In 2021, a PIL on concerns of COVID, suo moto taken up by the Gujarat High Court was live streamed and was viewed by more than 94,000 people.
- Currently, the Gujarat, Patna, Jharkhand, Karnataka, Orissa and Madhya Pradesh High Court have already been live streaming their proceedings through Youtube.

RESTRICTIONS

The Court may refuse to allow streaming of live proceedings in the following cases as suggested by the Attorney General of India, KK Venugopal:

- Matrimonial matters.
- Matters involving interests of juveniles or the protection and safety of the private life of the young offenders,
- Matters of National security
- To ensure that victims, witnesses or defendants can depose truthfully and without any fear.

- To protect confidential or sensitive information, including all matters relating to sexual assault and rape,
- Matters where publicity would be antithetical to the administration of justice, and
- Cases which may provoke sentiments and arouse passion and provoke enmity among communities.

BENEFITS OF LIVE STREAMING PROCEEDINGS

The move will have great significance as will pave way for the following positive outcomes:

- It will lead to de-congestion of courts
- It would remove the need for people to come to Delhi from distant states for a day's hearing.
- It will lead to more transparency, inclusivity and better access to justice
- Increase legal literacy and the public's engagement with the Constitution and laws of the land.
- Improve the quality of conduct of the legal fraternity particularly lawyers and bring more decorum and discipline.
- Promote flow of real time information
- Various matters of national importance are lined up for hearing like petitions challenging the quota for economically weaker sections (EWS), hijab ban, and Citizenship Amendment Act (CAA), excommunication in the Dawoodi Bohra community, petition for enhanced compensation for victims of 1984 Bhopal gas tragedy, the and SC's power to dissolve marriages on the grounds of irretrievable breakdown. Hearing on such issues of national and public interest deserve to be watched by the public.

CONCERNS OF LIVE STREAMING PROCEEDINGS

The decision has given rise to certain issues and concerts like:

- It may lead to sensationalization and disinformation as clips may be circulated irresponsible with catchy sensational titles to garner views effectively leading to fake news and propaganda.
- People may be misled watching snippets of the hearing when in reality everything needs to be viewed as a whole
- May lead to self-censorship by Judges and lawyers to escape criticism on unpopular opinions. This
 goes against constitutionalism as judges are sworn to constitutional morality and not popular
 morality
- It may hamper genuine courtroom engagement
- Issues of Lack of technical manpower in courts and awareness amongst litigants and advocates as well as their acceptance to the system change is also there.
- May be susceptible to cyber attacks
- Lack of Infrastructure and high-speed internet connectivity

WAY FORWARD:

Introduction of live streaming is a welcome step to enhance the justice delivery system in India. As the Supreme Court pointed out in *Swapnil Tripathy vs Supreme Court*, "sunlight is the best disinfectant. Live-streaming will ensure that the interface between a court hearing with virtual reality will result in the dissemination of information in the widest possible sense, imparting transparency and accountability to the judicial process" However, this must be implemented with caution as **Ex-CJI N.V. Ramana** stated, "A judge cannot be swayed by popular opinion. Yes, with increased public gaze, he might become a subject of multiple debates, that should never deter him from his duty to protect the right of one against the might of many. Always remember, as a repository of people's faith, a judge cannot afford to lose objectivity," while to lawyers, he said, they should watch over their clients' interests rather than vie for publicity.



Repercussions of alternations in the catchment area



Why is it in the news?

Bellandur, Varthur, Saul Kere and Kaikondrahalli, overflow in these lakes of Bangaluru is a consequence of the loss of interconnectivity of the water bodies, which is a prime reason for the current urban flooding.

When the government took up the work of the removal of suspended slits from the Bellandur and Varthaur lakes in June 2020, that work is yet to be completed.

The main reason for urban floods in Bangalore is the Loss of Interconnectivity between the lakes

- The scientist of the Indian Institute of Science (IIS) has confirmed that the Bengaluru lakes are not in a good condition.
- Bengaluru has lost 45 to 50% of interconnectivity between the lakes, due to unplanned urban development and encroachment.
- which is the prime reason for the decaying of the lake due to sewage inflow and also led to frequent flooding in the areas closer to it.
- In the 19th century, Bangalore had a 740 sq km region and 1452 water bodies with a capacity of water storage of 35 TMC (thousand million cubic feet), which helps in both harvesting rainwater and also to mitigate floods.
- But at present, Banlaguru has left with only 193 lakes and most of them lost connectivity due to the blocking of the stormwater drains (rajakulaves) because of encroachment or solid wastes.
- The clag deposition in the lakes decreased the water holding capacity of the lakes.
- The number of wetlands in Bangalore also reduced from 285 to 194.

Repercussions of Alteration of Catchment areas

- Bangaluru has a significant interconnected lake system.
- To secure the continuation of the Hydrological functions of the drains and flood plains, the valleys zones connecting the lakes must be protected.
- But, the habitants of these valley zones of the cities continuously abuse the delicate ecosystem despite norms to protect them.
- Due to large-scale catchment alteration with changes in land use and land cover, the Bellandur-Var-

thur wetland ecosystem in Bangalore, experiencing the threat.

• In 2004 the wetland was started to convert into mixed land, to be used to build both residential and office complexes.

•

- The upstream lakes to Bellandur and Varthur, which include Kaikondrahalli and Saul Kere, are also overflowing due to the rampant encroachments of stormwater drains.
- Because of rampant encroachment of stormwater drains, there is an overflow in the upstream lakes to Belladur and Vathur, including the kaikondrahalli and Saul Kere.
- A study by scientists stated that the stormwater drain connecting Bellandur lake from the city market side was narrowed to 28.5 m against the original width of 60 m.
- The groundwater restoration structure was not taken up due to the flow of sewage in SWDs.
- Drains and water bodies are not interconnected and linkage linkage between drains was absent
- This affected the free flow of stormwater leading to frequent flooding in many parts of the city.

Failure of removal of clag

- In 2020 June, Bangalore Development Authority commenced the removal of clag from the Balladur and Vathur Lakes. But due to the pandemic, the work is yet to be completed.
- Most of these lakes and drains in this series are either encroached or not the removal of clag leading to flooding.

What we can conclude

- Hence, there is a very urgent need to include public open spaces within the urban fabric in the form of storm management infrastructure, which could help our cities transform into water-sensitive cities.
- And the development in urban areas must be done under some environment-friendly planning program

Hearing Before Death Sentence: SC refers to Constitutional bench framing guidelines on mitigating circumstances

CONTEXT

The Supreme Court has referred to a larger Constitution bench of 5 judges the issue of framing uniform norms for awarding the death sentence The 3 Judge bench headed by CJI UU Lalit observed that the prevailing practice "places the convict at a hopeless disadvantage, tilting the scales heavily against him". This move is hailed as a much-needed reform in awarding death penalty since there exist differences of opinion and approach in deciding whether the Court is obligated to hold a separate hearing of sentencing after recording the conviction of the accused for a capital offense.



CONSTITUTIONAL PROVISION OF DEATH SENTENCE AND JUDGMENTS

- Under Section 235(2) CrPC, If the accused is convicted, the Judge shall..hear the accused on the question of sentence, and then pass sentence on him according to law.
- The apex court in Bachan Singh v State of Punjab(1980) upheld the constitutional validity of
 death penalty and established the "rarest of the rare" principle to decide if death penalty should
 be given to the convict. Court also held that after awarding death penalty, court would conduct
 another hearing where the convict would place mitigating circumstances before the court to
 convince him why he shouldn't be granted death penalty.
- While the State can present aggravating circumstances against the accused during the trial, the convict can produce mitigating factors only after conviction. This inherently discriminatory.
- Due to some benches conducting hearing of sentencing the same day after awarding the death sentence, other benches considering this to be against principles of natural justice, a lot of ambiguity has arisen.
- The CJI in present case considered if mitigating circumstances ought to be brought to the attention
 of the trial court at the very stage of framing charges or even after the conclusion of the prosecution evidence.

AGGRAVATING AND MITIGATING CIRCUMSTANCES

Aggravating factors may increase a sentence, making the crime more serious in nature. For ex-

ample, if the accused is a Repeat/Habitual offender, if the victim was vulnerable due to her age or mental or physical condition, if the crime was a hate crime, etc.

- Mitigating factors on the other hand represent extenuating circumstances that might lead to a reduced sentence. For example young age of the suspect, chances of the accused of not indulging in commission of the crime again, psychiatric disorder or addiction, etc
- Supreme Court in its reference stressed that a trial court must take into account "the social milieu, the age, educational levels, whether the convict had faced trauma earlier in life, family circumstances, psychological evaluation of a convict and post-conviction conduct, were relevant factors at the time of considering whether the death penalty ought to be imposed upon the accused".

THE NEED FOR UNIFORMITY

- In *Manoj and Ors vs. State of MP*, Supreme Court pointed to the absence of legal framework to handle death penalty sentencing and the subjectiveness and arbitariness of judges involved.
- *Machhi Singh vs. State of Punjab* gave judicial recognition to the notion of "shock of collective conscience" as a ground for imposition of the death penalty. However, it failed to clearly define in what circumstances would amount to "shock of collective conscience"
- The lack of guidelines often make the poor and vulnerable bear the brunt. In a 2016, Project 39A study by National Law University Delhi analyzed profiles of 385 death row prisoners and found that 76 per cent of such prisoners belonged to scheduled castes and scheduled tribes, other backward classes or religious minorities and over three-fourths were from economically vulnerable sections.
- The present three-judge Bench said a uniform approach as to when and how to afford an accused opportunity to present mitigating circumstances before their condemnation to death after the crime is declared "rarest of rare" should be decided authoritatively by a Constitution Bench.

WAY FORWARD

Awarding a death sentence is a serious matter and trial courts should do so only after thoroughly weighing and balancing the aggravating and mitigating circumstances. The accused should be allowed to lay down mitigating factors at the initial stage only and a humanistic approach is needed. The drafting of uniform guidelines by the Supreme Court will give much needed clarity to the issue. There needs to be additional review of the fact whether death penalty is needed since it has been done away in majority of the developed and developing countries Law Commission Report, 2015 on Death Penalty recommended abolishing death penalty and retaining it only for terrorism related offences and waging war against the country. A reformative approach to punishment in need of the hour.

Rules notified for the Criminal Procedure (Identification) Act, 2022

CONTEXT

The Ministry of Home Affairs (MHA) recently notified rules for The Criminal Procedure (Identification) Act, 2022 which gives legal sanction to law enforcement agencies to collect, store and analyze and disseminate measurements of convicts for the purpose of identification and investigation of criminal matters.



MEANING AND PURPOSE OF MEASUREMENTS

As per the rules, "measurements" include **finger-impressions**, **palm-print**, **footprint**, **photographs**, **iris and retina scan**, **physical**, **biological samples** and their analysis, behavioural attributes including **signatures**, **handwriting** or any other examination referred to in Section 53 or Section 53A of the Code of Criminal Procedure(CrPC), 1973. Section 53 and Section 53A of CrPC refer to blood, blood stains, semen, swabs in case of sexual offences, sputum and sweat, hair samples and finger nail clippings by the use of modern and scientific techniques including DNA profiling, name, Address and age of the person. The main purpose of including measurements is:

- 1. Ascertaining identity of the culprit.
- 2. To establish if a previously convicted person has committed a similar offense again.
- 3. Establish a previous conviction of the person

KEY FEATURES OF THE ACT

- The act permits **taking of samples by Police** not only from convicts but also from those under preventive detention, persons ordered to give security for good behaviour or maintaining peace and any person who is arrested for any offense. This includes all measurements except biological samples. Biological samples can be taken only in cases where offense involves crimes against women or children or crimes punishable with imprisonment of less than 7 years.
- The Magistrate is empowered to pass an order compelling any person to give measurements.
- The National Crime Records Bureau (NCRB) is the nodal agency to collect, store, preserve and destroy the records of measurements. It can also share such records with any law enforcement agency.
- The data so collected will be retained in digital form for 75 years. It will be destroyed if the person is acquitted or released without a trial.

• Refusal or resistance by a person from giving samples will attract criminal liability.

THE NEED FOR THE NEW ACT

- The act repeals Identification of Prisoners Act, 1920 .The 1920 did not have provisions for collecting all the biological samples other than fingerprints and foot impressions, like which are covered under the new act since most of these techniques were not developed by that time. The Law Commission 87th report also had recommended amending various provisions of the 1920 act.
- The **old act** permitted sample collection of those persons who are arrested or convicted with **offences punishable with rigorous imprisonment of one year or more**, the **new act** has been liberal and allows data collection of persons arrested or convicted for **any offence**.

CONCERNS

1. Ambiguity due to undefined terms

- The Bill fails to provide an exact definition of 'measurements'. Terms such as 'analysis', 'biological samples' and 'behavioral attributes' used under the definition of 'measurements' are open to varying interpretations which leads to ambiguity.
- The bill empowers NCRB to disseminate this data of persons arrested or convicted but it does not state for what purpose this data may be shared and the extent of information which can be shared.

2. Against Constitutional Safeguards

- The act is in conflict with the triple test for privacy- Legality, Legitimate State Purpose and Proportionality. given in the judgment of *Puttaswamy & Anr. v. Union of India*. The act fulfills first two tests but is alleged to be not proportionate. Hence, it is Against Right to Privacy under Article 21. It also goes against the Right to be forgotten given in the judgment as allowing storing of data for 75 years is a long time span.
- Against Right to Equality under Article 14 which is against arbitrariness and unreasonable classification as gives wide discretionary powers to Magistrate to give orders compelling accused to give samples.
- Violation of Right against Self-Incrimination under Article 20(3)

3. Issues of ethics and Regulation

- The act fails to differentiate between categories of accused persons on the basis of the nature of offence. Hence, a person accused of even a petty offense may be treated at par with a person accused of heinous crime.
- The act does not deal in detail with procedural safeguards for collection, storage, processing, sharing and destruction of these measurements. This may lead to abuse of data for surveillance purposes.

WAY FORWARD

While inculcating scientific methods of investigation is a dire need for improving the effectiveness and efficiency of the investigation process, collection of sensitive information of accused and making

a database of it needs to be approached with caution. Fundamental Rights can only be encroached if the restrictions are reasonable and far fetched invasion of bodily integrity cannot be acceptable. Any infringement of such data can have far reaching consequences and the State should be well equipped to guard such data.

Saumya khedwal



Human development report 2021-22

Human Development report

Pre: social development and economics

Mains: GS paper III Indian Economy and issues relating to planning, mobilisation of resources, growth, development and employment, Major crops-cropping patterns in various parts of the country.

Why is int the news?

Recently the United Nations Development Programme (UNDP) released the latest Human Development Report (HDR)

Generally, the country's score on Human Development is checked on the basis of the Human Development Index (HDI) and compared to the global average and score of some other comparable countries

The HDI consists of three broad parameters: longevity, education and income per capita

What is the Human Development report?

It aims to come up with the expansion of opportunities, choice and freedom, choice and freedom.

UNDP has been releasing Human Development Reports (HDRs) since 1990 and has surveyed different themes through the human development approach.

Human Development Report 2021-22 is themed on "uncertain Times, unsettled lives unsettled lives: Shaping our future in a world in transformation."

The human development Index :

HDI is a static index that checks the betterment of human development on the basis of four indicators

Life expectancy at birth

Expected years of schooling

Mean years of schooling

Gross national income

It was started when two renowned economists from Mahbub ul Haq from Pakistan and Amartya Sen from India created the measure.

It was created as a compliment to the GDP, as it focused on the importance of human development in the growth process.

The Human Development Index 2021-2022.

Life expectancy drop:

A large contributor to the Human Development Index's recent decline is a global drop in life expectancy, down

In the last two years, life expectancy dropped to 71.4 years in 2021 from 72.8 years in 2019.

In the last two years, the pandemic put a devastating impact on billions of people worldwide, also the wars like Covid -19 and the war in Ukraine hit and interacted with the extent the social and economical shifts and hazardous planetary Changes.

The tops scoring countries are:

European countries performed best overall, holding 8 top positions in the top 10.

The list of the countries with their score is

Switzerland	(1, 0.962)
Norway	(2, 0.961),
Iceland	(3, 0.959)
Denmark	(6, 0.948),
Sweden	(7, 0.947)
Ireland	(8, 0.945),
Germany	(9, 0.942)
Netherlands	(10, 0.941).

Asian countries:

Sri Lanka come up as the best performer in the Indian Sub-continent, at 73, with an index value of .782

Followed by China (79 and 0.768),

Bhutan (127 and 0.666),

Bangladesh (129 and 0.661)

India

Nepal (143 and 0.602)

Pakistan (161 and 0.544).

India scored 0.633 on the 2021 Human Development Index, which is considered as lower than the world average of 0.732.

• The life expectancy of India in 2021, is recorded at 67.2 years, at birth.

Schooling in India: Expected years of schooling at 11.9 years and mean years of schooling at 6.7 years,

The Gross National Income per capita of India stood at USD 6,590.

India's gender inequality has ranked 122 on the **Gender Inequality Index**.

The IHDI indicates a percentage loss in HDI due to inequality.

country (HDI rank)	world	India (132)	Switzerland(1)	China (79)
when HDI adjusts the inequality	19% fall	25% fall	7% fall	15% fall
income share held by poorest 40% of	18%	20%	20%	17%
Income share held by the richest 1%	17%	22%	12%	14%

The IHDI value in 2019 for India was 0.537 (16.8% overall loss).

Gender Development Index:

• It checks the disparities in the HDI by the Gender

country (HDI rank)	world	India (132)	Switzerland(1)	China (79)
GDI	0.958	0.849	0.967	0.958
GNI per capita for women (in 2017 PPP\$)	12,241	2,277	53,597	13,980
Income share held by the richest 1%	21,210	10,633	79,451	20,883

The GDI value for India in 2021 is **0.490**.

HDI metric women are legging behind men the most is the income per capita.

Gender Inequality Index:

Country (HDI rank)	world	India(132)	China(79)	Switzerland(1)
Maternal mortality ratio(death per 100,000 lives births)	225	122	29	5
adolescent birth rate (birth per 1,000 women ages 15-19)	43	17	11	2.2
share of seats in Par- liament (% held by women)	26	13	25	40
female population with at least some secondary education (% ages 25 and older)	64	42	78	97
labour force participation rate (% ages 15 and older)	46	19	62	62
GII	0.465	0.49	0.192	0.018

Gender Inequality Index (GII) presents a complex measure of gender inequality using three dimensions:

In GII, India is at the 122nd rank.

Reproductive health,

Empowerment and

The labour market.

• Multidimensional Poverty Index (MPI):.

The MPI is used to check the many problems that is faced by the people of developing countries in their health, education and standard of living.

In India, it was reported in 2019, that India had more than 382 million suffering from multidimensional poverty.

Country (HDI rank)	India	Bangladesh	China	brazil
Population in severe MPI(in %)	8.8	6.5	0.3	0.9
Population in vulnerable MPI(in %)	19.3	18.2	17.4	6.2
Population living below income poverty line (%) (PPP \$1.90 a day)	22.5	14.2	0.5	4.2

Planetary pressures-adjusted Human Development Index:

It balances the HDI for planetary pressures in the Anthropogenic to reflect a concern for intergenerational inequality, similar to the Inequality-adjusted HDI adjustment — which is motivated by a concern for intragenerational inequality.

The PHDI value can be determined as the level of human development adjusted by CO2 emitted per person and the material footprint per person to account for excessive human pressure on the planet.

5G rollout



Prelims: Science and Technology

Main: GS.III, industrial policy and its effects on industrial growth and development in Sci & Tech and its Development, applications and day-to-day effects

The background story

- The Indian Aviation Safety Regulator body has written to the telecom department flagging concerns over the probable interference of 5G C-Band Spectrum with radio altimeters because India's telecom operators are preparing for the rollout of 5G service.
- In July 2022, the cabinet gave its consent for the auction of the spectrum that can be used to offer 5G services.
- Total width of 72,097.85 MHz (or 72 Ghz) of the spectrum with a bona fide of 20 years.
- The government of India also gave permission to the big tech firms for setting up captive 5G networks, and the telecoms have opposed any move to set aside spectrum for captive private networks at an administered price.

About 5G technology

- 5 G is the fifth generation mobile network, it will provide faster and more steady communication that too with ultra-low latency.
- According to the government panel report, it is expected that the 5G network will peak the speed in the range of 2-20 Gigabit/seconds (Gbps).
- 5G will provide higher speed internet in India in contrast to 4G link speeds averaging 6-7 megabits per second (Mbps), in comparison to 25 Mbps in the advanced nations.
- 3rd Generation Partnership projects(3GPP) will define the standards for usage of 5G

5G Bands

- There are 3 main bands in which 5G works, they are Low, mid and high-frequency spectrum, these all have their own advantages and limitations.
- Low band spectrum: the maximum speed of it is limited to 100 Mbps(megabits per second), however, it has shown improvement in terms of coverage and data exchange as well as in the

speed of the internet

- Mid-band spectrum: it provides a higher speed on comparing to the low band, however, it has limitations in terms of coverage area and penetrations of the signal.
- High band spectrum- it offers the maximum speed in comparison to the former two bands but offers limited coverage and signal penetration strength.

The primary concern of the Directorate General of Civil Aviation (DGCA)

- It is expected that the interference of 5G with the aircraft's radio altimeter could intercept the engine and the braking system from transitioning to landing mode, which could prevent an aircraft from stopping on the runway.
- The DGCA works in close coordination with the Department of Telecommunications (DoT).

Radio altimeter:

- It is a type of altimeter, an instrument used to measure the altitude of an object from a fixed level above the earth's surface, it is a radar aid.
- It measures how far the ground an aircraft is travelling, in aviation.
- It is effective only 20 ft to 2500 ft. and the auctioned frequencies sit too close to this range.

Advantages of 5 G

- According to the report by the Government-Appointed Panel, it has been predicted that 5G will
 create a cumulative economic impact of \$ 1trillon in India by 2035. also in a separate report of
 Telecom gear maker Ericsson, it was stated that by 20265G-enabled digitalization revenue potential in India will be above \$27 billion by 2026.
- In addition to this, the Global Telecom Industry GSMA has estimated that India will have around 70 Million 5G customers by 2025.
- It has been expected that the 5G will become the chief support of emerging technologies, like the Internet of Things and machine-to-machine communication. it will also support the application services, including driver-less vehicles, telesurgery and real-time data analysis on a much larger scale
- One of the prime use of 5 G will be, the implementation of a sensor –an embedded network that will permit real-time relay of information across fields, like manufacturing, customers durables and agriculture.
- It can also help make transport infrastructure more systematic by making it smart.
- Well-ordered Governance: This technology will also carry positive changes in the governance of the country, ease of living and ease of doing business.
- It will escalate the convenience and will create many employment opportunities.
- In the National Digital communication Policy, 2018 it was pointed out its potential and TELECOM REGULATORY AUTHORITY OF INDIA(TRAI) advised a reserve price for the auction of 5G spectrum in 3.3-3.4 GHz and 3.4 -3.5 GHz bands.

The Telecom Regulatory Authority of India (TRAI)

- The Telecom Regulatory Authority of India (TRAI) was founded on February 20, 1997, under the Telecom Regulatory Authority of India Act, 1997 act of parliament, to monitor telecom services, including tariff fixation and revision. Earlier to these are vested in the Central Government.
- It is a statutory body of the Indian government.
- Its main objective is to provide a fair and transparent policy environment that promotes a level playing field and facilitates fair competition.
- Its HQ is in New Delhi.



The growing need for strengthening Internal democracy in Political Parties

CONTEXT

The Election Commission of India (ECI) has rejected the concept of a 'permanent president' for a political party stating it to be inherently anti-democratic. This decision comes in the backdrop of Congress holding elections for the post of Party President and Andhra Pradesh's Chief Minister being declared as President for life by his party.

REASONS FOR LACK OF INNER PARTY DEMOCRACY:

- No legal backing: There is no law that mandates political parties to conduct organizational elections at regular intervals. The ECI has time and again used Section 29A of the Representation of the People Act, 1951(which provides for registration of political parties with the Election Commission of India) to issue guidelines to remind parties to conduct elections to ensure that there is a renewal of leadership in every five years. But the commission lacks any statutory power to enforce this.
- **Problem of over centralization in functioning of political parties**: There is a problem of over centralization with only one or few people holding vast powers leading to a high command culture. The **170th Law Commission Report** recommended introducing a regulatory framework to govern the internal structures, accountability and inner democracy of parties. It stated that a political party "cannot be a dictatorship internally, and democratic in its functioning outside."
- Non Transparent Procedure of determining leadership: Leadership is decided by consensus and elections even if happen are contested unopposed to declare the de-facto power holder as the Party President
- **Financing structure**: The financing structure is of such nature that it necessitates centralized control by a single person or small group.
- **Fear that election may lead to party fragmentation**: There is a fear that election may trigger disunity and lead to breaking of party into smaller groups
- **Norm of dynastic politics**: power is held in a close knit group of a single family. Hence, rising in ranks depends on relationship with the family instead of merit.

WAYS TO ACHIEVE INNER PARTY DEMOCRACY

- **Conduct election for post of leadership at regular intervals**: The most common way to realize inner party democracy is conducting elections for leadership positions in the party.
- **State funding of political parties**: Former Chief Election Commissioner of India S.Y. Quraishi proposed that parties should receive money as per the number of votes they get.
- **Stringent enforcement by ECI**: The ECI should be firm in insisting on organizational elections, and stop condoning delays for not holding elections. Elections where one is elected unopposed should not be recognized.
- **NCRWC Recommendations**: It recommended that rules and by-laws of the parties seeking registration should include provisions for declaration of adherence to democratic values and norms of the Constitution in their inner party organizations.

2nd ARC on Ethics and Governance stated that over-centralization in the working of political parties leads to corruption and the "the more remotely power is exercised from the people, the greater is the distance between authority and accountability." Saumya khedwal PLUTUS IAS

Draft Indian Telecommunication Bill, 2022

CONTEXT:

The Department of Telecommunications (DoT) under the Ministry of Communications has released the draft **Indian Telecommunication Bill, 2022** to deal with new regulatory issues with the advent of OTT platforms. The bill seeks to do away with British-era laws governing the telecom sector and bring various changes to the governing of the telecom sector in India.



THE NEED FOR A NEW ACT

India is the world's second-largest telecommunications market with a **subscriber base of 1.20 billion**. In 2021, the Government allowed **100% foreign direct investment (FDI)** via the automatic route in the telecom sector which was previously capped at 49%. The sector is a key river of economic growth and social development.

Hence, it is imperative to secure affordability and accessibility of telecommunication services. It is also necessary to ensure that the communication is safe and secure in line with **Right to Privacy under Article 21 of the Constitution**. Moreover, spectrum benign a public good and hence it is the responsibility of the government to ensure it's proper management

KEY FEATURES OF THE BILL

- **1. Consolidation of old, outdated laws**: The bill consolidates Indian Telegraph Act, 1885, the Wireless Telegraphy Act, 1933, and the Telegraph Wires (Unlawful Possession) Act, 1950, which presently govern the telecom sector. These laws have failed to keep pace with the advancement of technology.
- **2. Bringing OTT in the ambit of "telecommunication services"**: Over-the-top communication services like WhatsApp, and Telegram have been included in the definition of telecommunication services. This would effectively mean that OTT platforms would also require a license to operate the same way that telecom companies do.
- **3. Permits interception of information by authorized Government Official**: The bill allows information transmitted and received over telecommunication services to be intercepted by a government official in the interest of sovereignty, integrity or security of India, friendly relations with foreign states, public order, or for preventing incitement to an offence.
- **4. Dilution of powers of TRAI**: The bill dilutes certain provisions of Telecom Regulatory Authority

of India Act (TRAI Act). For example, presently, the telecom department has to obtain TRAI's views before issuing a new license to a service provider which will not be required with the passage of this bill. TRAI will also no longer be able to request the government to furnish information in order to make recommendations. Further, the Department of Telecommunication had to earlier send matters back for reconsideration of TRAI if it didn't agree with it. The bill does away with this provision.

- **5.** Reversion of control of Spectrum to Center in case of insolvency: If a telecom entity in possession of spectrum undergoes bankruptcy or insolvency, the assigned spectrum will go back to Center's control.
- **6. Extraordinary powers to Center**: Center can defer, convert into equity, waive off dues or grant relief to any licensee under extraordinary circumstances.
- **7. Regulatory Sandbox**: The Central Government may create a Regulatory Sandbox for testing of products and services in a controlled environment under the supervision of the Central Government. This will encourage innovation and development in the field of telecommunication.
- **8. Revealing identity of sender to stop Harassment and cyber frauds**: The identity of person sending a message by use of telecom services shall be made available to the user receiving the message

WAY AHEAD

While the reforms were much needed to keep up with the rapidly evolving digital ecosystem affecting the telecom sector, some concerns need to be addressed:

- The bill may affect the role of TRAI as a watchdog, TRAI which has been an independent body so far and has statutory backing. The proposed provisions might dilute its role to oversee the telecom sector and affect its autonomy.
- There are various messaging platforms that provide encrypted services. The bill gives wide power to the government to intercept despite the encryption feature. Encryption is done to protect the privacy of users. The discretionary powers to intercept need to be exercised cautiously while abiding by principles of necessity and proportionality given by the *Puttaswamy judgment*.

There is a need to resolve the bottlenecks of the telecom sector which has led to large unpaid dues adding to the burden on the government's financial liabilities. But this needs to be done while respecting privacy of individuals and establishing strong oversight by independent regulatory bodies to have a win- win scenario.

Mid-day Meal Audit

Prelim: economy and social development

Mains: GS II: government policies and intervention for the development, and resolve issues

Why in the news?

The central government has ordered the State government and Union Territories to carry out the social audit of the mid-day meal scheme in each and every district by November 30.

What is a social audit?

- It is an audit done jointly by the government and public agencies, checking the detailed resources, both financial and non-financial, for the development initiatives that are shared with the people, through a public platform.
- The social audits authorize the public to enforce accountability and transparency, providing the ultimate users with a window to scan the development initiative.

Benefits of social audit

Guaranteed Accountability:

• The audit authority guarantees public accountability, transparency and citizen participation in executing the government schemes services and programs, and also the direct performance of the implementing agencies.

Evaluation of the service

• The audit authority will evaluate the quality of the service delivered by the government schemes and programs. In addition, it will also carry out a people's satisfaction survey to find out the various outcomes of various schemes.

Plan and perform the social audit.

• It will find out the efficiency and effectiveness of the service delivery and whether public money is being used economically.

Recognizes and builds the capacity of civil services organisation

• It gives technical assistance towards the productivity of implementation of various schemes and programmes; provides technical aid to the finance and planning department towards strengthening the yearly plans and their result budgeting, and also evaluates the quality standards of development and infrastructure works in rural and as well as urban areas.

Need for social audit



Challenges of social audits

- In many parts of our nation, social audits are not unhampered to prevent corruption, due to the lack of adequate administration and political will in institutionalising social audits.
- It becomes difficult for Social audit units as well as village social audit facilitators, to access primary records for verification, due to the ongoing resistance and intimidation.
- As there is a lack of education, awareness, and capacity building in the common people, the participation of people is less.
- The absence of an independent agency to investigate and act on social audit findings

Mid-day meal schemes



- It was started by the government in 1995 on 15th August, as the national Programme of Nutritional Support to Primary Education (NP-NSPE).
- On October 27, 2007, it was renamed the" National Programme of Mid-Day Meal in Schools', and popularly known as Mid-day Meal (MDM) Scheme. Currently, it is functioning under the name of PM Poshan Shakti Nirman or PM Poshan from 2021.
- Under the Poshan Shakti Nirman or PM Poshan scheme, a freshly cooked hot meal per day is provided to all children (studying in Class I to VIII) enrolled in government schools, local body schools, government-aided schools, special training centres (STC), maktabs and madrasas which are supported by the Sarva Shiksha Abhiyan.

The objectives of the Mid-day meal scheme

- The main objectives of the mid-day meal scheme.
- To boost the admission in the school of the children who belong to the unprivileged sections of the society
- To boost the attendance of the student in the government and government-aided schools
- To keep up the children studying in classes I to VIII.
- to give nutritional support to the children studying in the early, particularly in the areas which are affected by drought.
- To address malnutrition and hunger and resolve the social issues among castes.

Calories Intake

The calorie intake which is prescribed per child per school every day is given below

No.	Nutrition	Primary Class	Upper Primary Class
1	Protein	12gms.	20gms.
2	Calories	450 calories	700 calories

Funding and implementation of Mid-day meal

- In each state and UT, at the state and district and block level, they have set up state steering –cum Monitoring committees (SSMCs), to supervise the implementation of this scheme, as well as establish a mechanism to keep up the quality and nutritional standards of the meal.
- It is a Centrally sponsored scheme, the fund is shared between the centre and state with a ratio of 6:4.
- But, Sharing is 90:10 for the Northeastern states, Jammu and Kashmir, Himachal Pradesh and Ut-



Chip Shortage: Global Semiconductor Shortage and ramifications for India

CONTEXT

The Semiconductor Industry is facing severe semiconductor shortages worldwide for almost a year due to limited supply. Semiconductor chips are a vital component in a wide number of industries like the automobile sector, electronic goods, etc. As a result, the shortfall has crippled many crucial sectors. The current issue is exacerbated by the fact that the production process is itself complex, expensive and time taking and hence no immediate respite can be seen.

WHAT ARE SEMICONDUCTORS?

A semiconductor is a material which conducts electricity more than an insulator (ex. glass) but less than a pure conductor (ex. Copper or aluminum). It is mostly made of silicon. They are also called chips and are found in a great number of products such as computers, smartphones, electronic gadgets, aviation and medical equipment



REASONS FOR GLOBAL SHORTAGE OF SEMICONDUCTORS

- **Crisis in Taiwan strait**: Taiwan produces 63% of global semiconductors. Recent turn of events in Taiwan has created tensions and limited production. Ever since US House of Representatives Speaker Nancy Pelosi visited Taiwan, China has been uncomfortable with Taiwan's growing closeness to the USA. In retaliation, China sent fighter jets into Taiwan's air defense zone and there has been fear of a possible Chinese invasion into Taiwan.
- Russia- Ukraine Conflict: The war has contributed to the shortfall. Ukraines' two leading companies of neon gas, which is used as a key ingredient for making chips, have stopped their operations since the city of manufacturing has been seized by Russian forces. Russia supplies 25 to 30 percent of palladium, a rare metal used for semiconductors. There has been a downfall in its supply too. Moreover, the war has also led to supply chain blockages.
- **COVID-19**: The crisis started with the imposition of the first lockdown and though supply picked up, the resurgence of the virus with a new strain again affected the industry. It all led to bottle-necks in the supply chain. Chip packaging and testing are labor intensive in nature and hence more affected by the pandemic.
- **Structural Issues:** Various problems like insufficient capability, changes in auto industry leading to automation and e-vehicles which create more demand for chips and shift to work from home model contributing to greater demand for wireless connectivity and PCs have added to the problem.

INDIA'S ROLE IN SEMICONDUCTOR MANUFACTURING

- The chip-making industry is a highly-concentrated one, with the big players being Taiwan, South Korea and the U.S. among others
- India imports 100% of its chips, memory, and display, with about 37% coming from China.
- The Indian semiconductor story has been full of missed opportunities. The only government-owned fabrication plant, Semiconductor Complex Limited (SCL), started operations in 1983 in Mohali, but had to stop due to a fire incident. It now focuses mostly on R&D.
- India has an advantage due to the industry being software driven and having a pool of talented engineers. It can work to scale up the industry for global production.
- Although India has two units producing semiconductors- SITAR, under Defense Research and Development Organization(DRDO), Bangalore and semiconductor laboratory in Chandigarh, they manufacture chips for strategic use like defense and space and not for commercial use

GOVERNMENT INITIATIVES TO BOOST PRODUCTION

- PLI Scheme to boost semiconductor manufacturing: Due to low labour cost and vast production
 capacity, India will have an advantage in this sector. It would not only help domestic companies
 to reduce reliance on semiconductor imports, but also generate revenue from exports to other
 nations.
- National Policy on Electronics 2019 (NPE 2019): It aims to make India a global hub for Electronics System Design and Manufacturing (ESDM) by enhancing capabilities to produce core components like chipsets
- Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS): It will provide financial incentive of 25% on capital expenditure for the identified list of electronic goods that comprise downstream value chain of electronic products which will include semiconductors thus giving a boost to the sector.
- **Increased FDI limit**: Government has permitted 100 percent (FDI) under the automatic route in the Electronics Systems Design & Manufacturing sector.

CHALLENGES

- **High Investment**: Manufacturing of semiconductor is capital intensive and finding local investors remains a challenge
- **Technological Hurdles**: The indigenous manufacturing of semiconductors requires the use of high-end technologies which are licensed from patent holders at enormous price.
- **Lack of continuous uninterrupted power supply**: The production of semiconductors needs uninterrupted power supply 24×7. This is difficult in India
- **Lack of pure water supply**: Chip making required gallons of ultrapure water in a single day, which for a country battling drought conditions in various party becomes difficult

WAY FORWARD

There is a need to establish a few successful units to begin with which can be increased to more in upcoming years. Both State and Central governments should come forward to provide infrastructure and long-term incentives. Scaling up our production will not only reduce our import dependence but also establish India as a potential player in supply of chips to the global world. Fiscal support and fixing the supply chain should be the immediate task at hand. Further, India needs a dedicated semiconductor policy and not occasional reimbursement schemes.



Low rainfall in Delhi, impacting the life cycle of Dragonfly

Prelims: effect of climate change on biodiversity

Mains: GS –III, environmental issues, pollution and degradation,

Why in headlines?

- A survey done by the Biodiversity Parks of Delhi on Dragonflies and Damselflies indicates that low this year's low rainfall will impact their life cycle and number.
- A total of 25 species of dragonflies and damselflies were recorded in the Biodervsity Park along with the Kamla Nehru Ridge

What are dragonflies

- These are big predator insects, of beautiful colours, generally found near water bodies.
- More than 5000 known species of dragonflies exist, and their fossils have proved that they have been on the earth for many years.
- They have long thin colourful bodies, with six legs and large eyes and two pairs of transparent wings.
- They have two large compound eyes, each with thousands of lenses, and three eyes with simple lenses.



The different stages of the life cycle of the dragon



Dragonflies vs Damselflies

Dragonflies	Damselflies	
long body predator	a lender insect, resting with the folded back the body	
unequal winged: Anisoptera	yoke winged: Zygoptera	
broadly rounded eyes	spherical eyes	
3(approx) inches long	Comparatively small	
stocky	Long and slender	
the thorax is broader the abdomen	Thorax s narrow and has the same width as the abdomen	
known as filers: can fly long distance	known as perchers: only cover a small distance	

Importance of Dragonflies and Damselflies for the environment

- The dragonflies are crucial bio-indicator of the ecological health of a particular area.
- At the 1st census of it, a total of 51 different species were revealed in New Delhi and NCR, which was carried out in 2018.
- Dragonflies and Damselflies are predatory insects
- They play a very crucial role in checking the insect population, especially pests like mosquitoes and agricultural pests.

Bioindicators are:

- They are living organisms like plants, plankton, animals and microbes which are used to access the condition of the natural ecosystem in the environment.
- Some of the Bioindicators:
- Lichens check the quality of the air.
- Frogs are influenced by changes that take place in freshwater and terrestrial areas

Farhin

The power to remove online content

Mains: GS II Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation

CONTEXT

Recently, the Government passed orders directing YouTube to remove 45 Videos from its 10 channels. Government pointed out that these channels posted videos which aimed to spread hatred among religious communities and the content was detrimental to India's friendly relation with foreign states. There have been voices of concern regarding the orders on the ground that the proper procedure under Section 69A of IT Act and IT Rules,2021 was not followed and also suggestions that the power of Government to remove online content under Section 69A must be used sparingly and responsibly.



SECTION 69A of IT ACT

- Section 69A allows the Indian government to block public access to information online in the interests of India's sovereignty and integrity, defense, security, friendly relations with foreign States, or public order.
- The directions to stop content under this must be given in writing.
- It imposes a penalty and imprisonment upto 7 years on the social media intermediaries who fail to comply with such directions.
- These directions are enforced by the Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009.
- The Supreme Court upheld Section 69A in *Shreya Singhal vs Union of India*. Stating that the rules provided procedural safeguards.
- These safeguards include the need to issue notice to the originators or the intermediary, before a blocking order is passed.
- Earlier judgments of the Supreme Court have suggested that for application of Section 69A to a content, the content must be viewed from the standards of a "strong-minded, firm and courageous" person.

Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021

• The latest order invokes the Information Technology (Intermediary Guidelines and Digital Media

Ethics Code) Rules, 2021

- The rules prescribe a procedure for removal of content. It requires an inter-departmental committee to address complaints
- It has a procedure by which an inter-departmental committee examines complaints/grievances and gives due opportunity to the applicable entity and makes recommendations to the Ministry.
- The authorised Officer has to take the approval of the Secretary, I&B, before directing the publisher or intermediary to block the relevant content in question.
- Blocking orders are examined by a review committee
- There is also an emergency provision under which the Secretary may first order content blocking as an interim measure, and thereafter confirm it after getting the committee's views. All such blocking orders are subject to the decision of a review committee.

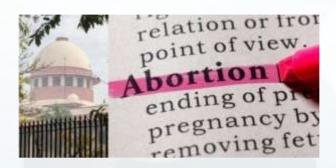
WAY AHEAD

India ranks quite high in the list of countries that make regular requests for removal of online content. Though offensive content which promotes hatred or can pose a threat to security should be removed like hate speech to maintain peace and security in online space, powers to remove these should be used sparingly and responsibly. Mere dissent should not be blocked unless it poses risk to security and stability of online space. Also, such restrictions should be imposed only after following the due process which is following the procedure mandated in the IT Act and Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021.

Right to reproductive choice: Supreme Court extends right to safe and legal abortion to single, unmarried women

CONTEXT

Supreme Court has extended right to safe and legal abortion up to 24 weeks to unmarried single women. Holding the distinction created between married and unmarried women as artificial and constitutionally unsustainable, it allowed termination of pregnancy between 20-24 weeks on certain exceptional grounds. The court held it is the right of every woman to make reproductive choices without undue interference from the state. Court also included victims of marital rape under MTP act.



THE LAW ON ABORTION

The law on abortion in India is governed by the Medical Termination of Pregnancy (MTP) Act, 1971 which was amended in 2021 to incorporate certain changes. The act provides for termination of certain pregnancies by registered medical practitioners. The various provisions governing different time periods in the pregnancy are given below:

- 1. **Pregnancy up to 20 weeks**: Approval of one a registered medical practitioner mandatory. Further, he should be of the opinion that the continuation of pregnancy has risk to life or injury to health of the pregnant woman or the child if born would suffer from abnormalities. The 2021 amendment also allows termination in case of failure of contraceptive method or device. The amendment gave this provision for "any woman" instead of "married women" which was the earlier rule in the 1971 act.
- **2. Pregnancy more than 20 weeks but less than 24 weeks**: Approval of 2 two registered medical practitioners necessary and they should be of the opinion that the continuation of pregnancy has risk to life or injury to health of the pregnant woman or the child if born would suffer from abnormalities. It is allowed for certain specified cases given in the rules like for survivors of rape, incest or sexual assault, minors, those who became widow or divorced during pregnancy, those suffering from mental or physical disability, risk of child to suffer from abnormalities or pregnancy in humanitarian or emergency settings.
- **3. Pregnancy of more than 24 weeks**: A four-member medical board constituted by the State Government will look in such cases. Termination beyond 24 weeks is allowed only on the grounds of foetal abnormalities

THE COURT RULING

• The landmark ruling on reproductive rights comes in the case of *X v. Principal Secretary, Health and Family Welfare Department, Government of NCT of Delhi* held that unmarried women are also

- entitled to seek abortion of pregnancy of period more than 20 weeks but less than 24 weeks arising out of consensual relationship.
- The court stated that the distinction between married and single and married women is constitutionally unsustainable. Unmarried women who conceive out of a live -in relationship are entitled to relief under the MTP act.
- The court also pointed out that the 2021 amendment to MTP act had removed the distinction between married and unmarried women.
- Such artificial distinction between married and unmarried women violates Article 14(Right to equality) and right to reproductive autonomy.
- The court noted that law must be interpreted keeping in mind the changing social mores
- The court also made a big change by ruling that the meaning of "rape" will include "marital rape" for the purpose of MTP Act. This means that pregnancy caused by marital rape are also eligible for termination. This is only for the purpose of MTP act and not Indian Penal Code.
- The court recognised a husband's act of sexual assault or forced intercourse committed on his wife as 'rape' but the court said that understanding 'rape' under the MTP Act would not have the effect of striking down Exception 2 to Section 375 which excludes marital rape from the ambit of offense of rape under Section 375.

SIGNIFICANCE OF THE RULING

- Where developed countries like USA have recently overturned constitutional validity of right to abortion given in the landmark case of *Roe v Wade*, the Supreme Court of India has given a progressive direction to abortion laws and reproductive rights in India.
- As the apex court rightly pointed out, the right to reproductive autonomy is closely linked with the right to bodily autonomy. Hence, the decision to carry the pregnancy to its full term or terminate it ultimately vests in the right to bodily autonomy of the pregnant woman.
- Forcing a woman to carry an unwanted pregnancy can result in negative consequences on the physical and mental health of the woman, often hampering her education, career and life choices, taking away her financial independence and bodily integrity.
- Decision to give birth is based on various factors like social, situational and financial circumstances. Hence it should be left to be decided by the woman.

CHALLENGES

- The decision to allow termination or not will depend on case to case basis and on the recommendation of medical practitioners. So, the autonomy of women in reality is not unlimited
- The law still does not does permit abortion at will, this is known to push women to access illicit abortions under unsafe conditions.
- Though court took a remarkable step in declaring marital rape as rape for the purpose of MTP act, recognizing the violence and lack of consent in this issues, marital rape is still not considered an offence under Section 375 of the IPC

WAY AHEAD

We should strive to provide complete bodily autonomy, inclusivity and reproductive equity to women. Right to abortion is closely linked with Right to life under Article 21. Every woman should have access to safe and legal abortions with integrity.



Oceanic warnings: Changing nature of Hurricanes

Pre: Indian and world physical -geography.

Mains: GS-I important geographical phenomenon

Why in headlines?

- Hurricane Ian, a tropical storm with heavy rain and winds of 73mph, recently hit the southern Eastern Seaboard of the United States.
- Scientists say that the storm is acquiring power rapidly and, if the latest history is any guide, it can intensify dangerously as it approaches Cuba



Hurricane:

- These are kind of storms which carries a wind speed of 74 miles per hour spinning around them.
- They develop on the warm water near the equator and are one of the strong storms on the planet
- Large storms that occur over the Atlantic Ocean or the Eastern Pacific Ocean is often referred to as hurricane zone.

How do hurricanes form?

- In low-pressure Areas, when warm, wet air rises upwards from the surface of the ocean, it generates a low-pressure zone below.
- During this air form, the surrounding areas try the air from the surrounding areas and rush in to fill the space, ultimately rising as it warms and gets moist.
- In the middle of the cyclone, an eye forms: this is the most silent area of the cyclone. Before the wind reaches the centre, it warms up and climbs upward, and the moisture condenses as they warm up and climbs upward and the moisture condenses as the heated air rises and cools.
- This cloud and wind system continues to expand and spin.
- The hot temperature of the ocean and the water that evaporates from its surface fuel this distur-

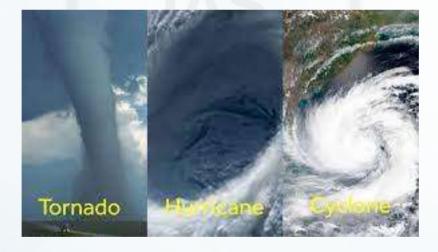
bance, which causes storm systems to revolve faster and more rapidly.

- Storms that occur north of the equator rotate counter-clockwise, although those that form south of the equator revolve clockwise because of the earth's rotation
- Hurricanes can last up to 14 in some areas.

Difference between Cyclone, typhoons and Tornado,

Cyclone	Typhoons	Tornado
Around a low-pressure area, when there develops a rapid	These are full-grown tropical cyclones, these matured cyclones usually	Tornados are natural phenomena which are consisting of a violently rotating column of air that extends from a thunderstorm to the ground.
inward air circulation, this circulation of air is called Cyclone	develops between "Between 180° and 100°E" in the Northern Hemisphere.	
The air circulates in clock-	This region is referred to as the Northwestern Pacific Basin is the most active tropical cyclone zone on Earth.	They are whirlpools of rapidly moving air.
wise direction in southern hemisphere and in an anti-clockwise direction in Northern Hemisphere.		The tornado forms when there are changes in wind speed and direction creating a horizontal spinning effect within a storm cell
	For organizational purposes, the northern	
They come with violent	The Pacific Ocean is divided into three regions:	This effect is then tipped vertically by rising
storms and bad weather.	the eastern (North America to 140°W),	air moving up through the thunderclouds.
	Central (140°W to 180°), and western	
	(180° to 100°E).	

Indian Ocean region affected by the cyclone: Bangladesh, India, Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand	Tropical cyclones in the Pacific Ocean can affect coastal regions of Mexico, south-east Asia, north-east Australia and the South Pacific islands.	Tornadoes usually occur in middle latitudes They are usually referred to as twisters or cyclones
	The Indian Ocean can affect India, Bangladesh, north-west Australia, some parts of East Africa and Indian Ocean islands such as Mauritius and Madagascar.	Tornados have been spotted on all continents except for Antarctica



Climate change

Changing the nature of hurricanes

They are becoming wetter, windier and stronger due to the effects of climate change.

In addition to it, it has been observed by scientists that it is influencing the storms to move slowly and letting them dump more water in one location

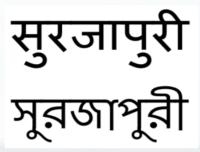
Creating grounds: Temperature: The earth is becoming hotter because of climate change but wasn't for the oceans. But, over the past 40 years, the ocean helped to reduce 90% of the warming brought on by the discharge of heat-trapping greenhouse gases. The majority of oceanic heat is concentrated near the water surface. Moisture: In addition to it, the storms have the ability to produce more rainfall and can increase due to climate change. A hotter environment can store more moisture, for which water vapour accumulates until clouds from raindrops are released, putting down the heavy rain. **Frequency of hurricanes:** The usually considered seasons of hurricanes are changing due to the change of climate since most of the time the years become storms friendly. **Farhin**

Bihar dialects: Surjapuri and Bajjika

About Surjapuri and Bajjika

The dialect Surjapuri is a mix of three languages Bangla, Urdu, and Hindi, and spoken primarily in Kishanganj and some other parts of Seemanchal in Northeastern Bihar, including the district of Bihar Katihar, Purnia and Araria and also in contiguous parts of West Bengal.

The common speakers of this language are Muslims Surjapuri Muslims, who primarily live in Krishanganj, 70% of the population of the district is Muslim. In spite of the fact that the dialect has nothing specific to do with religion.



On the other hand, the Bajjika is not as popular as other dialects like Bhojpuri and Maithili. Bajjika is a mix of Hindi and Maithili and is one of the five dialects spoken in Bihar. and basically, this language is spoken in Vaishali, Muzaffarpur and part of Sitamarhi, Sheohar and Samastipur.



About the 8th Schedule

- The 8th schedule of India lists down the all official language of the Indian Republic.
- Part XVII of the Indian Constitution deals with the official languages in Articles 343 to 351.
- It lists the official languages of the Republic of India. Part XVII of the Indian constitution deals with the official languages in Articles 343 to 351.
- The official languages of the Indian Constitution:
- The 8th schedule of the Indian Constitution has 22 languages of India

Assamese,	Manipuri,	Telugu,
Bengali,	Marathi,	Urdu,
Gujarati,	Nepali,	Bodo,
Hindi,	Oriya,	Santhali,
Kannada,	Punjabi,	Maithili
Kashmiri,	Sanskrit,	and Dogri
Konkani,	Sindhi,	
Malayalam	Tamil,	

14 languages were included in the constitution initially.

Rest were added later

- Sindhi was added by the 21st Amendment Act of 1967 and primarily spoke in Rajasthan.
- Konkani(in goa and some parts of Maharastra), Manipuri(Manipur), and Nepali(Sikkim and the Gorkhaland Territorial Region of West Bengal) were included by the 71st Amendment Act of 1992.
- Bodo(Assam and Meghalaya), Dogri(union territory of Jammu and Kashmir.), Maithili(one of the three main languages of BIHAR), and Santhali (West Bengal, Jharkhand, and Orissa.)were added by the 92nd Amendment Act of 2003 which came into force in 2004.

The idea behind it

- There exist 8 academics or functioning organizations for languages Hindi, Urdu, Bhojpuri, Maithili, Angika, Magahi, Bangla, and South Indian languages in Bihar, and the government's decision on these two dialects takes note of it what had been left out.
- The aim of setting up an umbrella Organisation for Bihar's language and anticipating a platform for academics, litterateurs, and officials to work together to promote literary writing, the improvement of dictionaries, and the also updating of the grammar of these dialects.
- The primary idea is to promote literature and run more research on Surjapuri and Bajjika dialects to promote these two dialects

Farhin

How the fall of the Indian rupee hurts economic stability of the country

CONTEXT

The Indian Rupee (INR) has been depreciating at a fast pace against the US dollar crossing the 81 mark. The recent decline in the exchange rate of the INR against the US Dollar (USD) has been worrying economists as it affects the macroeconomic stability of the country.

CURRENCY APPRECIATION AND DEPRECIATION

- **Currency depreciation** takes place in the foreign exchange market when the domestic currency loses its value in front of foreign currency.
- It occurs due to the demand for dollars increasing its supply. For example, earlier \$1 = Rs.70, now \$1 = Rs.81. The demand for the dollar is more, and hence the value of the dollar is increasing.
- This happens when there is an increase in imports or a fall in exports.
- On the other hand, if the value of domestic currency increases in comparison to foreign currency, it is referred to as **Currency appreciation**
- Currency appreciation takes place when there is a surplus of the dollar in the market and hence, the supply of dollars exceeds its demand. For example, if \$1 = Rs.81 today and later \$1= Rs.70, then we can say that there has been an appreciation in the value of INR.
- This is seen when there happens to be a rise in exports and a fall in imports.

REASONS FOR FALL OF RUPEE

The Government has stated global factors to be the reasons behind the fall of the rupee Prominent global factors are -Russia-Ukraine conflict, soaring crude oil prices, and tightening of global financial conditions. All these have led to an outflow of foreign funds from India.

- **Russia- Ukraine War**: Any war leads to economic instability. Investors fear losing money due to war. Hence, ever since the Russia-Ukraine War broke out, investors shifted their investments to safe havens like USA instead. USA being a stable market attracts investors.
- **Increasing Crude oil Prices**: Countries that purchase crude oil have to make payment in USD to the countries that produce oil. This system is known as the petrodollar system and it negatively effects the importing country.
- Rate hike by US Federal Reserve: This move further strengthens the dollar as investors move their money to USA since they are getting a better return on their investment

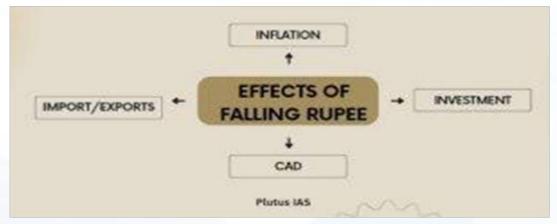
ISSUES WITH DEPRICIATION OF RUPEE

- To control Rupee Depreciation, the RBI has been intervening in the forex market.
- This has led to the decline of forex reserves rapidly. From USD 642 billion in October 2021, India now has USD 545.6 billion in September 2022.
- This decline in forex reserves corresponds to a decrease in import cover. Import cover measures

the number of months of import that can be covered with foreign exchange reserves available with the Central Banks of the country.

• India's forex reserves were earlier sufficient enough to cover 16 months of imports in October 2021. Now, this has declined to 9 months of import cover as of September 2022

The fall in Rupee impacts the following impacts:



- **Impact on Inflation**: Depreciation of INR means the amount we are paying towards import of good increases. Thus import becomes costly, and this leads to higher inflation as being a net importer, India depends on overseas goods for its requirements. This phenomena is known as import led inflation. Given the fact that India imports more than 80% of its crude oil, inflation in the country increases. As per RBI's Report, a 5% depreciation of the currency would add about 15 basis points to domestic inflation. Due to increase in price of oil, transportation costs increases which has indirect impact on daily household items. Daily goods like vegetables, soap, flour, etc goes up.
- **Impact on Investments**: When the rupee depreciates against the dollar, it effectively means an additional return on one's investments in US market. Hence, rupee depreciation against the dollar works in favour of investors. In order to invest in the US stock market, the investor's money is converted into dollar and then back to INR when he redeems it. So, if one invested ten years ago when \$1=Rs.53, and withdrew today, he gains additional amount since now the same \$1=Rs.81
- **Impact on Imports and Exports:** The depreciation of rupee impacts imports negatively and exports positively. If earlier \$1=Rs.75 and now \$1=Rs.81, that means now importers would have to pay Rs.6 more for the same commodity. Similarly, on exporting goods worth \$1, exporters would earn Rs.6 more compared to earlier when \$1 was for Rs.75
- **Impact on Current Account Deficit (CAD):** The current account measures the flow of goods, and services into and out of the country. It is a record of visibles and invisibles. Even though currency depreciation means exports become profitable, India being an import dependent country has more imports than exports. This negatively affects the trade balance and leads to widening of current account.
- **Impact on External Commercial Borrowings**: A depreciating rupee poses risk to external commercial borrowing (ECB), as the cost of borrowing increases. ECB having lower interest rates compared to domestic banks are a favoured route for Indian companies to raise funds. The fall in rupee means their cost of borrowing increases and may have to look for other options to raise funds.

RBI INTERVENTION

In order to halt the sliding rupee, RBI has taken various steps like liberalising the norms for foreign investments in government and corporate bonds, easing the limits for foreign currency borrowings and easing norms to help banks attract greater deposits from non-residents. It has RBI has been selling dollars from the forex Reserves. By doing so, it has been able to ensure that there is no large-scale Rupee Depreciation. However, this has depleted our forex reserves at high speed.

WAY AHEAD

For a long term solution and to make the INR stronger and more stable, there should not be sole reliance on buying dollars to curtail the depreciation. Instead, a multi-pronged strategy is needed. The following steps can be taken for this:

- Change in norms to attract inflow of dollar: This can be done by easing the ECB norms, attract NRI Deposits, increasing the FPI investment limit in G-Secs etc.
- Increasing the interest rate: the policy rates should be hiked to reduce the interest difference between US and India. This will attract more FPI inflows
- Limited RBI intervention: The Central Bank intervention should be limited to cases where there is large scale volatility. India should have enough import cover for times of crisis. Hence, regular intervention by RBI by purchasing dollars with India's forex reserves should be decreased.
- Reserve Bank of India will have to ensure price stability and prevent further weakening of the rupee

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Basement C59 Noida, opposite to Priyagold Building gate, Sector 2, Pocket I, Noida, Uttar Pradesh 201301

Phone: 08448440231

Email: info@plutusias.com
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