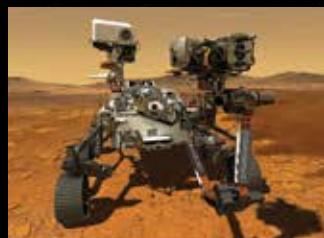# BYJU'S | IAS

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Key highlights and six pillars of
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Incredible Results

CSE 2019

4 Ranks in top 10 | **13 Ranks** in top 50 | **22 Ranks** in top 100

Rank 3
Pratibha Verma

Rank 6
Vishakha Yadav

Rank 8
Abhishek Saraf

Rank 10
Sanjita Mohapatra

CSE 2018

11 Ranks in top 50 | **28 Ranks** in top 100 | **183 Ranks** in the final list

Rank 11
Pujya Priyadarshni

Rank 16
Dhodmise Trupti Ankush

Rank 21
Rahul Jain

Rank 24
Anuraj Jain

Rank 31
Mainak Ghosh

CSE 2017

5 Ranks in top 50 | **34 Ranks** in top 100 | **236 Ranks** in the final list

Rank 3
Sachin Gupta

Rank 6
Koya Sree Harsha

Rank 8
Anubhav Singh

Rank 9
Soumya Sharma

Rank 10
Abhishek Surana

CSE 2016

8 Ranks in top 50 | **18 Ranks** in top 100 | **215 Ranks** in the final list

Rank 2
Anmol Sher Singh Bedi

Rank 5
Abhilash Mishra

Rank 12
Tejaswi Rana

Rank 30
Prabhash Kumar

Rank 32
Avdhesh Meena

CSE 2015

5 Ranks in top 50 | **14 Ranks** in top 100 | **162 Ranks** in the final list

Rank 20
Vipin Garg

Rank 24
Khumanthem Diana Devi

Rank 25
Chandra Mohan Garg

Rank 27
Pulkit Garg

Rank 47
Anshul Agarwal

CSE 2014

6 Ranks in top 50 | **12 Ranks** in top 100 | **83 Ranks** overall selections

Rank 4
Vandana Rao

Rank 5
Suharsha Bhagat

Rank 16
Ananya Das

Rank 23
Anil Dhameliya

Rank 28
Kushaal Yadav

Rank 39
Vivekanand T.S

TABLE OF CONTENTS

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11th May to 15th June, 2021	Geography	Geography	Geography			
16th June to 21st July, 2021	Modern History	Modern History	Modern History	Modern History		
22nd July to 25th August, 2021	International Relations + World History	Polity	Polity	Polity	Polity	
26th August to 1st October, 2021	Ethics + Governance	Ethics + Governance	Economics	Economics	Economics	Economics
4th October to 8th November, 2021	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Geography	Geography	Geography
9th November to 14th December, 2021	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology	Modern History	Modern History
15th December to 18th January, 2022	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Polity
19th January to 22nd February, 2022	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT
23rd February to 30th March, 2022		International Relations + World History	International Relations + World History	International Relations + World History	International Relations + World History	International Relations + World History
31st March to 4th May, 2022			Focus Prelims	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India
5th May to 8th June, 2022			Focus Prelims	Focus Prelims	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology
After Prelims 2022			Ethics + Governance	Ethics + Governance	Ethics + Governance	Ethics + Governance
After Prelims 2022						Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper

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6th April to 10th May, 2021	Modern History	Modern History				
11th May to 15th June, 2021	Economics	Economics	Economics			
16th June to 21st July, 2021	Polity	Polity	Polity	Polity		
22nd July to 25th August, 2021	International Relations + World History	Geography	Geography	Geography	Geography	
26th August to 1st October, 2021	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology	Modern History	Modern History	Modern History	Modern History
4th October to 8th November, 2021	Ethics + Governance	Ethics + Governance	Ethics + Governance	Economics	Economics	Economics
9th November to 14th December, 2021	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Polity	Polity
15th December to 18th January, 2022	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Geography
19th January to 22nd February, 2022	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper
23rd February to 30th March, 2022		International Relations + World History	International Relations + World History	International Relations + World History	International Relations + World History	International Relations + World History
31st March to 4th May, 2022			Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology
5th May to 8th June, 2022				Focus Prelims	Internal Security + CSAT	Internal Security + CSAT
After Prelims 2022				Focus Prelims	Focus Prelims	Ancient India + Medieval India + Art & Culture + Post Independent India
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April (10, 11, 17, 18, 24, 25) + May (01, 02, 08 & 09)	Geography	Geography				
May (15, 16, 22, 23, 29 & 30) + June (05, 06, 12 & 13)	Polity	Polity	Polity			
June (19, 20, 26 & 27) + July (03, 04, 10, 11, 17 & 18)	Modern History	Modern History	Modern History	Modern History		
July (24, 25 & 31) + August (01, 07, 08, 14, 15, 21 & 22)	Ancient India + Medieval India + Art & Culture + Post Independent India	Economics	Economics	Economics	Economics	
August (28 & 29) + September (04, 05, 11, 12, 18, 19, 25 & 26)	International Relations + World History	International Relations + World History	Geography	Geography	Geography	Geography
October (02, 03, 09, 10, 16, 17, 23, 24, 30 & 31)	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology	Environment & Ecology + Science & Technology	Polity	Polity	Polity
November (06, 07, 13, 14, 20, 21, 27 & 28) + December (04 & 05)	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Social Issues & Social Justice + Essay + Disaster Management + Compulsory Language Paper	Modern History	Modern History
December (11, 12, 18, 19, 25 & 26) + January '22 (02, 08, 09 & 15)	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Economics
January '22 (16, 22, 23, 29 & 30) + February '22 (05, 06, 12, 13 & 19)	Ethics + Governance	Ethics + Governance	Ethics + Governance	Ethics + Governance	Ethics + Governance	Ethics + Governance
February '22 (20, 26 & 27) + March '22 (05, 06, 12, 13, 19, 20 & 26)		Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India	Ancient India + Medieval India + Art & Culture + Post Independent India
March '22 (27) + April (02, 03, 09, 10, 16, 17, 23, 24 & 30)			International Relations + World History	International Relations + World History	International Relations + World History	International Relations + CSAT
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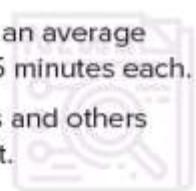
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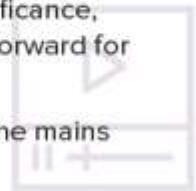
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POLITY

Indian Constitution-Features and significant provisions

1. The absurdity of the anti-defection law

» Prelims: Anti defection law provisions

» Mains: Concerns associated with anti defection law and its misuse

Context:

- Resignation of MLAs from the ruling party in Puducherry that helped lower the numbers required for a no-confidence motion to succeed and bring down the existing government.
- A similar pattern was also seen recently in other states such as Madhya Pradesh and Karnataka.

Background:

Anti-defection law:

- The anti-defection law was included in the Constitution as the Tenth Schedule in 1985.
- The main purpose was to preserve the stability of governments and insulate them from defections of legislators from the treasury benches.
- The law stated that any Member of Parliament (MP) or that of a State legislature (MLA) would be disqualified from their office if they voted on any motion contrary to the directions issued by their party. The provision is not limited to confidence motions or money bills but also applies to all votes in the House. It even applies to the RajyaSabha and Legislative Councils, which have no say in the stability of the government.
- The Constitution was consequently amended to ensure that any person disqualified for defecting cannot get a ministerial position unless they are re-elected.

Details:

- The recent events in Puducherry highlight the concerns associated with the anti-defection law.

Against the concept of representative democracy:

- The anti-defection provision goes against the concept of representative democracy envisioned in the Indian Constitution which envisages the MP or MLA as a representative of the people of the electoral constituency.
- Due to the anti-defection law provisions, an MP (or MLA) has absolutely no freedom to vote based on their judgement on any issue. They have to blindly follow the direction of the party.

- The anti-defection law provisions make the MP neither a delegate of the constituency nor a national legislator as envisaged under a representative democracy but make them just an agent of the party.

Reduces the accountability of the government:

- In a parliamentary form of government, the legislator is accountable to voters, and the government is accountable to legislators.

  * The presidential form of government (such as in the United States) has higher stability but lower accountability as the President is elected for four years, and cannot be removed except for proven misdemeanour. In the parliamentary form like India, the government is accountable on a daily basis through questions and motions, and can be removed any time it loses the support of the majority of the members of the LokSabha. The Constitution drafting committee believed that India needed a government that was accountable, even at the cost of stability and hence chose the parliamentary form of government for India.

- In India, the chain of accountability has been broken by making legislators accountable primarily to the party. This means that anyone from the party having a majority in the legislature is unable to hold the government to account. Hence, the anti-defection bill weakens the accountability mechanism.

Eroding legislatures:

- An important consequence of the anti-defection law is the hollowing out of our legislatures.
- Since the MP or MLA has no freedom to take decisions on policy and legislative proposals, he/she will have no incentive to understand the different policy choices and their outcomes.
- Hence, the core role of an MP to examine and decide on policy, bills and budgets is side-lined.

Using loopholes in the provisions of the anti-defection law:

- The anti-defection law was intended to end the evil of political defection and hence help ensure the stability of elected governments.
- However, the anti-defection law has failed to even provide stability.
- The political system has found novel ways to topple governments by exploiting the loopholes in the existing anti-defection law provisions.

* This includes methods like reducing the total membership through resignations. The Constitution was amended to ensure that any person disqualified for defecting cannot get a ministerial position unless they are re-elected. In order to escape the disqualification, sitting MLAs and MPs are resorting to resignation rather than voting against the party.

* In some instances, the Speaker — usually from the ruling party — has delayed taking a decision on the disqualification. This has led to members who continue to be part of the main Opposition party becoming Ministers (Andhra Pradesh in the term of the last Assembly).

Flawed argument:

• The premise that the anti-defection law is needed to punish legislators who betray the mandate given by the voters seems to be flawed.

• If voters believe that they have been betrayed by the defectors, they can vote them out in the next election. However, many of the defectors in States such as Karnataka and Madhya Pradesh were re-elected in the by-polls, which were held due to their disqualification.

Wrong solution:

• The issue with anti-defection law is that it attempts to find a legal solution to what is essentially a political problem.

• If the stability of government is an issue due to people defecting from their parties, the answer is for parties to strengthen their internal systems to ensure greater exit barriers. This has not been possible with many of the political parties which continue to encounter a large number of defections despite the anti-defection law.

Not in line with international practice:

• India's anti-defection law stands in stark contrast with other democracies.

* The U.S. system has a more liberal view of legislators not in line with the party's stand. In the recent vote on the impeachment of former U.S. President Donald Trump, seven members from his party in the U.S. Senate, the Republicans, voted to convict him. This would not lead to any legal repercussion on the republican senators. However, the party is free to take action. Also, voters may decide to reject the legislator for re-election, in line with the core design element of representative democracy.

Conclusion:

• The anti-defection law has been detrimental to the functioning of the legislatures as deliberative bodies which hold the executive to account on behalf of citizens. The anti-defection law has turned the legislature into just a forum to endorse the decision of the government on Bills and budgets.

• The law has not been able to fulfil the intended objective of ensuring the stability of the governments by ending the practice of political defections.

• The Tenth Schedule to the Constitution must be reviewed.

Functioning of the legislature

2. **Voice vote as constitutional subterfuge**

» Prelims: Legislative process in India

» Mains: Concerns associated with the recent events related to legislative process in India; significance of bicameralism and the challenges to a robust bicameralism system in India

Context:

• The Karnataka Prevention of Slaughter and Preservation of Cattle Bill was passed by the State's Legislative Council through a voice vote without any division of votes as demanded by the opposition members. This allowed the state government to get the bill passed by the Council despite the lack of a majority in the upper house.

• A similar process of a voice vote was used to pass the farm laws in the RajyaSabha despite the government lacking a majority in the Upper House.

Concerns:

• The article discusses some of the recent concerns associated with the legislative process in India.

Bypassing constitutionally mandated legislative process:

• In both cases, the pandemonium in the House caused by heated interventions by the Opposition was used as a pretext to resort to a voice vote. However, these two sets of laws passed with a voice vote amount to a gross bypassing of the constitutionally envisaged legislative process.

• The legislative process followed for these laws did away with actual voting in the Upper House. These legislations were passed without an actual legislative majority voting for them.

Reluctance to refer bills to parliamentary committees:

- Despite the repeated calls for referring bills to parliamentary committees for detailed scrutiny or review, the governments have often insisted on the bills not being referred to the legislative committees.

Misuse of money bill provisions:

- There has been the misuse of money bill provisions to bypass the Upper House of Parliament. The money bill route has been utilised increasingly in instances even where the laws concerned would not fit within the definition of a money bill.

- Example: Aadhaar Bill, electoral bonds, retrospective validation of foreign political contributions and the overhaul of the legal regime relating to tribunals have been carried out through the Money Bill route.

- The dissenting judge in the Aadhar case has called the misuse of the Money Bill nothing less than "a fraud on the Constitution". A later constitutional Bench of the Court has since referred the issue of interpreting the Money Bill provision to a larger Bench.

Devaluing legislature:

- There has been a sort of contempt for the legislature that has been shown by the executive since the mid-1970s, which has become more apparent during the pandemic. The legislature's role in India is seen as only to pass legislation without allowing it to scrutinize the executive.

- Parliament in India was not convened until it became necessary and there was also the uproar surrounding the suspending of the Question Hour.

Devaluing bicameralism:

- The increasing use of the Money Bill route was defended by the then Leader of the RajyaSabha when he deplored the repeated questioning by the indirectly elected RajyaSabha of the wisdom of the directly elected LokSabha.

- Democracy is being portrayed only in terms of parliamentary majority in the Lower House, the countervailing function of the Upper House is being neglected. This amounts to devaluing bicameralism itself.

Significance of bicameralism:

More representative:

- The two Houses are chosen by different processes of representation and elected on a different schedule.

- RajyaSabha membership which is determined by elections to State Assemblies leads to a different principle of representation, often allowing different factors to prevail than those in the LokSabha elections. RajyaSabha allows for the representation of the state's interests.

- The legislative council in the states allows for the inclusion of experts and academicians who would otherwise not be able to meet the demands of electoral politics.

Extra layer of legislative scrutiny:

- John Stuart Mill had warned in his classic treatise on representative democracy that a majority in a single assembly could easily become despotic, if released from the necessity of considering whether its acts will be concurred in by another constituted authority.

- The second chamber offers the opportunity for a second legislative scrutiny and thus helps keep the lower house activities in check.

Ensures robust separation of powers:

- An important merit of bicameralism in a Westminster system like India, where the Lower House is dominated by the executive is that the RajyaSabha holds the potential of a somewhat different legislative relation to the executive, thus making a robust separation of powers possible.

Lacunae in bicameralism:

- The undesirable practice of allowing members representing States they have no affiliation to has been allowed to flourish in RajyaSabha.

- The upper house has been increasingly used as a conduit to get the defeated candidates in the general elections into the executive. There has been very less scope for the entry of academicians and experts.

- There has been controversy surrounding the use of money power to get elected to the upper houses with candidates spending huge amounts to get the electors to vote for them.

- The constitutional design has resulted in an unequal positioning of the upper houses making them powerless.

Conclusion:

- Even laws that are unquestionably desirable and necessary cannot be enacted using dubious legislative mechanisms.

- It is important to recognize and acknowledge the key constitutional role played by the legislature and the crucial role that the upper house plays in this.

Indian Constitution-Features and significant provisions

3. Federalism and India's human capital

» Prelims: Human Capital index, ASER report

» Mains: Decentralization of governance in India; challenges and measures required.

Background:

Poor Human capital indicators:

- India's human capital indicators remain low.
  * India is ranked 116th in the World Bank's Human Capital Index.
  * The National Family Health Survey-5 for 2019-20 notes that malnutrition indicators stagnated or declined in most States.
  * The National Achievement Survey 2017 and the Annual Status of Education Report 2018 show poor learning outcomes.
- The COVID-19 pandemic is bound to worsen the human capital indicators further.

Government initiatives:

- Several government initiatives have been launched to address the problem of low human capital indicators in India.
  * The National Health Policy, 2017 seeks to reach everyone in a comprehensive integrated way to move towards wellness. It aims at achieving universal health coverage and delivering quality health care services to all at affordable costs. It proposes free drugs, free diagnostics and free emergency and essential health care services in all public hospitals in a bid to provide access and financial protection.
  * The National Health Policy of 2017 calls for interventions to address malnutrition. The PoshanAbhiyaan has been launched, as part of the Umbrella Integrated Child Development Scheme. The Prime Minister's Overarching Scheme for Holistic Nutrition or POSHAN Abhiyaan or National Nutrition Mission, is the Government of India's flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers. The POSHAN Abhiyaan directs the attention of the country towards the problem of malnutrition and addresses it in a mission-mode. The latest Union Budget has announced a 'Mission Poshan 2.0'.
  * SamagraShikshaAbhiyan, the Centre's flagship education scheme is an overarching programme for the school education sector extending from pre-school to class 12, with the broader goal of improving school effectiveness. It subsumes the three schemes of SarvaShikshaAbhiyan, RashtriyaMadhyamikShikshaAbhiyan and Teacher Education. This sector-wide development programme/scheme would help harmonise the implementation mechanisms and transaction costs at all levels.

Concerns:

Low allocation to social sector:

- India spends just 4% of its GDP as public expenditure on human capital (around 1% and 3% on health and education respectively), making it one of the lowest spenders among its peers.

Poor decentralization:

- International experience suggests a positive correlation between decentralisation and human capital development. Globally, there has been a gradual shift in the distribution of expenditures and revenue towards sub-national governments.
- However, India has been plagued by the issue of poor decentralisation. This is one of the main reasons why government interventions in the social sector are not leading to social development.

Details:

Decentralization in India:

- In India, three tiers of government are envisaged, the Centre, the States and the local governing bodies in the form of panchayats and municipalities.
- The Constitution divides powers between the Centre and the states as per the three lists under the Seventh Schedule.
  * Public health is on the State List. The broader subject of economic and social planning is in the Concurrent List. Education was shifted from the State List to the Concurrent List through the 42nd Amendment.
- The Constitution provides for fiscal transfers from the Centre to the states through tax devolution and grants-in-aid. In addition, the Centre can make 'grants for any public purpose' under Article 282 of the Constitution. While fiscal transfers that are part of tax devolution are unconditional, transfers under grants-in-aid or Centrally Sponsored Schemes (CSSs) can be conditional.

- The 73rd and 74th Amendments bolstered decentralisation by constitutionally recognising panchayats and municipalities as the third tier of governance. They have been allocated significant functions in the Eleventh and Twelfth schedules, including education, health and sanitation, and social welfare for panchayats, and public health and socio-economic development planning for municipalities.

Steps towards decentralisation:

- In recent years, India has taken some steps towards decentralisation.
- The Fourteenth Finance Commission increased the States' share in tax devolution from 32% to 42%, which was effectively retained by the Fifteenth Finance Commission. The increase in the States' share of tax devolution represents deepening decentralisation.

Concerns:

Fiscal imbalance:

- Fiscally, while the Constitution assigns the bulk of expenditure responsibilities to States, the Centre has major revenue sources. This results in a vertical fiscal imbalance between the Centre and the states.
- Despite some shifts towards greater State autonomy in the form of higher vertical devolution, the centralised nature of India's fiscal architecture has persisted.

Big role for Centrally Sponsored Schemes:

- Centrally Sponsored Schemes form a sizeable chunk of intergovernmental fiscal transfers, comprising almost 23% of transfers to States in 2021-22. Its outsized role strays from the intentions of the Constitution.
- There are issues in the design of CSSs as well, with the conditions being overly prescriptive and, typically, input-based. International experience reveals that schemes with output-based conditions are more effective.
- Also, CSSs typically have a cost-sharing model, thereby pre-empting the States' fiscal space. Notably many CSSs cover subjects in the State and Concurrent Lists, such as health and education and thus there is some degree of overlap leading to inefficient use of the available resources.

Indirect attempts at reducing financial devolution:

- There have been concerns over the Centre's attempts to offset tax devolution by altering cost-sharing ratios of CSSs and increasing cesses.

Ad hoc allotments:

- There has been an increasing share of allotment through the provisions of Article 282.
- Article 282 of the Constitution is listed as a 'Miscellaneous Financial Provision', unlike Articles 270 and 275, which fall under 'Distribution of Revenues between the Union and the States'. Thus the allotments under Article 282 could be characterized as more of a residuary power which can lead to adhocism in fiscal devolution.
- The Supreme Court also in Bhim Singh vs Union of India had observed that "Article 282 is normally meant for special, temporary or ad hoc schemes".

Reluctance of state governments to empower third tier:

- The Constitution lets States determine how and to what degree the third tier of governance are empowered.
- Many states have been reluctant to functionally and fiscally empower the third tier of governance. They have not clearly demarcated or devolved functions for panchayats and municipalities.

Fiscally disempowered third tier:

- The third-tier governments continue to be fiscally disempowered. The collection of property tax, a major source of revenue for third-tier governments, is very low in India (under 0.2% of GDP, compared to 3% of GDP in some other nations).
- Many States have not constituted or completed State Finance Commissions (SFCs) on time, thus not complying with the constitutional provisions pertaining to SFCs. The Constitution envisages State Finance Commissions (SFCs) to make recommendations for matters such as tax devolution and grants-in-aid to the third tier.

Conclusion:

- Investing in human capital through interventions in nutrition, health, and education is critical for sustainable growth. A decentralised approach and strong local governments can enhance developmental outcomes.
- States and the third tier of governance should be assigned a bigger role in human capital interventions and should be allocated adequate fiscal resources. The Centre should play an enabling role.

Functioning of the Indian Judiciary

4. **The pressing need to adjudicate, not mediate**

   » Prelims: Article 13 of the Indian Constitution

   » Mains: significance of Judicial review in India

Context:

- The recent judgment of the Supreme Court that refused to review its earlier verdict on the Shaheen Bagh protest.

Background:

- The Supreme Court in the ShaheenBagh case had declared that there is no absolute right to protest, and it could be subjected to the orders of the authority regarding the place and time.

Concerns:

- The article argues against the stand taken by the Supreme Court based on the following factors.

Problematic balancing:

- In the original judgment on ShaheenBagh, the Court attempted to "mediate" the issue. The textbook theory of "balancing" the right to protest and the right to move along the road did not help find a solution to the problem.

- Instead of fulfilling its duty to adjudicate on the issue, the court attempted mediation.

- A reconciliatory approach cannot be a substitute for judicial assertion. The judiciary should ensure timely adjudication of the validity of the laws which are questioned by the process recognised by the law.

- The review petition provided the Supreme Court an opportunity to revisit its earlier folly but has failed to capitalize on it.

Abusive judicial review:

- In the review petition, the petitioners rightly apprehended that the observations in the earlier judgment against the indefinite occupation of public space "may prove to be a license in the hands of the police to commit atrocities on legitimate voice of protest".

- The Court, by its present rejection of the plea, seems to have reinforced the state's stand. It illustrates an instance of "abusive judicial review", as described by David Landau and Rosalind Dixon, where the Court not only refuses to act as the umpire of democracy but aids the executive in fulfilling its strategies. In the process, it legitimises very many illegitimate state actions.

Against judicial precedent:

- The 2020 verdict fails to properly appreciate and contextualise the earlier Constitution Bench judgment in HimatLal K. Shah vs Commissioner of Police (1972) even after referring to it.

- In HimatLal K. Shah, the Court said that the rule framed by the Ahmedabad Police Commissioner conferred arbitrary power on the police officers in the matter of public meetings and, therefore, was liable to be struck down. The judges on the bench noted that "freedom of assembly is an essential element of a democratic system" and that "the public streets are the 'natural' places for expression of opinion and dissemination of ideas".

Conclusion:

Need judicial review:

- A fair and effective adjudicative mechanism in constitutional matters can help end the agitations and protests.

- Studies have shown that social movements could be less radical and less oppositional when the issues could be effectively sorted out by way of fair litigative means.

- The court's only role is to act as the guardian of the right of people including the right to dissent.

  * Article 19 of the Constitution deals with the right to liberty including freedom of expression to that of peaceful association.

Miscellaneous

5. **Sedition lies in the effect, not in content**

   » Prelims: Section 124A of the IPC

   » Mains: Concerns associated with the use of sedition provisions and remedial measures required.

Context:

- Disha Ravi, a climate activist, was arrested by the Delhi police from Bengaluru on charges of sedition.

Background:

Section 124A:

- Section 124A of the Indian Penal Code (IPC), which deals with sedition, was drafted by Thomas Babington Macaulay and included in the IPC in 1870.

- Section 124A of the IPC states that 'Whoever, by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the Government estab¬lished by law, shall be punished with impris¬onment which may extend to three years, to which fine may be added.'

Cases related to section 124A:

Kedar Nath Singh v/s State of Bihar (1962) case:

- In Kedar Nath Singh v. State of Bihar (1962), the Supreme Court upheld the constitutional validity of sedition and noted it as being a reasonable restriction on free speech as provided in Article 19(2) of the Constitution.

- It made clear that a citizen has the right to say or write whatever she likes about the government, or its measures, by way of criticism or comments, as long as she does not incite people to violence against the government established by law or with the intention of creating public disorder.

Bombay High Court case:

- The Bombay High Court, in the case of cartoonist Aseem Trivedi, issued guidelines that the police must follow prior to invoking the provisions of sedition.

- This includes an objective evaluation of the material on whether the words and actions cause disaffection, enmity and disloyalty to the government and if it is of the magnitude that incites violence or tends to create public disorder.

- The police are also required to obtain a legal opinion in writing from a law officer of the district who must give reasons on how the pre-conditions are met. This needs to be followed by a second opinion from the State's public prosecutor.

Concerns:

Misuse of the law:

- There are questions being raised on the misuse of this law to quell dissent.

- Notably, many charged are individuals protesting government action, which the Constitution Bench in KedarNath held falls outside the ambit of sedition.

- Data from the National Crime Records Bureau notes that between 2016 and 2019, the number of cases of sedition under Section 124A increased by 160%, while the rate of conviction dropped to 3.3% in 2019 from 33.3% in 2016.

Poor implementation of law and associated guidelines:

- While courts have on numerous occasions cautioned law enforcement agencies not to misuse the provisions on sedition, and follow court directions, they have been grossly ignored. There has been the poor implementation of the law and guidelines related to section 124A.

Way forward:

The law needs a relook:

- Despite a Constitution Bench upholding the law on sedition, the available data and the gross misuse of the legal provisions call for a complete relook at the provision.

- Also given that there have been substantial changes since 1962 when the KedarNath case was decided, there is a need for a relook as a law cannot afford to remain static.

- Many nations have repealed sedition like provisions in their statute. The U.K. repealed the offence of sedition in 2010.

- In 2018, the Law Commission of India also called for a relook at the controversial law.

Following the guidelines provided by the judiciary:

- The police must follow the process established by law and follow the guidelines provided by the Bombay High Court in the Aseem Trivedi case.

An effect-based test:

- The courts must adopt what some Western countries follow: an effect-based test which examines the effects of the seditious text rather than a content-based test which reviews the text alone.

Conclusion:

- The law of sedition is a powerful tool in the hands of the state to maintain peace and order in society. However, it cannot be invoked to quieten the disquiet under the pretence of muzzling the miscreants.

Miscellaneous

6. **The viability of two proposals: On having 4 capitals in India**

   » Prelims: 1911 Delhi durbar

   » Mains: Feasibility of four capitals; challenges and benefits

Context:

- Recently, the West Bengal Chief Minister asked why India should have only one capital and suggested that there be four. She suggested that Parliament sessions should be held in each of the four capitals in a rotating manner.

History:

- Calcutta (now Kolkata) was the capital of the British Indian empire until King George V announced in December 1911 that Delhi would be the new capital.

- Parliament House was opened in 1927 and the magnificent Viceroy's residence (now Rashtrapati Bhavan) and the government buildings were inaugurated in 1931.

- One of the factors that may have weighed in favour of New Delhi could be its proximity to the summer capital, Shimla.

Feasibility of the proposal:

- Four capitals would obviously mean having Parliament buildings in three other regions, too.

Accommodation:

- If there are four capitals, accommodation for all the MPs and the adjunct staff will have to be constructed.

- While those from the northern parts of the country would prefer to stay comfortably in the existing residential accommodation in New Delhi, those from other parts of the country may prefer to settle in the capital of the region to which they belong.

- After the Parliament sessions, these residential accommodations would be vacant for months after every session.

- In addition to this, huge expenditure would be involved in all the MPs and their staff having to fly to and from these capitals every now and then.

Security:

- Providing security to all the MPs will be a huge burden for the State Police.

- Vacant accommodations where the MPs don't reside would also have to be guarded round the clock.

- Depending on the risk factor, enhanced security will have to be necessarily provided to a fair number of them.

Expenditure:

- Even shifting a State capital would involve huge expenditure.

- Previously the Tamil Nadu Chief Minister's proposal to shift the State capital to Tiruchirappalli was eventually shelved when it became apparent that it would impose a huge burden on the state exchequer.

- The cost to the government exchequer to have capitals in three other States will be mind-boggling and our nation can ill-afford this.

A proposal to be considered:

- In 2021, a similar request was made when the Bar Councils of the five southern States called for a Supreme Court bench in south India.

- This has been a long-standing demand.

- Unlike the proposal to establish four capitals, this one merits serious consideration.

- The proposal needs consideration given the prohibitively long distance between the southern states and Delhi.

  * Not many can afford to travel all the way to New Delhi to engage lawyers and plead their cases.

  * The exorbitant fees of the Supreme Court lawyers in New Delhi is another deterrent.

- Also, Attorney General K.K. Venugopal suggested that four benches of the Court of Appeal with 15 judges each be created across the country to reduce the burden of the Supreme Court.

Merits:

- This would enable judges to go through each case thoroughly and deliver a well-thought-out verdict.

- Setting up these courts would call for an amendment in the Constitution. Though the demand is to set up a bench in the south, southern Bar Councils may later take up the issue of setting up separate appellate benches in regions in the south.

- Such an arrangement would leave the apex court free to deal with constitutional issues.

- With a huge number of cases pending in various courts, a viable solution needs to be worked out.

- Easy accessibility to justice for every citizen is a right that cannot be countered.

Indian constitution: Significant provisions

7. **Priya Ramani Case – Criminal Defamation**

   » Prelims: Defamation law provisions

   » Mains: Right to freedom of speech; Reasonable restrictions

Context:

A Delhi court rejected a criminal defamation case filed by former Union Minister M.J. Akbar against journalist Priya Ramani for her tweets accusing him of sexual harassment.

Background:

- At the height of the #MeToo movement in 2018, Ms. Ramani accused Mr. Akbar of sexual harassment.

Defamation:

- Akbar in his criminal defamation complaint had alleged that Ms Ramani's allegations were defamatory and had damaged his personal reputation and as a minister, thereby causing him irreparable loss and tremendous distress.

Defence:

- Ramani's lawyers pleaded truth as her defence, made in good faith, in the public interest, and for the public good.

- Ramani premised her defence on the First Exception to Section 499.

  * "Imputation of truth"which is required for the "public good" and thus has to be published, on the public conduct of government officials, the conduct of any person touching any public question and merits of the public performance are exceptions.

- She also relied upon the Ninth Exception which says:

  * "It is not defamation to make an imputation on the character of another provided that the imputation be made in good faith for the protection of the interests of the person making it, or of any other person, or for the public good."

Details - Verdict:

- The court said that a woman has a right to put her grievance at any platform of her choice and even after decades.

- "Despite how well-respected some persons are in society, they — in their personal lives — could show extreme cruelty to the females," the court observed.

- The court asserted that "The woman cannot be punished for raising voice against the sex abuse on the pretext of criminal complaint of defamation as the right of reputation cannot be protected at the cost of the right of life and dignity of a woman as guaranteed in the Constitution,".

Significance:

- The verdict has come as a vindication to a long line of women who have not been taken seriously earlier when they have alleged sexual harassment.

- It has given voice to the victim for redressal.

Conclusion:

- The case has been placed in the correct perspective by noting that a woman cannot be punished for criminal defamation when she raises her voice against sexual harassment because "the right of reputation cannot be protected at the cost of the right of life and dignity of [the] woman".

- By rarely visiting retribution upon the perpetrators, the legal process has hitherto yielded little in terms of relief to the victim.

- A conviction in this case would have had disastrous consequences for the many courageous women who have come out with disturbing revelations about the extent to which a large number of professions and fields in the country have been unsafe.

- Against all odds, the verdict may come to be a defining image in India's long walk towards respecting female sexual autonomy.

- With this verdict, many more women will now be emboldened to resist harassment at the workplace and elsewhere.

- Hopefully, a few men are now deterred from trading power and position to secure sexual favours.

What is Defamation?

- Defamation is the communication of a false statement that harms the reputation of an individual person, business, product, group, government, religion, or nation.

- The law of criminal defamation is premised on a person's right to reputation.

  * Making or publishing any imputation concerning any person, intending to harm, or knowing or having reason to believe that such imputation will harm, the reputation of such person is criminal defamation.

- In India, defamation is both a civil and a criminal offence.

  * In Civil Law, defamation mostly falls under the Law of Torts, which imposes punishment in the form of damages awarded to the claimant (person filing the claim).

  * Under Criminal Law, Defamation is a bailable, non-cognizable and compoundable offence.

Criminal Defamation and Exceptions:

- Criminal defamation has been specifically defined as an offence under Section 499 of the Indian Penal Code (IPC).

- According to Section 499, defamation could be through words, spoken or intended to be read, through signs, and also through visible representations.

- However, there are exceptions to this. They are:

  * "Imputation of truth" which is required for the "public good" and thus has to be published.

  * Any opinion given by the public in respect of conduct of a public servant in discharge of his functions, his character appears.

  * The conduct of any person touching any public question and merits of the public performance.

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ECONOMY

Agriculture

1. **Agricultural Technology Management Agency (ATMA)**

   » Prelims: ATMA scheme

   » Mains: Significance of agricultural extension scheme

   • The scheme promotes decentralized farmer-friendly extension system in the country.

   • Under the scheme grants-in-aid is released to the States/UTs with an objective to support State Governments efforts in revitalizing the extension system and making available the latest agricultural technologies in different thematic areas to increase production in agriculture & allied sectors through a Cafeteria of Activities which include

     * Farmers Training, Demonstrations, Exposure Visits and KisanMela

     * Mobilization of Farmers Groups,

     * Setting up of Farm School,

     * Innovative Technology Dissemination,

     * Research-Extension Linkages etc.

   The objectives of ATMA are:

   • To strengthen research – extension – farmer linkages

   • To provide an effective mechanism for co-ordination and management of activities of different agencies involved in technology adaption / validation and dissemination at the district level and below.

   • To increase the quality and type of technologies being disseminated.

Agriculture

2. **Animal Husbandry**

   » Prelims: AHIDF

   » Mains: Significance of AHIDF

   Context:

   • The Animal Husbandry Infrastructure Development Fund (AHIDF) announced in 2020 under the AtmaNirbhar Bharat Abhiyan stimulus package.

   Details:

   • The Animal Husbandry Infrastructure Development Fund (AHIDF) aims to incentivize investments by individual entrepreneurs, private companies, MSME, Farmers Producers Organizations (FPOs) and Section 8 companies to establish dairy processing and value addition infrastructure, meat processing and value addition infrastructure and animal feed plants.

   • As per the provisions of AHIDF, a project will be eligible for a loan amount that covers up to 90% of the estimated cost – with an interest subvention of 3% for all eligible entities.

   • The AHIDF has been set up with an outlay of Rs. 15,000 crore.

   Significance:

   Address infrastructural deficit in dairy value chain:

   • AHIDF will help strengthen the dairy value chain which is currently facing an infrastructural deficit.

   • There is an infrastructure gap of about 120-130 MMT in terms of chilling infrastructure at collection centres. Similarly, there is an infrastructural deficit even in terms of milk processing.

   • The setting up of chilling infrastructure at collection centres by setting up bulk milk coolers will help prevent wastage of milk.

   Help increase productivity of cattle:

   • AHIDF's focus on the animal feed sector will help increase the productivity of cattle, especially by enhancing the quality of animal feed.

   • AHIDF has been designed to support the establishment of animal feed plants of varying capacities – including the setting up of mineral mixture plants, silage making units, and animal feed testing laboratory.

   • This could spur innovative solutions from domestic start-ups for the development of new varieties of green fodder and enriched animal feed.

   Nutritional security:

   • The scheme's support to the poultry industry will not only result in economic but also nutritional benefits by boosting the poultry segment's output, efficiency and quality.

     * India is the fourth-largest chicken meat producer and the second-largest egg producer in the world.

   • The poultry sector can help mitigate rampant malnutrition given that chicken meat provides the cheapest source of protein per unit. Eggs have been introduced as part of the mid-day meal in several anganwadis in the country.

Economic benefits:

- As an allied industry of agriculture, the animal husbandry and dairy sector collectively employ more than 100 million people.
- The AHIDF has the potential to create over 30 lakh jobs, as it helps to overhaul domestic infrastructure towards giving greater prominence to India's dairy and livestock products in the global value chain.
- Also given that the bulk of animal husbandry related establishments are concentrated in rural India, the impetus to this sector will have a substantial impact on the socio-economic development of the nation.

Climate action:

- Macro benefits regarding climate change are linked to the animal husbandry sector. Enhanced infrastructure can make processing units more energy-efficient and help mitigate their carbon footprint.

Agriculture

3. National Innovations in Climate Resilient Agriculture (NICRA)

- » Prelims: NICRA
- » Mains: Possible impact of climate change on Indian agriculture and measures to be taken to mitigate the impact

Context:

- Impact of climate change on Indian agriculture was studied under NICRA.

What is NICRA?

- The Indian Council of Agricultural Research (ICAR) has initiated a network project NICRA during 2011 to address the impact of climate change on Indian agriculture.
- The project aims to enhance the resilience of Indian agriculture to climate change and climate vulnerability through strategic research and technology demonstration.
- The research on adaptation and mitigation covers crops, livestock, fisheries and natural resource management.
- The project consists of four components viz. Strategic Research, Technology Demonstration, Capacity Building and Sponsored/Competitive Grants.
- NICRA was launched with an outlay of Rs. 350 crores with the following objectives:
  - * To enhance the resilience of Indian agriculture covering crops, livestock and fisheries to climatic variability and

climate change through development and application of improved production and risk management technologies

- * To demonstrate site specific technology packages on farmers' fields for adapting to current climate risks
- * To enhance the capacity building of scientists and other stakeholders in climate resilient agricultural research and its application

Agriculture

4. Sub Mission on Plant Protection and Plant Quarantine (SMPPQ)

- » Prelims: SMPPQ
- » Mains: Significance of Plant protection and plant quarantine in the increasing globalized agricultural trade.
- Sub Mission on Plant Protection and Plant Quarantine (SMPPQ) is one of the schemes under the Green Revolution (Krishonnati Yojana) through which regulatory, monitoring, surveillance and capacity building functions are performed.
- The aim of the scheme is minimizing loss to quality and yield of agricultural crops from the ravages of insect pests, diseases, weeds, nematodes, rodents, etc. and to shield our bio-security from the incursion and spread of alien species.
- It involves integrated pest control management and locust control and research.

Indian Economy and Infrastructure

5. Sustainable Development for Coal Sector

- » Prelims: Coal reserves in India, types of coal
- » Mains: Measures being taken by government to promote coal mining in India

Context:

Government has put major thrust on sustainable development in coal mining and is taking multi-pronged action on both environmental & social fronts.

Details:

- The Ministry of Coal has undertaken several out-of-the-box measures besides regular environmental monitoring and mitigation during mining operation in order to sustainably develop the coal sector.

- Some of the measures are described below.

  * Utilisation of mine water: Huge volume of mine water released during mining operation is partially utilized for internal consumption by coalmines for providing drinking water in their colonies, dust suppression, industrial use, plantation, etc. The internal consumption constitutes about 45% of the total mine water leaving a substantial volume for community use. A plan has been drawn up for the maximisation of mine water supply to nearby villages.

  * Eco Parks: Coal companies have already developed 15 eco-parks in various coalfields. Ten new eco-parks are in different stages of development.

  * Extraction and use of Sand from Over Burden (OB): Extraction of sand from Over Burden (OB) for use as construction & stowing material will not only help in availability of cheaper sand for house & other construction but will also minimize the land required for OB dump in future projects. This initiative also lowers the adverse footprint of riverbed mining of sand.

  * First Mile Connectivity: Under this measure, coal is being transported through conveyor belt from Coal Handling Plants to Silo for loading. This process eliminates movement of coal through road and thus not only minimizes the environmental pollution, but also reduces the carbon footprint.

  * Renewable Energy: Coal companies have set up solar power plants towards achieving their set targets of renewable energy production.

  * Bio-Reclamation and Tree Plantation: Bio-Reclamation and massive tree plantation has been one of the key thrust areas of coal companies in promoting environmental sustainability.

Indian Economy and Infrastructure

6. RS passes ports Bill despite opposition

  » Prelims: Major ports of India

  » Mains: Significance of seaways in expanding India's foreign trade

Context:

- The Rajya Sabha passed the Major Port Authoritiues Bill, 2020. The bill will now go to the President of India for his assent.

Salient features of the Major Port Authorities Bill 2020:

- The new Bill has proposed a simplified composition of the Board of Port Authority which will comprise 11 to 13 Members from the present

17 to 19 Members representing various interests.

- The Tariff Authority for Major Ports (TAMP) has been redefined.

  * Port Authority has been given powers to fix tariff which will act as a reference tariff for purposes of bidding for PPP projects.

  * PPP operators will be free to fix tariff based on market conditions.

  * The Board of Port Authority has been delegated the power to fix the scale of rates for other port services and assets including land.

- An Adjudicatory Board has been proposed to be created to carry out the residual function of the erstwhile TAMP for Major Ports.

- The Board of each Major Port shall be entitled to create a specific master plan in respect of any development or infrastructure.

- Provisions of CSR & development of infrastructure by Port Authority have been introduced.

Significance:

- The bill aims to promote the expansion of port infrastructure and facilitate trade and commerce.

- It aims at decentralizing decision making and to infuse professionalism in the governance of major ports.

- It imparts faster and transparent decision making benefiting the stakeholders and better project execution capability.

- It is aimed at reorienting the governance model in central ports to the landlord port model in line with the successful global practice.

  * This will also help in bringing transparency in operations of Major Ports.

  * This will empower the Major Ports to perform with greater efficiency on account of full autonomy in decision making and by modernizing the institutional framework of Major Ports.

Governmental schemes/Programmes/Initiatives

7. Mahabahu Brahmaputra

  » Prelims: Map related questions regarding north east India

  » Mains: Economic potential of north east India and measures taken in this regard

- The 'Mahabahu-Brahmaputra' program is aimed at providing seamless connectivity to the Eastern parts of India and includes various development activities for the people living around River Brahmaputra and River Barak.

- The launch of Mahabahu-Brahmaputra will be marked by the inauguration of the Ro-Pax vessel operations between
  * Neamati-Majuli Island,
  * North Guwahati-South Guwahati
  * Dhubri-Hatsingimari;

RoPax (Roll-On-Roll-Off-Passenger-ship/ferry)

- Ro-Ro (roll-on/roll-off) ships are vessels designed to carry only wheeled cargo, such as cars, trucks, etc.
- A Ro-Pax vesselis built for freight vehicle transport along with passenger accommodation
  * RoPax is a short form used to illustrate ships with roll-on and roll-off features for the carriage of commercial vehicles and private cars with the provision to accommodate large numbers of passengersseparately, for shorter voyages

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The Prime Minister also launched two e-portals to further Ease of Doing Business.

- The Car-D (Cargo Data) portal will collate cargo and cruise data on a real time basis.
- PANI (Portal for Asset and Navigation Information) will act as a one-stop solution for providing information about river navigation and infrastructure.

Significance

- The Ro-Pax services will help in reducing travel time by providing connectivity between banks and thus reducing the distance to be travelled by road
- Ro-Pax operation between Neamati and Majuli will reduce the total distance of 420 km currently being travelled by vehicles to only 12 km, resulting in a substantial impact on logistics of small-scale industries of the region.

Governmental schemes/Programmes/Initiatives

8. **Mega Investment Textiles Parks (MITRA) Scheme**

   » Prelims: MITRA Scheme
   » Mains: significance of Textile sector in the Indian economy and measures taken by the government

Context:

- Govt. announces launch of Mega Investment Textiles Parks (MITRA) scheme in the Union Budget 2021-22 to make Indian textile industry globally competitive.

About MITRA Scheme:

- The objectives behind the scheme are to enable the textile industry to become globally competitive, attract large investments, boost employment generation and exports.
- This scheme will be in addition to the PLI scheme.
- The FM announced that seven textile parks will be established over three years.

Significance:

- Such parks have already been present in nations like China and Vietnam which help give a thrust to the textile sector.
- India has been losing its competitive edge to Bangladesh and Vietnam owing to their low labour costs, wider scale of operations and the Free Trade Agreement (FTA) advantage enjoyed by them.
- With the textile sector being the second largest employment generator in the country after agriculture, the Budget announcements mean a significant step forward for the industry.
- This comes after a tumultuous year for the textile and clothing industry in 2020 which saw a spate of job losses, cancelled orders and an acute crunch of financial resources.
- Exports in the textiles and apparel industry are expected to reach $300 billion by 2024-25 resulting in a tripling of Indian market share from 5% to 15%, as per national investment promotion and facilitation agency Invest India.
- The industry size is expected to double to $300 bn by 2025-26, for which the 7 mega textile parks have been planned.

9. National Handloom Development Programme (NHDP)

» Prelims: NHDP

» Mains: Significance of handloom sector in India and measures taken by government to promote it

• It is a central sector scheme to support weavers both within and outside the cooperative fold including Self Help Groups, NGOs, etc.

• It follows a need-based approach for integrated and holistic development of handlooms and welfare of handloom weavers.

• It supports weavers in getting raw materials, design inputs, technology up-gradation, marketing, support through exhibitions, create permanent infrastructure in the form of Urban Haats, marketing complexes, development of web portal for e-marketing of handloom products, etc.

• With this the weavers have been benefited by waivers of overdue loans, availing loans at concessional rates, participation in exhibitions/ fairs/craft melas for marketing handloom products, upgradation of looms and training to improve their earnings.

• The chief components of the scheme include:

  * Block level cluster projects

  * Handloom marketing assistance

  * Concessional credit

  * Handloom census (data regarding handloom weavers, number of handlooms, number of handlooms engaged in commercial and domestic use, etc.)

• Some of the other components include handloom parks, research and development, publicity, training, etc.

Governmental schemes/Programmes/initiatives

10. Remission of Duties or Taxes on Export Product (RoDTEP) scheme

» Prelims: RoDTEP scheme

» Mains: Measures taken by government to promote exports from India and the associated challenges

• The new Remission of Duties or Taxes on Export Product (RoDTEP) scheme has been introduced from 1.1.2021 instead of the Merchandise Exports from India Scheme (MEIS), which is available for all physical exports.

• The scheme seeks to reimburse the input taxes and duties paid by exporters – including embedded taxes, such as local levies, coal cess,

mandi tax, electricity duties and the fuel used for transportation – which are not exempted or refunded under any other existing scheme.

• The scheme was designed in compliance with WTO permissible rules to extend handholding benefits to exporters.

• Also, the tax assessment will become fully automatic for exporters which will bring more transparency and make taxation smoother.

• Besides, the scheme will make Indian products cost-competitive in the international market.

Note:

• Merchandise Exports from India Scheme was launched with the aim of enhancement of the export of notified goods manufactured in any country.

• This scheme came into existence on 1 April 2015 by the Foreign Trade Policy.

Governmental schemes/Programmes/initiatives

11. Startup India Seed Fund Scheme (SISFS)

» Prelims: Start up definition in India

» Mains: Measures taken by government to promote start-ups in India

Context:

• SISFS has been approved for the period of next four years starting from 2021-22.

About Startup India Seed Fund Scheme:

• The Scheme aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization.

• It will be implemented with effect from 1st April 2021.

• A Rs. 945 Crore corpus will be divided over the next 4 years for providing seed funding to eligible startups through eligible incubators across India.

• The scheme is expected to support about 3600 startups.

• The implementing body of the scheme is the Department for Promotion of Industry and Internal Trade (DPIIT).

• These 3,600 entrepreneurs will represent DPIIT-registered startups across sectors and incorporated not more than two years ago at the time of applying for the scheme.

• The selected startups will be offered up to Rs 20 lakhs as a grant for proof of concept and up to Rs 50 lakhs through convertible debentures or debt or debt-linked instruments for commercialization of the product.

- Startups selected under the scheme would preferably be from sectors including social impact, waste management, water management, financial inclusion, education, agriculture, food processing, biotechnology, healthcare, energy, mobility, defence, space, railways, oil and gas, textiles, etc.

Governmental schemes/Programmes/initiatives

12. PLI Scheme for Telecom and Networking Products

» Prelims: PLI scheme

» Mains: Significance of telecom sector

Context:

The Union Cabinet has approved the PLI Scheme for Telecom and Networking Products.

Details:

- This scheme is part of the umbrella scheme approved by the cabinet in November 2020 for implementation of Production Linked-Incentives (PLI) under various ministries/departments.

- This is in continuation with the 'Atmanirbhar Bharat' strategies for enhancing India's manufacturing capabilities and exports.

- Support under the Scheme will be provided to companies/entities engaged in the manufacturing of specified telecom and networking products in India.

- Eligibility will be further subject to achievement of a minimum threshold of cumulative incremental investment over a period of four years and incremental sales of manufactured goods net of taxes (as distinct from traded goods) over the Base Year 2019-2020.

  * The cumulative investment can be made at one go, subject to annual cumulative threshold as prescribed for four years being met.

- There will be a minimum investment threshold of Rs.10 crore for MSME with incentives from 7% to 4 % and Rs. 100 crore for others with incentives from 6% to 4% over 5 year above Base Year.

Benefits:

- With this scheme, India will be well positioned as a global hub for manufacturing of Telecom and Networking Products.

- Incremental production of around Rs. 2 Lakh crore is expected to be achieved over 5 years.

- India will improve its competitiveness in manufacturing with increased value addition.

- It is expected that the scheme will bring more than Rs. 3,000 crore investment and generate huge direct and indirect employments.

- By incentivizing large scale manufacturing in India, domestic value addition will increase gradually.

- Provision of higher incentive to MSME will encourage domestic telecom manufacturers to become part of the global supply chain.

Governmental schemes/Programmes/initiatives

13. PLI for Pharmaceuticals

» Prelims: PLI scheme

» Mains: Significance of Pharmaceuticals sector in Indian economy

Context:

Cabinet approves Production Linked Incentive Scheme for Pharmaceuticals.

Details:

- The union cabinet has approved the Production Linked Incentive (PLI) Scheme for Pharmaceuticals for the period 2020-21 to 2028-29.

Background:

- The Indian pharmaceutical industry is the 3rd-largest in the world by volume and is worth USD 40 billion in terms of value.

- The country contributes 3.5% of total drugs and medicines exported globally.

- India exports pharmaceuticals to more than 200 countries and territories including highly regulated markets such as the USA, the UK, the European Union, Canada, etc.

- At present, low value generic drugs account for the major component of Indian exports, while a large proportion of the domestic demand for patented drugs is met through imports.

- This is because the Indian pharmaceutical sector lacks in high value production along with the necessary pharma R&D.

- In order to incentivize the global and domestic players to enhance investment and production in diversified product categories, a well-designed and suitably targeted intervention is required to incentivise specific high value goods such as bio-pharmaceuticals, complex generic drugs, patented drugs or drugs nearing patent expiry and cell based or gene therapy products, etc.

Objectives of the scheme:

- To enhance India's manufacturing capabilities by increasing investment and production in the sector and contributing to product diversification to high value goods in the pharmaceutical sector.

- To create global champions out of India who have the potential to grow in size and scale using cutting edge technology and thereby penetrate the global value chains.

Salient features of the PLI Scheme for Pharmaceuticals:

- Production-Linked Incentive or PLI scheme is a scheme that aims to give companies incentives on incremental sales from products manufactured in domestic units.

- The pharmaceutical goods manufacturers registered in India will be classified according to their Global Manufacturing Revenue (GMR) into three groups to decide the quantum of their incentive allocation.

- The three groups or categories are:

  * Group A: Applicants having GMR (FY 2019-20) of pharmaceutical goods more than or equal to Rs 5,000 crore.

  * Group B: Applicants having GMR (FY 2019-20) of pharmaceutical goods between Rs 500 (inclusive) crore and Rs 5,000 crore.

  * Group C: Applicants having GMR (FY 2019-20) of pharmaceutical goods less than Rs 500 crore. A sub-group for MSME industry will be made within this group, given their specific challenges and circumstances.

- The incentive allocation among the Target Groups is as follows:

  * Group A: Rs.11000 crore

  * Group B: Rs.2250 crore

  * Group C: Rs.1750 crore

- Financial Year 2019-20 shall be treated as the base year for computation of incremental sales of manufactured goods.

- Rate of incentive will be 10% (of incremental sales value) for Category 1 and Category 2 products for first four years, 8% for the fifth year and 6% for the sixth year of production under the scheme.

- Rate of incentive will be 5% (of incremental sales value) for Category 3 products for first four years, 4% for the fifth year and 3% for the sixth year of production under the scheme.

Significance:

- The Scheme will benefit domestic manufacturers, help in creating employment and is expected to contribute to the availability of wider range of affordable medicines for consumers.

- The scheme is expected to promote the production of high value products in the country and increase the value addition in exports.

- It is expected to promote innovation for development of complex and high-tech products including products of emerging therapies and in-vitro Diagnostic Devices as also self-reliance in important drugs.

- It is also expected to improve accessibility and affordability of medical products including orphan drugs to the Indian population.

- The Scheme is also expected to bring in investment of Rs.15,000 crore in the pharmaceutical sector.

Governmental schemes/Programmes/initiatives

14. **Scheme of Fund for Regeneration of Traditional Industries (SFURTI)**

  » Prelims: SFURTI scheme

  » Mains: Measures taken by government to promote Handicraft related MSMEs

Context:

Union Minister for MSME & Road Transport & Highways inaugurated 50 artisan-based SFURTI clusters, spread over 18 States.

Details:

- In the 50 clusters inaugurated, over 42,000 artisans have been supported in the traditional segments of muslin, khadi, coir, handicraft, handlooms, wood craft, leather, pottery, carpet weaving, bamboo, agro processing, tea, etc.

- The Ministry of MSME, Govt. of India has funded an amount of around Rs.85 crore for the development of these 50 clusters.

- The Ministry of MSME is implementing a Scheme of Fund for Regeneration of Traditional Industries (SFURTI) with a view to organize traditional industries and artisans into clusters to make them competitive and increase their income.

About SFURTI:

- This scheme has been under implementation since 2005-06 for making traditional industries more productive, market-driven and competitive by organizing the traditional industries and artisans into clusters.

- The scheme envisages providing need-based assistance for replacement of production equipment, setting up of Common Facility Centres (CFC), product development, quality improvement, improved marketing, training and capacity building, etc. with the financial assistance extended by the Government.

- The scheme was modified as revamped SFURTI scheme during 2016-17.

- As on date, there are 371 clusters which have are being funded by the Ministry, supporting 2.18 lakh artisans with a total government assistance of Rs. 888 cr.

- SFURTI clusters are of two types:

  * Regular Cluster (500 artisans) with Government assistance of up to Rs.2.5 crore

  * Major Cluster (more than 500 artisans) with Government assistance up to Rs.5 crore

15. Conclusive land titling and its challenges

» Prelims: NITI Aayog

» Mains: Benefits of conclusive land titling; associated challenges

Context:

• Proposed bill on Conclusive Land Titling.

Background:

• The government's think tank, NITI Aayog, has proposed a bill on Conclusive Land Titling.

• The Model Bill on Conclusive Land Titling has been sent to States and Union Territories seeking their comments.

Details:

Current system:

• India currently follows a system of presumptive land titling. This means that land records are maintained, with information on possession, which is determined through details of past transactions.

• Ownership is established on the basis of current possession. Registration of land is actually a registration of transactions, such as sale deeds, records of inheritance, mortgage and lease.

• Holding registration papers does not actually guarantee the ownership title of the land.

Proposed system:

• Under a conclusive land titling system, land records designate actual ownership.

• The title is granted by the government, which takes the responsibility for accuracy. Once a title is granted, any other claimant will have to settle disputes with the government, not the title holder.

• Further, under conclusive land titling, the title holder is not in any danger of losing ownership.

Significance of new system:

• The new system envisages reforming the country's land markets through a fundamental legal and procedural shift in how land titles are awarded.

Lower litigation:

• A conclusive land titling system will drastically lower litigation related to land.

• Land-related disputes account for two-thirds of all pending court cases in India. Disputes on land or real estate take an average time of 20 years in the courts to be resolved.

Incentivize economic activity:

• Currently land titles are based on transactions where people have to keep the entire chain of transaction records, and a dispute on any link in that chain causes ambiguity in ownership.

• The increased confidence on land ownership documents will allow investors to purchase land for business activities without uncertainty or fear of risk. The long-running court cases currently stifle the appetite for investment in many sectors of the economy.

• The new system would help end land disputes which create hurdles for infrastructure development and housing construction.

Active land market:

• The new system would promote an active land market.

Ease of governance:

• Conclusive land titling will allow the urban local bodies to collect property taxes more effectively.

• Ambiguity in ownership also results in a black market for land transactions, which deprives the government of taxes. This would end under the new system.

Benefit for small and marginal farmers:

• The new system with conclusive land titles would allow the small and marginal farmers to access agricultural credit through formal channels by using their land as collateral.

• This will allow them to have access to timely and cheap credit.

Challenges:

Un-updated records:

• The biggest challenge is that land records have not been updated for decades, especially in rural and semi-urban areas. Unless the land titles are not based on updated records, conclusive land titles could create even more problems.

Challenge to claimants:

• In case of any disputes over the land titles, the onus falls on claimants, many of whom have no access to documentation, to proactively challenge the titling. This could strain them financially.

Lack of human resources:

• The local governments do not have the resources or manpower to conduct local level surveys to undertake the envisaged process.

Way forward:

• Comprehensive village-level local surveys with community involvement are a necessary precursor to the land titling process.

16. Go Electric' Campaign

» Prelims: Go electric campaign

» Mains: Benefits of shifting to electric mobility

Context:

• Transport Minister launches 'Go Electric' Campaign.

About the Campaign:

• The aim of the campaign is to spread awareness on the benefits of e-mobility and EV Charging Infrastructure as well as electric cooking in India.

• The idea behind this initiative is to encourage the use of electric vehicles rather than those running on petrol and diesel.

• The campaign is aimed at creating awareness at PAN-India level and is expected to boost the confidence of Electric Vehicle manufacturers.

• The "Go Electric" campaign is an important initiative as it would be an important step towards a cleaner and greener future and help in reducing the import dependence of our country in the coming years.

• Electric fuel is a major alternative to fossil fuels which have an import bill of Rs 8 lakh crores.

• When compared to conventional fuels the electric fuel has low cost, reduced emissions and it is also indigenous.

Schemes/Programmes/initiatives

17. HathkarghaSamvardhanSahayata (HSS) Yojana

» Prelims: Hathkargha Samvardhan Sahayata (HSS) Yojana

» Mains: Governmental measures to promote handloom industry

• The government launched the HathkarghaSamvardhanSahayata (HSS) Yojana for the welfare of handloom weavers. Launched in 2015-16, the scheme was renamed HathkarghaSamvardhanSahayataYojana in December 2016.

• The scheme was introduced to facilitate technology up-gradation in the handloom sector by providing 90% subsidy for the purchase of looms and accessories by the weavers.

• Scheme objectives:

    * To facilitate the up-gradation of technology in loom units.

    * To encourage the development of capabilities to create employment opportunities in emerging technological areas.

• The scheme is under the Ministry of Textiles.

• The technology upgrade is aimed at improving the quality of the fabric and enhance productivity of the handloom weavers.

Schemes/Programmes/initiatives

18. Kalam Program for Intellectual Property Literacy and Awareness Campaign (KAPILA)

» Prelims: KAPILA Scheme

• The government has launched a campaign namely KAPILA for Intellectual Property Literacy and creating patent awareness.

• Under this campaign, students pursuing education in higher educational institutions will get information about the correct system of the application process for patenting their invention and they will be aware of their rights.

• The program will facilitate the colleges and institutions to encourage more and more students to file patents.

Schemes/Programmes/initiatives

19. MeriSaheli Initiative

» Prelims: Meri Saheli initiative

Context:

• Indian Railways has launched 'MeriSaheli' initiative for focused action on security of women with an objective to provide safety and security to lady passengers travelling by trains.

Background

• The 'MeriSaheli' initiative was started by the Railway Protection Force (RPF) as a pilot project in the South Eastern Railway in 2020 and after getting positive response from women passengers, it was extended to all zones.

Details

• Under the initiative, a team of lady officer and staff have been formed. The team will visit all of the passenger coaches including ladies coaches to identify women passengers.

• Details of their journey including coach number & seat number will be noted down by the team, especially if a lady is travelling alone in the train.

• The passengers will be briefed about RPF Security Helpline No. 182, GRP Security Helpline No. 1512 and other precautions, for example, not to take food from strangers, buying food from IRCTC authorized stalls only & taking care of luggage.

• The team will also advise them to feel free to contact the train escort party and dial 182 in case of any emergency.

• The details of the passengers will be conveyed to en-route Divisions & Zones to meet the passengers at their convenience till they reach their final destination.

- At the end of the journey, a feedback will be collected from the lady passengers regarding their journey experience and safety measures taken.

- Dedicated teams of lady RPF personnel have been formed across all zonal railways for its implementation.

Schemes/Programmes/Initiatives

20. E-Daakhil Portal

» Prelims: E-Daakhil portal

Context:

- E-Daakhil portal for consumer grievance redressal is operational in 15 States/UTs.

What is E-Daakhil Portal?

- It is a portal for e-filing of consumer complaints with the National Consumer Dispute Redressal Commission (NCDRC) and other consumer commissions.

- It was launched by the NCDRC in September 2020 with Delhi being the first state to implement it.

- The fees for filing the complaint can also be paid online through the e-Daakhil portal.

- The e-Daakhil portal empowers the consumer and their advocates to file the consumer complaints along with payment of requisite fees online from anywhere for the redressal of their complaints.

- It also facilitates the consumer commissions to scrutinize the complaints online to accept, reject or forward the complaint to the concerned commission for further processing.

- To facilitate rural consumers for e-filing, it has been decided to integrate the Common Service Centres (CSC) with the e-daakhil portal.

  * As many consumers at Gram Panchayat level may either not have access to electronic modes of communication or are unable to use the tools, they may avail the services of CSCs in filing their complaints in the Consumer Commission.

Reports/Index

21. National Coal Index

» Prelims: National Coal Index

» Mains: Coal mining sector in India: Challenges and potential

Context:

- The Ministry of Coal has started the commercial auction of coal mines on revenue share basis.

- The National Coal Index (NCI) was conceptualised in order to arrive at the revenue share based on market prices of coal.

What is the NCI?

- The NCI is a price index which reflects the change of price level of coal on a particular month relative to the fixed base year.

- The base year for the NCI is FY 2017-18.

- Prices of coal from all the sales channels coal, including import, are taken into account for compiling the NCI.

- The amount of revenue share per tonne of coal produced from auctioned blocks would be arrived at using the NCI by means of defined formula.

- NCI was rolled out in 2020 and the same is placed on the website of the Ministry of Coal.

- NCI is composed of a set of five sub-indices: three for Non Coking Coal and two for Coking Coal.

  * The three sub-indices for Non Coking Coal are combined to arrive at the Index for Non Coking Coal and the two sub-indices for Coking Coal are combined to arrive at the Index for Coking Coal.

  * Thus, indices are separate for Non-coking and Coking Coal.

- As per the grade of coal pertaining to a mine, the appropriate sub-index is used to arrive at the revenue share.

Miscellaneous

22. Being petroleum-independent

» Prelims: NEMMP, FAME India scheme

» Mains: Measures being taken to reduce energy import dependence of India

Context:

- Speaking on the increase in petrol and diesel prices, Prime Minister had emphasized the need to reduce India's energy import dependence and the need to adopt cleaner sources of energy.

Measures taken to reduce energy import dependence:

- Various governments have undertaken several initiatives to increase the energy security of India.

Fuel efficiency standards:

- The formulation of fuel efficiency standards for passenger vehicles was one of the earliest measures in this direction. It aimed to reduce fuel consumption by the vehicles while also ensuring lesser pollution.

- Heavy-duty vehicles, which consume nearly 60% of the diesel used in the country, are also now subject to fuel efficiency standards.

National Electric Mobility Mission Plan:

- The National Electric Mobility Mission Plan (NEMMP) aims to promote sales of electric and hybrid vehicles in India. NEMMP aims to make hybrid and electric vehicles the first choice for the purchasers so that these vehicles can replace conventional vehicles and thus reduce liquid fuel consumption in the country from the automobile sector.

- National Electric Mobility Mission employs a multi-stakeholder approach through demand-side incentives and supply-side incentives. It also aims to promote R&D in technology including battery technology, power electronics, motors, and battery management system.

FAME scheme:

- Under NEMMP 2020, Government launched the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) scheme to promote the manufacturing of electric and hybrid vehicle technology. The Faster Adoption and Manufacturing of Electric Vehicles (FAME-II) scheme now focuses largely on electric vehicles.

Alternate fuels:

- The share of bioethanol in petrol has been raised to nearly 8% by volume under the 2018 National Policy on Biofuels.

- The government has been encouraging multiple fuels in the transport sector including natural gas. The impetus to use Biogas in modified engines could help further decrease import dependency.

Other measures:

- The government has also provided several additional fiscal and non-fiscal incentives to encourage a transition to electric vehicles.

Significance of reducing import dependency:

The government measures aimed at reducing import dependency can give rise to the following benefits:

- Consumers will save money due to more fuel-efficient ICE vehicles. Consumers who switch to electric vehicles will save even more as these consume less energy, and electricity is cheaper compared to petrol and diesel.

- The reduced import of fossil fuels will help India address its current account deficit in international trade.

- It will help India achieve energy security by insulating India from the volatile fossil fuel market.

- The decreasing use of fossil fuels in the transportation sector will also help reduce the emissions of Green House Gases and help meet India's ambitious INDCs as part of the Paris climate deal.

- The measures such as bio-fuel adoption, FAME scheme would also promote economic growth.

Lacunae in efforts:

- While all the above government initiatives are well-intended actions, they fall short as discussed below.

  * India's 2022 fuel efficiency standards for passenger cars are nearly 20% less stringent than the European Union's standards.

  * The NEMMP primarily focused on hybrid electric vehicles, and most of the incentives under the NEMMP went towards subsidising mild hybrids instead of electric vehicles. This has failed to incentivize global manufacturers from deploying their electric passenger cars in the Indian market.

  * The target set under the 2018 National Policy on Biofuels would most likely be missed.

Way forward:

- There are many things that the government can and should do to reduce dependence on petroleum.

Zero-emissions vehicle (ZEV) programme:

- The government should formulate a zero-emissions vehicle (ZEV) programme that would require all vehicle manufacturers to start producing electric vehicles across all market segments.

- The zero-emissions vehicle (ZEV) programme is already in effect in China, certain States in the U.S., British Columbia in Canada, and South Korea.

- At present, the electric mobility initiative in India is driven largely by new entrants in the two- and three-wheeler space. Market leaders have adopted a wait-and-watch attitude. The ZEV programme would make sure that they too enter the electric mobility sector.

Strengthen fuel efficiency regulation:

- The government should strengthen fuel efficiency requirements for new passenger cars and heavy-duty commercial vehicles.

- The government should also introduce fuel efficiency standards for two-wheelers.

  * Currently, two-wheelers consume nearly two-third of the petrol used in India and are not subject to any fuel efficiency standards. A recent analysis by the International Council on Clean Transportation (ICCT) suggests that a standard requiring a 50% reduction in fuel consumption by new two-wheelers by 2030 will not only lead to internal combustion engine (ICE) efficiency improvements, but also ensure that nearly 60% of all new two-wheelers sold in India are electric driven.

- Adopting stringent fuel efficiency standards and

a ZEV programme by 2024 can result in India's petroleum demand peaking by 2030, in spite of tremendous projected growth in economic and vehicular activity.

Extending existing schemes:

- The FAME scheme focuses on two- and three-wheelers, taxis, and buses. It should be extended not only to all passenger cars and commercial vehicles but also to agricultural tractors.

Fiscal incentives:

- Fiscal incentives could promote faster adoption of electric vehicles.

- The GST rates for all passenger vehicles could be made proportional to their fuel efficiency level, instead of the present system that relies on vehicle length and engine size. This would incentivize buying of electric vehicles.

Charging infrastructure:

- The increasing number of electric vehicles will require a proportionate increase in charging infrastructure.

- There is a need to step up investments in charging infrastructure as an essential complementary policy.

Conclusion:

- As the economy recovers from the pandemic, the demand for petroleum products will rise, as will prices.

- Apart from expanding and diversifying the energy supply, India must also work towards managing the demand for petroleum products to help reduce its energy import dependence.

Miscellaneous

23. 'Domestic businesses need more govt. support'

Context:

- Minister of External Affairs stressed the need for strong policies to foster and promote manufacturing in India and called for more governmental support for domestic businesses.

Details:

- He stressed that it is the business of the government to support domestic businesses.

- He pointed out that there existed a huge potential for manufacturing which had not been fostered by the right policies yet.

- It was emphasised that lot more people-centric policies are needed at home.

Fifth Asia Economic Dialogue 2021:

- Asia Economic Dialogue is a unique dialogue based in India where Asia gets together to talk trade, finance, and business opportunities.

- It is the flagship geo-economics conference of the MEA.

- The Asia Economic Dialogue (AED) is jointly being convened by the Ministry of External Affairs (MEA) and Pune International Centre (PIC).

- The theme of the fifth edition of the AED, and the second one organised by PIC is "Post Covid-19 Global Trade and Finance Dynamics".

- The AED 2021 virtual conference will see participation from Foreign Ministers of Asian countries, senior government officials, officials from multilateral organisations and industry leaders

24. Union Budget 2021-22

The Union Budget is also known as the Annual Financial Statement. Article 112 of the Constitution of India lays down that it is a statement of the estimated expenditure and receipts of the Government for a particular year.

- The Budget keeps the account of the finances of the government for the fiscal year (from 1st April to 31st March).

- The Budget is presented on 1st February (until 2016, it was presented on the last working day of February) so that it can materialise before the commencement of the new financial year which starts on 1st April.

- In 2017, a 92-year-old tradition was broken when the railway budget was merged with the Union Budget and presented together.

- The Budget has to be passed by the Lok Sabha before it can come into effect.

- The Union Budget is divided into Revenue Budget and Capital Budget.

- In the Union Budget, the disbursements and receipts of the government comprise the various types of government funds in India namely, the Consolidated Fund of India, the Contingency Fund and the Public Account.

Paperless Budget

- In the wake of the ongoing pandemic, Union Budget 2021 was presented paperless.

- This was the first time since independence that the Budget papers were not printed and was presented paperless.

- All the members of the parliament received soft copies of the Budget and Economic Survey

- The Finance Ministry earlier unveiled a mobile

application where all the budget documents will be available.

Application

- For the paperless Budget, the finance ministry rolled out a dedicated mobile application — Union Budget Mobile App for users to access budget related information and documents.

- The application will be available for both the iOS and Android platforms.

- Developed by the National Informatics Centre (NIC) under the guidance of the Department of Economic Affairs (DEA), the app is available in Hindi and English.

Important Highlights of Budget 2021

The overall view of the Union Budget 2021 – 22 are given below.

- Focus on Atmanirbhar Bharat
  * Hike in customs duty

- Employment generation has been a recurring theme in the budget
  * Proposed higher expenditure (capex), for example, National Infrastructure Pipeline (NIP)
  * Creation of textile parks
  * Enhancement of emergency credit line to MSMEs
  * Disinvestment – the private sector is expected to revive these units
  * Launch of a new portal that will collect relevant information on gig, building and construction workers among others. This is expected to help in the formulation of schemes for the migrant workers

- Higher capital expenditure and infrastructure
  * DFI
  * PPP
  * Asset monetization
  * Disinvestment, etc

- Support for the banking sector
  * Recapitalization
  * Bad Bank

- Attracting foreign capital
  * FDI in the insurance sector
  * Foreign investors given tax exemption to shift to IFSC

The budget proposals are on six pillars:

- 1. Health and well-being
- 2. Physical & Financial Capital, and Infrastructure
- 3. Inclusive development for Aspirational India
- 4. Reinvigorating Human Capital
- 5. Innovation and R&D
- 6. Minimum Government and Maximum Governance

Health and well-being

- Healthcare expenditure has been more than doubled for the next fiscal.

- The allocation has been increased form ₹ 94452 Cr to ₹ 2.23 lakh Cr (137% increase).

- PM Atmanirbhar Swasth Bharat Yojana:
  * Centrally sponsored scheme with an outlay of ₹ 64180 Cr has been announced.
  * This will be implemented over the next six years.
  * It will focus on three areas – preventive, curative and well-being.
  * Over 17000 rural and 11000 urban health and wellness centres will be supported; integrated public health laboratories will be set up in all the districts; 3382 block public health units will be established in 11 states; critical care hospital blocks will be created in 602 districts and 12 central institutions.
  * This will be implemented in addition to the existing National Health Mission (NHM).

- Mission Poshan 2.0
  * Supplementary Nutrition Programme and Poshan Abhiyan merged.
  * It has been done to strengthen nutritional content, delivery, outreach and outcome.
  * Strategy to improve nutritional outcomes across 112 aspirational districts.

- Water supply
  * Jal Jeevan Mission (Urban) will be launched.
  * Aims to provide water supply to all the 4378 Urban Local Bodies and 500 AMRUT cities.
  * Will be implemented over 5 years with an outlay of ₹ 287000 Cr.

- Swachh Bharat, Swasth Bharat
  * Urban Swachh Bharat Mission 2.0 will be launched for a period of 5 years from 2021-2026.
  * It will be focused on complete faecal sludge management and wastewater treatment, source segregation of garbage, reduction in single-use plastic, reduction in air pollution by effectively managing waste from construction-and-demolition activities and bioremediation of all legacy dumpsites.

- Scrappage policy
    * Voluntary scrappage policy has been announced.
    * Vehicles older than 15 years and 20 years in case of commercial and personal vehicles respectively will be covered under this.
    * It will promote the usage of fuel-efficient, environment-friendly vehicles.
- Budget proposes spending ₹ 35000 Cr for covid vaccines in FY22.
- Rollout of pneumococcal vaccines for pan India usage (available only in 5 states now) has been announced (it will avoid deaths of 50000 children). It is a 'Made in India' product.

Physical and Financial Capital and Infrastructure

- PLI (Production Linked Incentives)
    * Govt has already announced this for 13 sectors.
    * Allocated ₹ 1.97 lakh Cr for five years from FY22.
- Textiles
    * Mega Investment Textile Parks (MITRA) will be launched.
    * This is in addition to the PLI scheme.
    * 7 textile parks will be established in 3 years.
    * This will create a plug and play infrastructure.
    * This is a low skill manufacturing sector.
    * India has a substantial export-oriented textile base but has been losing out to Vietnam and Bangladesh in recent times.
- Infrastructure
    * National Infrastructure Pipeline (NIP):
        » Govt has expanded the NIP to cover more projects to shore up the economic recovery.
        » The total value of projects proposed under NIP is ₹ 111 lakh Cr ($1.5 tn).
        » NIP was launched with 6835 projects and has been expanded to cover 7400 projects.
        » So far around 217 projects worth ₹ 1.1 lakh Cr have been completed.
        » In order to increase the spending, the govt proposed three steps:-
            • Creating an institutional structure
            • Govt has proposed setting up a development finance institution – National Bank for Financing Infrastructure and Development (NBFID).
            • It will be set up with a capital base of ₹

20000 Cr and will have a lending target of ₹ 5 lakh Cr in three years.
        » Big thrust to monetization of assets.
        » Enhancing the share of capex under centre and state budget.
    * Asset Monetization:
        » A National Monetization Pipeline (NMP) of potential brownfield infrastructure assets will be launched.
        » In addition to this, asset monetization dashboard will be created for tracking the progress and to provide visibility to investors.
        » NHAI and PGCIL to set up infrastructure investment trust to attract global funds.
        » Five operational roads with an estimated enterprise value of ₹ 5000 Cr are being transferred to NHAI InvIT.
    * A sharp increase in capital expenditure – ₹ 5.54 lakh crore for the FY22 (34.5% more than the budget estimate of FY21).
    * To provide more than ₹ 2 lakh crore for states and autonomous bodies for their capital expenditure.
    * Railways:
        » Indian Railways has prepared a National Rail Plan 2030.
        » To reduce logistics costs:
            • Dedicated Freight corridor – DFC (Western and Eastern) will be commissioned by 2022.
            • Future DFC will also be undertaken.
            • Electrification of broad-gauge routes is expected to reach 46000 Route KiloMeter (RKM).
    * Urban Infrastructure:
        » Govt to launch PPP models to promote private bus operators to operate and maintain 20000 buses in urban areas.
        » Two new technologies – MetroLite and MetroNeo will be deployed to provide rail metro services at a much lower cost.
    * Power infrastructure:
        » Govt will be putting in place a framework to provide choice for the consumers to choose from more than one electricity distribution company.
        » Govt to launch a revamped result-based power distribution sector scheme with an outlay of ₹ 305984 Cr over 5 years.
        » Hydro energy Mission 2021-22 for

generating hydrogen from green power sources.

* Ports, Shipping and Waterways:

  » 7 ports will be offered to the private sector under PPP.

  » These ports will be worth more than ₹ 2000 Cr.

  » India has implemented the Recycling of Ships Act 2019 and has acceded to Hong Kong International Convention. Read more on this convention in the article International Maritime Organization.

* Petroleum and Natural Gas:

  » The number of beneficiaries under the UJJWALA Scheme has been increased from 8 Cr to 9 Cr (increased by 1 Cr).

  » Will add 100 more districts under City Gas Distribution Network in the next 3 years.

* Financial capital:

  » Proposed consolidation of SEBI Act, Depositories Act, Securities Contraction Act and Govt securities Act into a single rationalized Securities Markets Code.

    • This will help integrate the capital markets and have rules streamlining across all the securities. In fact, it will also help in accelerating regulations for listing Indian companies abroad.

    • Promote ease of doing business – single statutory provision to follow.

    • RBI will have to give up its powers of regulating the G-securities.

    • Currently, there is a turf war between SEBI and RBI as to who should regulate different securities.

    • The regulation of equity cash and derivatives fell under SEBI, several other financial instruments classified as securities were regulated by RBI.

  » An institution shall be set up which would be purchasing investment-grade debt securities both in normal and distressed times to help the development of the bond market.

  » Gold exchanges were announced in the budget of 2018-19. In this regard SEBI was notified as the regulator and Warehousing Development and Regulatory Authority will be strengthened.

  » FDI in the insurance sector has been increased from 49% to 74%.

* Banking:

  » Govt has announced the recapitalization of ₹ 20000 Cr for the state-run banks (in the current fiscal initially govt had refrained from announcing any recapitalization but later in September it announced ₹ 20000 Cr; in 2019-20 it has proposed to infuse ₹ 70000 Cr).

  » Deposit Insurance

    • Deposit insurance cover has been increased from ₹ 1 lakh to ₹ 5 lakh per individual

    • Govt to allow withdrawal of deposits to the extent of deposit insurance cover in the troubled banks

    • The problem with the increased coverage is that it will only come into play when the bank license is cancelled and it is liquidated and not before that

  » An asset reconstruction company and asset management company

    • It is set to take over the bad loans of PSBs and manage the recoveries

    • A similar structure for stressed assets resolution was earlier proposed under Sashakt Scheme in 2018

    • Banks will be putting the initial capital (implying that the govt will not have any direct stake in the bank)

    • Bad bank would be transferring the NPAs to an entity (Asset Management or Asset Reconstruction Company) and dispose of the assets to Alternate Investment Funds (AIF)

    • Bad loans of Indian lenders have increased in several years. The gross bad loans in the banks could increase to 13.5% by Sep 30th (in worst case scenario, 14.8% – highest in two decades)

* Disinvestment

  » Objectives:

    • Minimizing the presence of CPSEs and creating new investment space for the private sector.

    • Post divestment, growth of these will be through the infusion of private capital, technology and best management practices. This will contribute to the economic growth and creation of new jobs.

    • The proceeds from the disinvestments would be to finance social and developmental programmes of the govt.

» Policy features:

- Will cover CPSEs, PSBs and insurance companies.

- Sectors will be classified into strategic and non-strategic. The strategic sectors are:

  * Atomic energy, space and defence

  * Transport and telecommunications

  * Power, petroleum, coal and other minerals

  * Banking, insurance and financial services

- In the case of strategic sectors, the govt would be having a minimum presence. Remaining CPSEs will be privatized, merged, subsidized with other CPSEs or closed.

- In non-strategic sectors, these CPSEs will be privatized or shall be closed.

» The govt has set a disinvestment target of ₹ 1.75 lakh Cr (against ₹ 2.1 lakh Cr in the last fiscal, against this the govt has raised ₹ 19499 Cr so far).

» Some of the disinvestments planned in 2020 such as IPO of LIC will be concluded in 2021.

» In addition to this, other sales that will be completed this year are Bharat Petroleum Corp, Shipping Corporation of India, Pawan Hans Ltd, BEML, etc.

» Apart from IDBI Bank Ltd (sold a majority stake to LIC in 2019), disinvestment of two other state-run lenders/banks and one general insurance company has been proposed.

- Govt expects to raise ₹ 1 lakh Cr from the sale of two PSBs, it was ₹ 32000 Cr in the previous fiscal.

» In the case of divestment, the govt has come out with a new policy to speed up privatization.

» To fast track the divestment, NITI Aayog has been asked to identify the CPSEs that would be taken up for strategic divestment.

» In addition to this, govt would be working out an incentive package to drive the disinvestment by states.

» Govt has also proposed to set up a special purpose vehicle to sell off the land assets owned by various departments and ministries.

* One person company (OPC)

  » It means a company formed with only one (single) person as a member, unlike the traditional manner of having at least two members to form a company.

  » Non- Resident Indians (NRIs) will also be allowed to incorporate OPCs in India.

* Changes introduced

  » According to the Companies Act, 2013, if the paid-up share capital limit of the OPC exceeds the prescribed limit (currently ₹50 lakh) or turnover exceeds ₹2 crore in three years preceding consecutive years, then the company shall lose its status as an OPC and shall be required to compulsorily convert to either to a private company or public company.

  » The budget has changed this requirement also as OPCs will be allowed to grow without any restriction on paid up capital and turnover, allowing conversion into any other type of company at any time.

* Significance

  » The move will benefit start-ups and innovators

  » It will also help NRIs with entrepreneurial potential to enter the Indian market.

Inclusive Development for Aspirational India

- Agriculture

  * SWAMITVA Scheme:

    » So far about 1.8 lakh property owners from 1241 villages have been issued with property cards.

    » Has been extended to cover all states/UTs.

  * Farm loans allocation has been increased to ₹ 16.5 tn from ₹ 15 tn in the last fiscal.

  * Cotton:

    » It has imposed a 10% import tax on the import of this fibre to help farmers.

    » Govt has also raised the levy on raw silk and silk yarn from 10% to 15%.

    » India is the biggest cotton grower. India's cotton output is expected to climb to 37.12 mn bales of 170 kgs each in 2020-21 from 35.49 mn bales a year earlier.

    » The imports are expected to fall to 1.4 mn this year from 1.55 mn bales in 2019-20.

» There was no import duty on cotton imports till now.

* Operation Green Scheme has been expanded to cover 22 perishable products

  » This has been done to boost value addition and exports.

* 1000 more mandis will be integrated under e-NAM.

* The Agriculture Infrastructure Development cess:

  » Govt has proposed cess on 25 products and basic customs duty has been reduced on these items so that the consumers do not end up paying a higher price. This has been done to improve farm infrastructure.

  » This may not change the prices of these products but makes a difference in terms of who will receive this amount.

  » Revenue collected from BCD goes to the Consolidated Fund of India, which is then divided between centre and states.

  » In the case of cess, the revenue goes to the central govt.

  » Govt has imposed this cess on petrol, diesel, gold. AIDC of ₹ 2.5 per litre has been imposed on petrol and ₹ 4 on diesel.

* Seaweed farming

  » It is an emerging sector with potential to transform the lives of coastal communities. It will provide large scale employment and additional incomes.

  » Many seaweeds are used to produce derivative chemicals that can be used for various industrial, pharmaceutical or food products.

  » To promote seaweed cultivation, a Multipurpose Seaweed Park is to be established in Tamil Nadu

* Fishing

  » To start with, five major fishing harbours — Kochi, Chennai, Visakhapatnam, Paradip and Petuaghat — will be developed as hubs of economic activity

  » Govt intends to develop inland fishing harbours and fish-landing centres along the banks of rivers and waterways

  » Overall, the Fisheries Department saw an increase in budget allocations from ₹825 crore in 2020-21 to ₹1,220 crore in 2021-22.

» The Blue Revolution centrally sponsored schemes saw their budget allocations double, with the new Pradhan Mantri Matsya Samada Yojana alone getting a ₹1,000 crore allocation.

• Migrant workers and labour

  * One Nation One Ration Card:

    » Is under implementation in 32 states and UTs.

    » It has reached 69 Cr beneficiaries i.e. 86% of the beneficiaries covered.

    » Remaining 4 states/UTs will be covered in the next few months.

  * Launch of a new portal that will collect relevant information on gig, building and construction workers among others. This is expected to help in formulating schemes for the migrant workers.

  * The 4 labour codes will be implemented. With this, for the first time in the world, gig and platform workers will be provided with social security benefits. All categories of workers will be provided with minimum wages.

• Financial Inclusion

  * To facilitate the credit flow under Stand Up India, the margin requirements have been reduced from 25% to 15%.

Reinvigorating Human Capital

• 100 new Sainik Schools will be opened in partnership with NGOs/private schools/states.

• An umbrella body called the Higher Education Commission of India to be set up.

  * It will have 4 separate vehicles – Standard Setting, Accreditation, Regulation and Funding.

• Govt has set up a target of setting up 750 Ekalavya model residential schools.

• In 2016, govt had launched the National Apprenticeship Promotion Scheme. The Government is looking at amending the Apprenticeship Act with a view to further enhance apprenticeship opportunities for our youth.

Innovation and R&D

• National Research Foundation with an outlay of ₹ 50000 Cr over 5 years has been proposed. It will ensure that the research ecosystem is strengthened.

• ₹ 1500 Cr allocated for a scheme to promote digital transactions.

- National Language Translation Mission (NTLM)
    * This will enable the wealth of governance-and-policy related knowledge on the Internet being made available in major Indian languages.
- Space
    * As part of the Gaganyaan mission activities, four Indian astronauts are being trained on Generic Space Flight aspects, in Russia. The first unmanned launch is slated for December 2021.
- Oceans
    * To better understand ocean and its resources govt will launch a Deep Ocean Mission with a budget outlay of more than `4,000 crores, over five years.
    * This Mission will cover deep ocean survey exploration and projects for the conservation of deep sea bio-diversity

Minimum Government, Maximum Governance

- To promote ease of doing business, the govt has proposed to set up a Conciliation Mechanism and mandate its usage for quick resolution of contractual disputes.

Taxation in Budget 2021

- Senior citizens over 75 years of age with only pension and interest income are exempted from filing income tax returns.
- Presently, the tax assessments can be reopened up to 6 years and in serious tax frauds up to 10 years. This has been reduced to 3 years and in the case of serious tax frauds, up to 10 years but with approval from the Principal Chief Commissioner.
- International Financial Services Centre (IFSC)
    * Govt has provided tax incentives for foreign funds to shift their assets to IFSC.
    * Govt has offered complete tax exemption on the transfer of their assets from other countries.
    * GIFT city has zero tax for 10 years.
    * This will help govt to develop IFSC as India's fund management hub.
    * Those which are approved by BSE and NSE need no separate registration for trading in GIFT City.
- Dispute Resolution Committee
    * To reduce litigation of small taxpayers
    * It will be faceless
    * Taxable income up to ₹ 50 lakh and disputed income of up to ₹ 10 lakh will be eligible
- Income Tax Appellate Tribunal

- * It will be made faceless
    * All communications between the tribunal and the appellant shall be electronic
    * In case of personal hearing, it shall be done through video-conferencing
- Start-ups
    * Eligibility for claiming tax holiday for start-ups has been extended by one more year
    * Capital gains tax exemption for investment in start-ups has been extended by one more year
- Import duty on gold
    * Govt has reduced the import duty on gold and silver to 7.5% from 12.5%
    * It was increased to 12.5% in the July budget 2019
    * Govt has also imposed AIDF of 2.5%, taking the total to 10%
    * Demand for gold has come down by 35% in 2020, making it the lowest in the last 25 years
        » Prices have increased significantly
        » Govt had increased import duty to 12.5%
    * The downward revision of import duty may also have a positive impact by bringing down gold smuggling
- Reduced import duty on steel
    * Govt has reduced the import duties on types of steel products to 7.5%
    * 70% of the steel imports done by India is from those countries with which India has a free trade agreement and hence attract zero customs duty

Fiscal Numbers

- Expenditure
    * The expenditure is pegged at ₹ 34.83 lakh Cr for FY22 against a revised expenditure of ₹ 34.5 lakh Cr. It represents an increase of 13.4% over budgeted estimates.
        » Revenue expenditure is budgeted at ₹ 29.29 lakh Cr in FY22
        » Capex allocation – ₹ 5.54 lakh Cr
    * Govt has budgeted higher capex to aid economic recovery but overall spending as a percentage of GDP will fall in FY22.
    * As a percentage of GDP, it will fall to 15.6% for the current fiscal against 17.7% in the previous fiscal.

- Deficits
  * Fiscal Deficit stood at 9.5% for FY21 and is pegged to be reduced to 6.8% in FY22.
  * With a steady decline over a period, the fiscal deficit target of 4.5% of GDP will be met by 2025-26 (15th FC has recommended reducing the FD to 4% by FY26).
    » The FRBM had set a target of 3% of GDP by FY21 (as per the amendment in 2018).
  * Revenue deficit has been revised for FY21 to 7.5% and for FY22 to 5.1%.
  * The FD for the current fiscal will be the highest since liberalization reforms began in 1991.
  * Govt had budgeted an FD target of 3.5% for the FY21 but the pandemic inflicted twin shocks to the balance sheet.
    » Contraction in the nominal GDP, reducing the tax revenues
    » Greater spending
    » As a result of the two, the FD shot over 9.5%, for the FY22 the budgeted FD has been set at 6.8% (highest since 1994).
    » The fiscal deficit in the current fiscal is countercyclical, led by the need for the government to increase spending. Against this, post the global financial crisis the FD was driven by drop in tax revenues, disinvestments and rise in revenue expenditure.
  * As per the 15th FC, states have been provided with a normal ceiling of 4% GSDP for FY22.
    » A portion of this will be earmarked for the incremental capital expenditure.
    » An additional ceiling of 0.5% GSDP will also be provided subject to certain conditions.
    » The states will be expected to reach the FD of 3% GSDP by 2023-24 as recommended by the 15th FC.
  * The loans from NSSF to Food Corporation of India for food subsidy will be discontinued.

25. Can a 'bad bank' solve the growing NPA crisis?

Context:

- Finance Minister Nirmala Sitharaman in her budget speech has stated that the Centre proposes to set up an asset reconstruction company to acquire bad loans from banks, thus reviving the idea of a 'bad bank'.

Background:

The issue of non-performing assets in India:

- Bad loans have been a perennial problem in the Indian banking sector.
  * According to the latest figures released by the RBI, the total size of bad loans in the balance sheets of Indian banks at a gross level was around ₹9 lakh crore as of March 31, 2020.
- Notably, though the gross bad loans have come down from over ₹10 lakh crore two years ago, it is the result of large write-offs rather than due to improved recovery of bad loans or a slowdown in the accumulation of fresh bad loans.
  * The size of bad loan write-offs by banks has steadily increased. The size of fresh bad loans accumulated by banks has also increased.
- The COVID-19 pandemic-triggered lockdown and the moratorium subsequently extended to borrowers by the Reserve Bank of India (RBI) have only worsened the crisis.
  * The proportion of banks' gross non-performing assets is expected to rise sharply from 7.5% of gross advances in September 2020 to at least 13.5% of gross advances in September 2021.
- With banks expected to report high proportion of bad loans, the idea of a 'bad bank' to deal with bad loans has gained particular significance.

Bad bank:

- A bad bank is a financial entity set up to buy Non-Performing Assets (NPAs), or bad loans, from banks. The bad bank helps take bad loans off the balance sheets of stressed banks.
- The bad bank may further try to restructure and sell the NPA to investors who might be interested in purchasing it.
- The idea of a bad bank has been tried out in countries such as the United States, Germany, Japan and others in the past.
  * The troubled asset relief program, also known as TARP, implemented by the U.S. Treasury in the aftermath of the 2008 financial crisis, was modelled around the idea of a bad bank. Under the program, the U.S. Treasury bought troubled assets from U.S. banks and later resold them when market conditions improved.

Arguments in favour of a bad bank:

Ease the pressure on banks:

- A bad bank helps isolate illiquid and high risk assets held by a bank. This helps ease the burden on banks, holding a large pile of stressed assets.
- The better balance sheets would be able to attract more investments in such entities at lower prices. It can help recapitalise public sector banks.

Revive credit flow in the economy:

- By taking bad loans off the books of troubled banks, a bad bank can help free capital that is locked in by banks as provisions against the existing bad loans. The freeing of the banks from these bad loans will give banks the freedom to use the freed-up capital to extend more loans to their customers.

- A new bad bank set up by the government can improve banks' capital buffers by freeing up capital. It could help banks feel more confident to start lending again. This could provide an impetus for higher credit disbursal in the economy.

Consolidated effort:

- A supposed advantage in setting up a bad bank, it is argued, is that it can help consolidate all bad loans of banks under a single exclusive entity.

- This would allow this single entity to deal with the issue more effectively as it avoids the need to work with multiple agencies with multiple levels of expertise and abilities.

Concerns:

Idea of a government backed bad bank:

- A bad bank backed by the government will merely shift bad assets from the hands of public sector banks, which are owned by the government, to the hands of a bad bank, which is again owned by the government.

- The ultimate impact will be on the taxpayers who will once again have to foot the bill for bailing out troubled banks.

Efficacy of a government backed bad bank:

- Many analysts believe that unlike a bad bank set up by the private sector, a bad bank backed by the government is likely to pay too much for stressed assets. While this may be good news for public sector banks, it does not augur well for the efficiency of the resolution process.

- The mere transfer of assets from one arm of the government to another will not lead to a successful resolution of the bad debts.

Root cause remains unaddressed:

- A key reason behind the bad loan crisis in public sector banks is the fact that unlike private banks, which are owned by individuals who have strong financial incentives to manage them well, public sector banks are managed by bureaucrats who may often not have the same commitment to ensuring these lenders' profitability.

- The bailing out banks through a bad bank does not really address the root problem of the bad loan crisis.

Risk of moral hazard:

- The idea of a bad bank endangers a huge risk of moral hazard.

- Banks that are bailed out by a bad bank are likely to lend more recklessly in view of the safety net provided by a bad bank. This could further exacerbate the bad loan crisis.

26. Urban visions

- Budget 2021 has recognised a core component of urbanisation with a clear focus on the expansion of Metro Rail and bus services through central funding.

Transportation and economic development:

- Comfortable, safe and affordable commuting has well-recognised multiplier effects for the economy.

- It has benefits, more generally for public health.

  * However, COVID-19 has had the perverse effect of driving people away to the safety of the personal car and two-wheeler bubbles.

- When the pandemic is under control, more people will return to clean and green mass mobility.

Provisions in the Union Budget 2021-22 to improve public transport:

- Finance Minister's announcement of Central funding for the Kochi, Chennai and Bengaluru Metro projects gives these big cities greater certainty that they can meet targets.

- The impact of the proposed ₹18,000 crore plan to augment public bus transport using a PPP model that will enable private sector players to finance, acquire, operate and maintain over 20,000 buses is, however, uncertain.

- As per the NITI Aayog data, India's ratio of buses to population is a low 1.2 per 1,000 people.

  * It is 8.6 in Thailand and 6.5 in South Africa.

  * Nevertheless, states like Karnataka are well ahead of the national average.

- Licensed private urban bus services remain a politically sensitive topic in many States, where State monopolies coexist with unregulated paratransit.

  * It will take a major effort to convince them that a bus renaissance is a good post-pandemic recovery strategy.

  * The amended Motor Vehicles Act has provisions for the Centre to take the lead here.

Challenges:

- Census 2011 showed that the number of Census Towns, which are urban for census purposes but not named urban local bodies, grew tremendously over a decade.

  * They lack access to funding, infrastructure and capacity to meet the needs of large populations even now.

- The challenge of urbanisation goes beyond standalone interventions such as Metro and bus system grants.

  * State governments, which retain effective control over urban development rather than city administrations, have failed to operationalise the umbrella authorities to regulate transport.

- Common mobility cards that would help citizens use bus, train and feeder networks seamlessly were largely in pilot project mode even before the pandemic.

- There is valid criticism that the existing paradigm is one of "exclusionary urbanisation", which makes Metro and bus services expensive for the majority, particularly for those forced to live in the suburbs due to housing costs, and sometimes making the per kilometre cost of using a two-wheeler more attractive

Way forward:

- Enhanced ambition requires the Centre to work with State governments to integrate key areas with its transport vision.

- Affordable inner-city housing, including rental projects, access to civic services and health care, and enhanced sustainability, greenery and walkability are needed.

- All these are covered by Central budgetary schemes for cities. Only integration can bring about inclusive urbanisation.

27. A Budget not for the environment

- The article talks about the allocations towards significant items relating to the environment in the Union Budget 2021-22.

Concerns:

- There has been a steady increase in the levels of pollution, biodiversity loss, decline in forest health and destruction of wetlands.

- Despite this, the budgetary allocations for the Ministry of Environment, Forest and Climate Change (MoEFCC) have consistently fallen as a percentage of total allocations.

- It is argued that the governments have not put in the substantial new financial resources raised through rapid growth into environmental protection.

- Even when there are increased allocations, such as for cleaning up the Ganga, their usage is ridden with such design flaws, inefficiencies and corruption that the environment is no better off than before.

2021 Budget:

- On several significant items relating to the environment, and taking inflation and needs into account, allocations have remained stagnant or fallen.

- It includes the MoEFCC and crucial institutions such as the Wildlife Institute of India and the Indian Council of Forestry Research and Education.

- This follows an earlier recommendation by the Ministry of Finance that the government should disengage with many such institutions.

- One consequence of this is that these institutions are having to raise funds through the private corporate sector.

  * This inevitably compromises their ability to speak up when the private corporate sector indulges in ecologically damaging activities.

Examining the allocations to environment-related sectors:

- There are substantial allocations to sectors that have a positive environmental impact. The 2021 Budget has allocated:

  * ₹3,500 crore for wind and solar energy

  * ₹4,000 crore for a 'Deep Ocean Mission'

  * ₹50,011 crore for urban drinking water

- India's major push for Renewable Energy (RE) has earned it global appreciation.

  * However, there is no intention to phase out fossil fuels; on the contrary, coal mining and thermal power are being promoted under the Aatmanirbhar Bharat package.

  * Large hydropower is being promoted as RE, though its massive ecological and social impacts are well documented.

  * Massive energy parks that generate solar and wind energy take up huge areas of land, displacing people and wildlife.

- Potentially, an allocation of ₹18,000 crore for public transport could have significant benefits for people and the environment if it helps to

reduce private vehicle density in cities.

Challenges:

- Without controlling demand, even a complete shift to RE will be unsustainable.

- There is no focus on incentivising responsible consumption, restraining luxury uses, and redistributing water more equitably, without which no amount of infrastructure will be enough.

Allocations to non-environmental sectors that have a negative impact on the environment:

- The budget proposes 11,000 km more of national highway corridors.

- In the last few years, massive road and dam construction has fragmented fragile ecosystems and disrupted local community life in the Himalaya, Western Ghats, north-east India and elsewhere.

Conclusion:

- India must consider climbing into a green, nature-and-land based livelihoods recovery that could create tens of millions of jobs as also regenerate India's depleted environment.

- There is a dire need to put environmental regeneration and conservation, and self-reliance built on this, at the core of development.

28. The road map for reducing public sector role

Context:

- The new disinvestment policy

Details:

- Finance Minister Nirmala Sitharaman, in her Budget speech for 2021-22, announced a new policy for central public sector enterprises (CPSEs). The policy would serve as a roadmap for disinvestment of government-owned firms across sectors.

Vision:

- In the areas that are strategic, bare minimum CPSEs will be maintained and the rest of the firms will be privatised, merged or subsidiarized with other CPSEs, or closed.

  * The strategic sectors include atomic energy, space and defence, transport and telecommunications, power, petroleum, coal and other minerals, and lastly, banking, insurance and financial services.

- All firms in sectors considered non-strategic would be either privatized or closed.

Proposed process:

- The NITI Aayog would suggest which public sector firms in strategic sectors should be retained, considered for privatisation or merger or 'subsidiarisation' with another public sector firm, or simply closed.

- A core group of secretaries on disinvestment will consider the NITI Aayog's suggestions and forward its views to a ministerial group.

- The ministerial group would include the Finance Minister, Road Transport and Highways Minister and the minister in charge of the administrative ministry of the public sector enterprise concerned.

- After the ministerial group's nod, the Department of Investment and Public Asset Management in the Finance Ministry will move a proposal to the Cabinet Committee on Economic Affairs for an 'in-principle' nod to sell specific CPSEs.

Exclusion:

- Public sector firms and corporations engaged in activities allied to the farm sector will not be privatised.

- Similarly departments with commercial operations like Railways and Posts, firms making appliances for the physically challenged, and those providing support to vulnerable groups through financing of SCs, STs, minorities and backward classes will also not be privatized.

- CPSES "maintaining critical data or having a bearing on national security", security printing and minting companies, will not be privatized.

Objective of privatization:

Impetus to private sector participation and associated benefits:

- The policy's objective is to minimise the public sector's role and create new investment space for the private sector, in the hope that the infusion of private capital, technology and management practices will contribute to growth and new jobs.

Revenue stream for the government:

- The proceeds from the sale of the public firms would help finance various government-run social sector and developmental programmes.

  * The Union Budget has estimated Rs. 1.75 lakh crore as receipts from PSU stake sales in the current year.

Concerns:

Challenges of privatization:

- There have been challenges in previous attempts at privatization.

  * For example the failed attempt to sell 76% of the stake in the loss-ridden national carrier Air India. Also an earlier attempt to sell Air India had got stalled in the face of a political outcry.

Low price realization of PSE shares:

- As compared to the disinvestment target of Rs. 2.10 lakh crore for 2020-21, just about Rs. 20,000 crore has been raised so far.

Impact of the pandemic:

- The more recent attempts at privatization of Air India Maharatna oil PSU Bharat Petroleum Corporation Ltd. (BPCL), Shipping Corporation of India, Container Corporation of India and Pawan Hans were affected by the pandemic. The timelines and investor interest were affected by the pandemic.

- The turmoil in the global economy due to the economic impact of the pandemic could impact the valuations of firms being privatised.

- Privatisation during a recession may dampen economic recovery as investors will end up buying existing capacities instead of embarking on fresh investments.

Piecemeal approach:

- The privatization approach has been piecemeal and has created uncertainty.

29. It's goodbye to fiscal orthodoxy

Context:

- Annual budget of India for the year 2021-22.

Background:

- The Budget for 2021-22 estimates a fiscal deficit of 9.5% of GDP for FY21 and 6.8% for FY22 with a commitment to lower the fiscal deficit to 4.5% of GDP by 2025-26. The Budget has set out a slow fiscal glide path.

- The Finance Minister has proposed introducing an amendment to the FRBM Act to formalise the new targets.

Details:

Economic orthodoxy:

- The current administration's economic policies have mostly been led by economic orthodoxy during the last few years.

  * Mainstream economics refers to the orthodox or neoclassical tradition of economics, in which markets are moved by an invisible hand. The origins of mainstream economics lie in the thinkings of Adam Smith. The current economic orthodoxy is of a free market and unregulated trade.

Mixed approach being employed:

- The huge deviation from the FRBM targets, though necessitated by the unprecedented pandemic, marks a selective departure from market orthodoxy that has marked the current government's economic policy. The policy to increase duties on some imports in order to

protect and foster domestic industry and the introduction of performance-linked incentives for designated sectors goes counter to market economics.

- However, the government has adhered to other elements of market orthodoxy, such as privatisation and an increased role for foreign direct investment (FDI).

Arguments in favour:

Need for fiscal stimulus:

- The pandemic and the consequent lockdowns brought the Indian economy to a standstill. There was loss of jobs, per capita incomes fell, aggregate demand went down and consequently, there was a contraction in the economy.

- To revive the economic growth in India, it is inevitable that the aggregate demand in the economy needs to be raised. One of the methods often employed to increase demand is through a fiscal stimulus.

- Fiscal stimulus refers to increasing government consumption. Effectively this means increasing the rate of growth of public debt.

Higher growth fuelled by fiscal stimulus:

- It is often argued that fiscal stimulus would cause sufficient economic growth to fill that fiscal deficit gap partially or completely. It would help reduce the public debt.

- The Economic Survey notes that the expansionary fiscal policy will boost growth and cause debt to GDP ratios to be lower, not higher. It also argues that given India's growth potential, India need not worry about debt sustainability until 2030.

Concept of Interest Rate-Growth Differential (IRGD):

- "If the interest rate paid by the government is less than the growth rate, then the intertemporal budget constraint facing the government no longer binds."- economist Olivier Blanchard

  * The "intertemporal budget constraint" means that any debt outstanding today must be offset by future primary surpluses. If the Interest Rate-Growth Differential (IRGD), the difference between the interest rate and growth rate, becomes negative, the governments need not worry about deficits since the growth would take care of the interest payment obligations. This would ensure the sustainability of public debts.

- The Economic Survey argues that in India, the growth rate is higher than the interest rate most of the time. So the conventional restraints on the fiscal policy may not be the right way ahead given the serious contraction of the Indian economy.

- If India can ensure high growth rates it need not worry about the high debts being accumulated due to the higher fiscal deficits.

Recommendations by the Bretton Woods twins:

- The International Monetary Fund (IMF) and the World Bank have been urging a departure from fiscal orthodoxy in the wake of the pandemic. These institutions have been urging countries to spend more by running up deficits even when the debt to GDP ratio is poised to rise to 125% by the end of 2021.

Key concerns:

Moving away from fiscal framework:

- The budget marks a departure from an adherence to fiscal consolidation as envisaged in the FRBM Act.

    * The FRBM Act envisages a fiscal deficit of 3% of GDP as the eventual target while moving along a fiscal consolidation path. It also envisages reducing revenue deficit to 0%.

- For well over a decade-and-a-half, India has kept up the pretence of attaining the deficit targets set out in the Fiscal Responsibility and Budget Management (FRBM) Act (2003). The current budget seems to move away from that commitment. Indian fiscal policy has adhered to orthodoxy even during downturns.

End of fiscal orthodoxy:

- The Budget by adhering to large deviations from the fiscal framework of the FRBM Act marks an important departure from one of the key tenets of the Washington Consensus- 'Macroeconomic stability'.

    * The Washington Consensus refers to a set of free-market economic policies supported by prominent financial institutions such as the International Monetary Fund, the World Bank, and the U.S. Treasury. It consists of a set of ten economic policy prescriptions considered to constitute the "standard" reform package promoted for developing economies. The framework for market-oriented economics given by the Washington Consensus has dominated policy-making in most parts of the world.

    * 'Macroeconomic stability' means that government budgets need to be broadly in balance so that borrowings to finance the deficit are kept to the minimum. 'Austerity'

policies are recommended under this. The aim is to reduce government budget deficits through spending cuts.

- The lack of fiscal prudence may hamper debt sustainability for India.

Rating downgrade:

- There is the fear that the rating agencies would downgrade India if total public debt crossed, say, 10%-11% of GDP. The downgrade in ties could dis-incentivize foreign investments into India or could raise the cost of raising capital in the international markets for the governments or Indian private entities.

Threat of inflation:

- Large fiscal deficit can fuel a rise in inflation.

- The change in the fiscal consolidation targets will require a change in the inflation target of 4% set for the Reserve Bank of India.

Doubts regarding planned revenue flows:

- The government is backing on enhanced tax collections and disinvestment to meet the planned fiscal deficits. The sale of public assets has become crucial to a reduction in fiscal deficits in the years ahead. There are concerns being expressed that this might be a high-risk strategy.

- The set targets seem challenging given that the tax to GDP ratio has not been rising as expected and there are challenges with the planned disinvestment process.

    * Year on Year revenues from disinvestment have fallen short of targets. The sale of Air India, which was begun in 2018, is still dragging on.

    * Large-scale privatisation is not easily accomplished in India.

- Selling public assets cheap is politically contentious. There will be allegations of favouring certain industrial houses. Job losses from privatisation are bound to evoke a backlash.

- Privatisation of banks raises concerns about financial stability.

Reliance on foreign capital:

- Large-scale privatisation may need substantial FDI inflow. The excessive dependence on foreign capital and excessive foreign presence in the domestic economies may not augur well for the long term interests of the Indian economy.

- This goes against the tenet of Atmanirbhar Bharat which connotes greater self-reliance and stronger Indian companies.

Conclusion:

- A departure from fiscal orthodoxy is welcome. But the government needs to think of ways to make it more sustainable.

INTERNATIONAL RELATIONS

International Relations: Relations between India and neighbouring countries

1. India – Mauritius

» Prelims: Mauritius map based information

» Mains: Significance of the bilateral relation with Mauritius

Context:

• Cabinet approves Comprehensive Economic Cooperation and Partnership Agreement (CECPA) between India and Mauritius.

Details:

• The Agreement is a limited agreement, which will cover Trade in Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement, Movement of Natural Persons, Telecom, Financial services, Customs Procedures and Cooperation in other Areas.

Significance:

• The India-Mauritius CECPA will be the first trade agreement to be signed by India with a country in Africa.

Benefits of the Agreement:

• CECPA provides for an institutional mechanism to encourage and improve trade between the two countries.

• It covers more than 310 export items for India.

• Mauritius will benefit from preferential market access into India for its 615 products.

• In services, Indian service providers will have access to around 115 sub-sectors from the 11 broad service sectors such as professional services, computer related services, research & development, other business services, telecommunication, construction, distribution, education, environmental, financial, tourism & travel related, recreational, yoga, audio-visual services, and transport services.

International Relations: Relations between India and neighbouring countries

2. India, Pakistan agree to adhere to 2003 ceasefire

» Prelims: SAARC

» Mains: Challenges to India- Pakistan bilateral relation

Context:

India and Pakistan have issued a joint statement for the first time in years, announcing that they would observe the 2003 ceasefire along the Line of Control (LoC).

Background:

• India and Pakistan had agreed to a ceasefire on the LoC in November 2003.

• The ceasefire along the borders was first enforced on November 23, 2003, when the then Pakistan Prime Minister ZafarullahJamali announced the decision on the eve of Eid-ul-Fitr and his then Indian counterpart late AtalBehari Vajpayee immediately reciprocated.

• Though the ceasefire was largely held over the years, it came under strain following the Pulwama attack in 2019 and India's decision to scrap Jammu and Kashmir's special status.

• Troops from the two sides have regularly exchanged fire.

Details:

• The countries have agreed to a strict observance of all agreements, understandings and cease firing along the Line of Control (LoC) and all other sectors with effect from the midnight of February 24-25, 2021.

• In the interest of achieving mutually beneficial and sustainable peace along the borders, the two Directors General of Military Operations agreed to address each other's core issues and concerns which have the propensity to disturb peace and lead to violence.

• In addition, they would use existing mechanisms of hotlines and flag meetings to resolve any misunderstandings.

• As per the existing mechanism, there is a discussion by officials from the Military Operations directorate every Tuesday but the DGMOs speak only when one side requests for a conversation.

• Political parties in J&K welcomed the decision calling it a step in the right direction.

• They opine that, for the interest of mutually beneficial and sustainable peace in the entire region, India and Pakistan need to address the core concern of J&K in keeping with the aspirations of its people.

Role of Backchannel diplomacy:

• Experts opine that backchannel diplomacy led to the talks and helped produce a joint statement between the two sides.

- Signs had come against the backdrop of India's region-wide diplomacy regarding COVID-19, in which Pakistan had participated under the umbrella of the South Asian Association for Regional Cooperation (SAARC).

  * While Pakistan had shown reluctance in engaging in bilateral exchanges with India on the global pandemic, it supported Prime Minister Modi's five proposals for collaboration at the South Asian level on containing the pandemic.

- Pakistan PM's latest trip to Sri Lanka was one more instance of softening of attitudes.

- In comparison to the airspace denial that both countries had imposed on each other during and in the aftermath of the Pulwama terror strike, India this week allowed the aircraft carrying Pakistan PM's passage.

- However, it is important to note that during these signs of backchannel talks, both sides have maintained their positions on Kashmir.

Conclusion:

- If the 2003 ceasefire is formalised with clear rules and regulations, demilitarized zones, neutral observers and joint commissions, it should reduce the chances of future ceasefire violations.

- However, the success of ceasefires in most conflict situations depends heavily on political will.

International Relations: India's relations with developed countries

3. **India-EU Macroeconomic Dialogue**

   » Prelims: EU, G20

Context:

Eleventh India-EU Macroeconomic Dialogue held.

About the Dialogue:

- The dialogue, inter-alia, covered sharing of their experiences to enable both sides on various aspects including collaboration in the G20 on finance track matters, including through G20 Framework Working Group deliverables, G20 Action plan, debt related issues and international taxation of digital economy.

- Fiscal policy response and medium-term fiscal strategy including financial/structural reforms priorities were also discussed.

- India shared its policy response to the Covid crisis and steps taken to revive the economy from its impact including well calibrated stimulus packages announced by Government of India as also the vaccination related efforts.

International Relations: India's relations with developed countries

4. **An India-EU trade pact may still remain elusive**

   » Mains: Significance of India- EU trade pact for India and EU; challenges in finalizing the pact

The article throws light upon how COVID-19, Brexit and international tensions have unsettled the European Union and exacerbated its internal discords.

Challenges facing the European Union:

- Before COVID-19 and Brexit, the EU had the same GDP as the United States and was one of India's major trade and investment partners.

- Being the largest democracies and unions of linguistically, culturally and ethnically diverse States, both the EU and India are well suited for a special relationship.

- The reality is that the current status lacks mutual chemistry.

- Also, the EU now finds itself in an unusually turbulent situation.

  * The crises of 2020 made the structural lack of unity in the EU apparent.

  * Despite its desire for greater integration, it faces obstacles from adherence to the rule of law to a strategy for dealing with China, Russia, Turkey and Iran.

  * After months of tortuous negotiation over Hungary and Poland's objections, member States finally agreed on a long-term budget and a COVID-19 recovery package of $2 trillion.

  * The two countries had opposed anti-COVID-19 support being linked to good governance, in particular, to accusations of suppression of human rights and lack of independence in the judiciary.

- The Trump presidency forced Europe to reassess its relationship with America.

  * This stimulated the EU's drive for greater self-reliance in security, economics, supply chains and climate change, and an attempt to emerge as a major global pillar alongside the United States and China.

- The COVID-19 pandemic has introduced divisive vaccine nationalism into the Union.

Shadow of Euroscepticism:

- Euroscepticism is criticism of the European Union and European integration. It is the opposition to increasing the powers of the European Union.

- The EU's attempt to condition its budget on the rule of law during the pandemic and recession only sharpened the emphasis on the veto power to which every member state is entitled.

- It was not only Britain that spawned a populist movement agitating to leave the EU. Europe's many Eurosceptic parties now focus on preventing closer unity.

- Elections are due in many EU states, including Germany and the Netherlands, both of which have strong Eurosceptic movements.

India-EU trade pact:

- India plans to start negotiations on investment and trade agreements with the European Union (EU).

- These are likely to run into the same problems as the discussions that began on a comprehensive free trade agreement in 2007. It was aborted due to differences on:

  * Movement of professionals, labour, human rights and environmental issues.

  * India's high tariffs, inconsistent tax regime and non-payment of arbitral awards.

Conclusion:

- For the EU to resolve these innumerable and diverse problems without further widening existing ruptures will require enormous political will and polished skill. Trade agreements with India will be the least of its problems.

International Relations: Effect of policies and politics of developed and developing countries on India's interests

5. Sri Lanka clears Chinese energy project, 50 km off Tamil Nadu

 » Prelims: Map based information

 » Mains: Challenges being posed by China in India's immediate neighbourhood; need for counter measures

Context:

- Sri Lanka cleared a Chinese energy project in three islands off Jaffna peninsula that are barely 50 km from the Tamil Nadu coast.

Details:

- Sri Lanka recently decided to pull out of the East Container Terminal (ECT) deal with India and Japan.

  * This is not the only challenge to New Delhi's interests.

- Sri Lanka's Cabinet approved a proposal to involve Sinosoar-Etechwin Joint Venture in China to install 'hybrid renewable energy systems' in Nainativu, Delft or Neduntheevu, and Analaitivu, located in the Palk Bay.

  * The islands are connected to the Jaffna peninsula by a limited ferry service,

managed mostly by the Sri Lankan Navy.

- Concerns have been raised on the project site's proximity to the Indian coastline.

  * Delft Island is one of the closest points to India from northern Sri Lanka.

- Sri Lanka's former High Commissioner to India said the Sri Lankan government cannot be blamed for this decision, because the project is backed by the Asian Development Bank, which has its own procurement guidelines that should be followed by the borrower.

International Relations: Effect of policies and politics of developed and developing countries on India's interests

6. Endless war

 » Prelims: Map based information; Houthis.

 » Mains: Yemen war and its impact on West Asian geopolitics

Context:

- The Biden administration has announced its decision to end U.S. support for Saudi Arabia's Yemen war.

Background:

- The U.S. offered support to Saudi Arabia's campaign against the Houthi rebels in Yemen when Barack Obama was the President.

- Donald Trump continued that policy, overlooking the disastrous effects of the war.

- The Yemen war has turned the country (one of the poorest Arab countries) into a humanitarian catastrophe.

- In its last decisions, the Trump State Department designated the Houthis, who are backed by Iran, as a terrorist organisation.

* Rights groups have condemned the move, saying that the designation would complicate aid efforts as the Houthis control a sizeable part of Yemen, including the capital.

Details:

- Biden has now taken a different line, initiating steps to remove the Houthis from the terror list, among other actions.

- This is part of the larger attempts to rewrite the U.S.'s West Asia policy which, under Mr. Trump, was almost entirely focused on containing Iran.

Yemen War:

- Yemen is a case study for a war that has gone wrong on many fronts.

- When the Saudis started bombing the country in March 2015, their plan was to oust the Houthis from Sana'a and restore a pro-Riyadh government.

- Despite the Saudi-led attacks, the Houthis held on to the territories they captured, while the Saudi-backed government of President Abdrabbuh Mansur Hadi lurched on the brink of collapse.

- After five years of fighting, the United Arab Emirates pulled out of the war in 2020.

- The UAE-backed Southern Transitional Council wants southern Yemen to be an independent entity.

- While these multiple factions continued to fight, more than 10,000 people were killed in attacks and tens of thousands more died of preventable diseases.

- Yemen also stares at famine.

Outcomes:

- It is a lose-lose war for everyone.

- Saudi Arabia has failed to oust the Houthis from Sana.

- Saudi is now facing frequent rocket and drone attacks by the rebels.

- The Houthis are living in permanent war, unable to provide even basic services to the people in the territories they control.

- Yemen's internationally recognised government practically lacks any power and legitimacy at home as the war is being fought by other players.

Recent developments:

- The administration's message seems to have reached Riyadh.

- Saudi Arabia ended a nearly four-year-long blockade of Qatar, another American ally, after Mr. Biden was elected President.

- It has also signalled that it would carry out domestic reforms keeping human rights in focus.

- But it is yet to make any definite moves to wrap up the Yemen conflict.

Way forward:

- Saudi Arabia must take this as a signal that the open support it had enjoyed from the U.S. is a matter of the past.

- Ending the war is in the best interest of all parties.

- The Biden administration should push Saudi Arabia and its allies to end their blockade of Yemen and initiate talks with the country's multiple rebel factions.

International Relations: Effect of policies and politics of developed and developing countries on India's interests

7. **In Biden's policy pursuit, the world order challenge**

  » Prelims: JCPOA

  » Mains: Possible changes in U.S. foreign policy under the new President

Context:

- Joe Biden's election as the U.S. President.

Background:

Foreign policy under U.S. President Donald Trump:

- The U.S. under President Trump had withdrawn from the Joint Comprehensive Plan of Action (JCPOA), the nuclear agreement with Iran. The U.S. had imposed strong sanctions on Iran.

- The U.S. had engaged in a trade war with China and the ties between the two countries had been at the lowest level. The US had been trying to galvanize the Quad as a countermeasure against the Chinese.

- The U.S. policy vis-a-vis Russia had been accommodative.

Biden's policy approaches:

- Biden has already revealed that despite some differences in policy content and diplomatic style, his term is likely to show more continuity than change where the U.S.'s core interests are concerned, specifically in its ties with Russia, China and Iran.

Iran policy:

- Joe Biden has been a strident critic of the U.S. withdrawal from the nuclear agreement with Iran. He had promised during his presidential election campaign that subject to Iran's compliance with its obligations, the U.S. would re-enter the agreement.

- Iran's Foreign Minister has called on Mr. Biden to uphold his commitment on the Iran nuclear deal. He also warned that "containment" of Iran would not work.

- Biden's Iran policy is likely to match Mr. Trump's hardline approach on substantive matters, but without the bravado associated with the previous regime like the killing of QasemSoleimani.

- The US is likely to pressurize Iran on the issues of its ballistic missiles programme, nuclear programme and Iran's "acts of terrorism" and its support to militant organizations operating in or against U.S.'s regional partners like Saudi Arabia and UAE.

- The U.S. may be looking at a long-term diplomatic engagement not just on the nuclear issue but on all matters that have security implications for the U.S. and its regional partners.

- However, unlike the previous regime characterized by its 'Maximum pressure' tactic on Iran, the U.S. could offer some palliatives to Iran to incentivize Iran into a dialogue. This could involve measures such as the International Monetary Fund providing funds to Iran to combat the novel coronavirus pandemic.

China Policy:

- China has been termed the U.S.'s "most serious competitor".

- The reference to China was with respect to 'economic, IPR and human right aspects, instead of the security concerns resulting from the aggressive Chinese posture'. The U.S. president in his speech outlining the regime's foreign policy framework did not refer to Indo-Pacific, the South China Sea or the Quad.

- In fact, the U.S. president stated that Washington would engage China if it served U.S. national interests.

Russia policy:

- Biden is likely to reverse his predecessor Donald Trump's personal accommodative approach towards Russia and adopt the U.S.'s traditional confrontational posture.

- The U.S. President has promised a strong push back against Russia terming it as a threat to U.S.'s interests.

- Ukraine issue, the cyberattacks on U.S. and human rights issues in Russia could be points of conflict between the two nations.

Concerns:

- Uncertainties around the Iran nuclear agreement could lead to tectonic changes in the new global and regional order.

Regional concerns:

Threat by U.S's allies:

- Israel's armed forces commander, Lt. Gen. Aviv Kochavi, has warned against any move to take forward the stalled Iranian nuclear deal. Israel has threatened decisive actions (military) against any nuclear development in Iran.

- Israel and the U.S.'s Gulf allies, Saudi Arabia and the United Arab Emirates, have insisted that they be involved with the discussions with Iran on the revival of the agreement.

Isolation of Iran and the possible reaction:

- Given the high unlikelihood of quick easing of sanctions on Iran particularly with no signs of an early easing of sanctions on Iranian oil sales, Iran may find itself remaining isolated and this would lead to the Iranian political leadership's reluctance to work cooperatively with western powers.

- Iran's regional influence remains significant, based on the backing of Shia militia in diverse locales as Lebanon, Iraq, Yemen and Syria. Iran continues to possess the ability to mobilise militants across the region.

- The capabilities of Iran's precision missiles and drones are also a matter of regional anxiety. Given the advanced air and missile power available with Israel, Saudi Arabia and some other Gulf states, there is no prospect of Iran curtailing its missiles and drone programmes.

Instability in the region:

- The situation will continue to remain tense in the region with Israel, Saudi Arabia and the United Arab Emirates engaging in a face-off with Iran and its allies, Iraq, Syria and its Shia militia.

Impact on international geopolitics:

- The ambivalence being exhibited by the U.S. in its approach towards foreign policy could cede its numerouno position in global affairs.

- Russia is now an influential player in the region; China, too, with its Belt and Road Initiative, has high stakes in West Asian regional stability.

- The Sino-Iran 25 years agreement, envisages substantial and long-term cooperation in political, security, military, economic, energy and logistical connectivity areas.

Conclusion

- Biden will thus witness a new world order, shaped by a coalition of Russia, China and Iran, in which the U.S. is no longer the most significant role-player.

Organization/Institutions in news

8. **ICC convicts Ugandan rebel commander for war crimes**

   » Prelims: ICC: powers, composition.

   » Mains: Concerns with respect to functioning of ICC

Context:

- The International Criminal Court (ICC) has convicted a Ugandan child soldier-turned-Lord's Resistance Army commander of war crimes and crimes against humanity.

Details:

- Dominic Ongwen was found guilty of 61 charges over a reign of terror in the early 2000s, including the first conviction by the ICC for the crime of forced pregnancy.

- Ongwen, nicknamed "White Ant", was convicted of charges including murder, rape, sexual enslavement and the conscription of child soldiers.

- The court said Ongwen ordered attacks on refugee camps as a senior commander in the Lord's Resistance Army (LRA).

Lord's Resistance Army:

- The LRA was founded three decades ago by self-styled prophet Kony. The group originated in Northern Uganda as a movement to fight for the rights of the Acholi people.

- Joseph Kony waged a bloody campaign in four African nations to set up a state based on the Bible's Ten Commandments.

- He launched a bloody rebellion in northern Uganda against President YoweriMuseveni.

- The United Nations says the LRA killed more than 1,00,000 people and abducted 60,000 children in a campaign of violence that spread to three other African nations — Sudan, the Democratic Republic of Congo and the Central African Republic.

Human Rights Watch said the case was a landmark in achieving justice for victims of the Lord's Resistance Army.

INTERNATIONAL COURT OF JUSTICE (ICJ) AND INTERNATIONAL CRIMINAL COURT (ICC)

DIFFERENCES AND SIMILARITIES

	ICJ	ICC
Year Established	1946	2002
Languages	English, Feanch	English, Feanch
UN-Relationship	Official court of the UN commonly referred to as "World Court"	Independent: may receive case referrals from UN Security Council; Can initiate prosecutions without UN action or referral
Location	The Hague, NL	The Hague, NL
Jurisdictons	Members-states	individuals

Types of cases	1. Contentions between parties 2. Advisory Opinions	Criminal prosecution of individual
Subject Matter	- Sovereignty - Boundary disputes - Maritime disputes - Trade - Natural resources - Human rights - Treaty violations - Treaty intepretations and more	- Genocide - Crimes against humanity - War crimes - Crimes of aggression
Authorizing Legal Mechanism	States that ratify the UN Charter become parties to the ICJ Status under Art, 93, Non UN-member states can also become parties to the ICJ by ratifying the ICJ Statute. Each state must provide consent to any contentious case by explicit agreement, declaration, or treaty clause	Rome Statute

Miscellaneous

9. ASEAN India Hackathon

- The ASEAN-India Hackathon was organised by the Ministry of Education in collaboration with Ministry of External Affairs

- The main aim of this was to promote youth cooperation and digital connectivity between the youth of India and ASEAN member countries.

- The Hackathon promoted learning, understanding, and cooperation. And, also fostered a strong sense of ASEAN-India community among the youth and to become responsible stakeholders in the regional and global growth they were provided the necessary skill-sets.

- The main themes of the programme were — 'Blue Economy' and 'Education'.

Significance

- It was an excellent means to inculcate cooperative spirit among the participants and to expose them to diverse viewpoints, cultures and work ethics cutting across national boundaries.

What are the other programmes India has for ASEAN?

- There are Special Courses for Young ASEAN Diplomats, Exchange Programmes for Young Farmers', Media Exchange Programmes, Programmes for Young Parliamentarians.
- With a budget outlay of USD 45 million, there is a grant of 1000 PhD Fellowships to ASEAN students at the country's most prestigious Indian Institutes of Technology (IITs).

Miscellaneous

10. India-Australia Circular Economy (I-ACE) Hackathon, 2021

Context:

- NITI Aayog's Atal Innovation Mission & Commonwealth Scientific and Industrial Research Organization kick-start the India-Australia Circular Economy (I-ACE) Hackathon, 2021.

About the I-ACE Hackathon:

- Goal of the hackathon: to enable talented innovative students and start-ups from Australia and India to address common national issues through innovative technology solutions.
- Conducted by: Atal Innovation Mission (AIM) and Australia's national science agency (CSIRO).
- The priority themes for the hackathon are Innovation in packaging – reducing packaging waste, Innovation in food supply chains avoiding waste, Creating opportunities for plastics waste reduction, and Recycling critical energy metals and e-waste.

Miscellaneous

11. Jidar-ul-Hadeed

- The Pakistan Army conducted a month-long exercise in the Thar Desert, located in the Sindh province, to prepare for conflict in extreme desert environments.
- The exercise was code-named 'Jidar-ul-Hadeed'

Aman-2021

- It is a multinational naval exercise hosted by Pakistan, Aman-2021, began in the Arabian Sea.

India's Bilateral relations

12. India delivers 2 cranes for Chabahar

- » Prelims: Chabahar Port location
- » Mains: India Iran relations

Context:

- India handed over two 140-tonne cranes for loading and unloading equipment to the Iranian government as part of its bilateral contract between India and Iran signed in 2016 for $85 million to equip and operationalise the Chabahar port.

Details:

- This event, coming amid talks with Iranian authorities, signals a push to the Chabahar port project, which was stalling due to the U.S. sanctions. There were concerns over the downturn of ties between India and Iran.
- The delivery of the cranes shows India's commitment to the strategic connectivity of Chabahar port project that will provide access to markets in Central Asia.
- India plans to invest further in the port project, given the government's expectations of some easing up in U.S. sanctions in the upcoming months, once the new Biden administration begins to address its policy on re-entering the Iran nuclear deal.

India's relationship with neighbouring countries

13. ECT fiasco: Indian envoy meets Gotabaya, Mahinda

- » Mains: India- Sri Lanka relations

Background

- The Colombo Port is one of the busiest in the world.
- Japan had earlier helped Sri Lanka in developing the site. It had provided both financial and technical assistance in the 1980s and 1990s.
- India is keen on the partnership because 70% of the trans shipment business at the Colombo Port is linked to India.
- Sri Lanka, Japan and India had signed an agreement to jointly develop the East Container Terminal at the Colombo Port.
- The ECT is located some 3 km away from the China-backed international financial city, known popularly as "port city", being built on reclaimed land on Colombo's sea front.
- The ECT project was expected to showcase India-Japan cooperation in a part of South Asia, where Chinese infrastructure projects have been prominent.

Context

- Reneging on a 2019 agreement with India and Japan, Sri Lanka has decided to develop the strategic East Container Terminal (ECT) at the Colombo Port on its own.

- The Sri Lankan government would instead offer the West Container Terminal to India for possible investments

Compensation

- A cabinet meeting approved a proposal to develop the West Terminal at the Colombo Port as a Public Private Partnership with India and Japan, which was seen as a bid to compensate India.

Will there be similar protests and crises if India accepts the West Terminal offer?

- The Sri Lanka government sources rules out chances of any further trouble on the cabinet-proposed West Terminal offer.

Sirisena

- India, Sri Lanka and Japan signed a Memorandum of Cooperation (MoC) to develop the ECT when Sri Lankan President Maithripala Sirisena was in power.

  * During the fag end of his presidency, Maithripala Sirisena had dropped a bombshell at a cabinet meeting, alleging that India's external spying agency R&AW was trying to assassinate him.

  * In the same meeting, Sirisena had vehemently opposed partnering with India in the ECT project.

- It had led to a complete breakdown of his relationship with the-then Prime Minister Ranil Wickremesinghe.

- Sirisena's allegations had incensed India and he had to issue a clarification saying he had never said anything like that.

Rajapaksa

- After Gotabaya Rajapaksa won the presidency in November 2019 and his elder brother and former President Mahinda Rajapaksa led his party SLPP to a landslide win in the 2020 parliamentary elections, India made several attempts to retain its hold over the Indian Ocean island nation.

- External affairs minister S Jaishankar and national security adviser Ajit Doval made special trips to Sri Lanka, assuring the government of all possible help from India.

- What had finally made the government surrender before trade unions was the increasing support of many more sections in the society for the protests against privatisation.

- Even as President Gotabaya stood by the agreement with India initially in spite of a strong opposition from Colombo port trade unions during their talks, "the pressure was brewing"

China

- However China, which has already pushed Sri Lanka into a debt trap, seems to have scuttled all important deals with India.

- To checkmate two of its traditional rivals and neighbours India and Japan, Beijing allegedly put enormous pressure on the Rajapaksa brothers to go back on their words to New Delhi and Tokyo.

- They even allege that some of the protests against the partnership with these two nations were funded by the Chinese embassy in Sri Lanka.

Impact on India-Sri Lanka relationship

- Many who are part of the Sri Lanka government as well as those who were known to the developments hope that the issue will die down soon with the offer of West Terminal.

- However, some critics of the Sri Lankan government anticipate many national and international impacts surrounding the latest decision on ECT.

India's relationship with neighbouring countries

14. Myanmar's Military Coup

» Mains: India- Myanmar ties; possible impact of the military coup on bilateral relations

Context

• The Myanmar military grabbed power in a coup

Background

• Elections to Myanmar Parliament was conducted in the month of November 2020

• Two parties were in a close political contest

  * Aung Suu Kyi led the National League for Democracy (NLD)

  * Military-backed Union Solidarity and Development Party (USDP)

• Aung Suu Kyi led the National League for Democracy (NLD) to a landslide win in the 2020 elections

What triggered the coup?

• The 2015 and 2020 election results showed the growing popularity of Ms. Suu Kyi and the unpopularity of the military.

• The military has alleged that the general elections held in November 2020 were full of "irregularities". It had questioned the veracity of millions of votes cast in the election.

  * Military has indicated the possibility that people had voted "more than once", or had engaged in some other "voting malpractice".

• The military had demanded that the United Elections Commission (UEC) of Myanmar which oversees elections, or the government, or outgoing parliamentarians prove at a special session before the new parliament convenes, that the elections were free and fair.

  * The demand was rejected.

• Soon after the coup in the early hours on February 1st , a year-long state of emergency was declared.

  * The military announced that it would hold power under a state of emergency for 12 months, claiming it would then hold fresh elections.

Actual Reasons

• Suu Kyi's NLD had won a total of 390 seats while the main Opposition, the military-backed Union Solidarity and Development Party, managed only 33 seats. That led to concerns within the military about their powers being curtailed by a more popular political leader.

• Clearly, the Army, which still nominates a fourth of the parliamentary seats and retains the important Defence, Borders and Interior portfolios, felt it was better to dismiss the NLD government before it increased its clout.

• Army chief General Min Aung Hlaing is due to retire in 2021, and it is possible that the move was meant to extend his longevity in power.

Examples from the past

• The Myanmar army has a long history of meddling in the country's politics, beginning with the coup in 1962, in which the democratically elected government of the Prime Minister U Nu was overthrown.

  * The army's political ambition has been a hindrance in the path of democracy in Myanmar.

• In 1990, despite the NLD's decisive victory in the election, the party was prevented from forming the government because the military rejected the result.

  * Suu Kyi was under house arrest for close to two decades.

The decision seems questionable on legal and constitutional grounds.

• First, electoral issues need to be addressed and resolved by relevant authorities, not the military leadership.

• Second, Article 417 of the Myanmar Constitution empowers the President to proclaim emergency, in consultation with the National Defence and Security Council.

  * It does not seem that the Council met or presidential consent was obtained.

  * In fact, President Win Myint and the de facto head of the government, Ms. Suu Kyi, have been detained.

• Therefore, the conclusion is inescapable: it is a coup d'état staged by the army.

The military's Constitution

• It was the military that drafted the 2008 Constitution

  * The Constitution was the military's "roadmap to democracy", which it had been forced to adopt under increasing pressure from the west

  * Opening up Myanmar to the outside world was also a dire economic necessity.

• The NLD had boycotted the referendum, as well as the 2010 elections that were held under the Constitution.

  * The NLD, which had not recognised the Constitution, boycotted the 2010 election, which the USDP won.

• In the next five years, the Army loosened its grip on the government and society to project they respect the values of constitution and democracy.

  * Political prisoners, including Ms. Suu Kyi, were released.

* Media censorship was eased.

* Ms. Suu Kyi's party also changed its earlier position and accepted the Constitution.

* The NLD won the 2015 election, and formed the government, raising hopes that the country was on its way to full transition to democracy.

• But the military safeguarded its interest in the Constitution and supremacy in national affairs.

* Under its provisions, the military reserves for itself 25 per cent of seats in both Houses of Parliament, to which it appoints serving military officials.

* Also, a political party which is a proxy for the military contests elections. Its share of seats fell further this time because of the NLD's sweep.

In this context, three fault lines may be pinpointed.

• First, ideologically the two segments of the political elite have been at war with each other. The army has a sense of entitlement to power on the grounds that it secured independence, defended the country against secession, and ensured stability and development. It views itself as the guardian of the state.

* NLD leader Ms. Suu Kyi, the other protagonist, has always expressed admiration for the army (especially because it was established and nurtured by her father), but she has been a staunch advocate of democracy, a system in which the army should be completely apolitical.

* Specifically, the two sides have had modest to serious differences over ethnic reconciliation, constitutional reform, the Rohingya issue, and the China policy.

• Second, in political terms the fight is for power. The army has been used to exercising power for long, which yields it immense economic dividends too. Playing second fiddle to democratically elected leaders was a difficult role for it.

• Third, presidential ambitions and the future of Senior General Min Aung Hlaing's career constitute a relevant issue.

International Response

• The speech and the army's assertion prompted the United States embassy and diplomatic missions of 15 other countries and the European Union in Yangon to issue a joint statement "opposing any attempt to alter the outcome of the elections or impede Myanmar's democratic transition".

India's Response

• For India, which had cultivated a careful balance, between nudging along the democratic process by supporting Ms. Suu Kyi, and working with the military to ensure its strategic interests to the North East and deny China a monopoly on Myanmar's infrastructure and resources, the developments are unwelcome.

• MEA has said "We have noted the developments in Myanmar with deep concern. India has always been steadfast in its support to the process of democratic transition in Myanmar. We believe that the rule of law and the democratic process must be upheld. We are monitoring the situation closely,"

China's influence

• The influence of China cannot be overlooked. The Chinese communist party and military leadership have had a very close association with the Myanmar army for decades now and it's believed that the army wouldn't have taken such a step without consulting Beijing.

• Although Suu Kyi had maintained friendly relations with China, a democratic government would have curtailed Beijing's capacity to manoeuvre in the long run, especially because China's popularity in Myanmar has increasingly been on the ebb.

Response

• China called for all parties to help maintain stability in Myanmar, as it refrained from criticising the military leadership for seizing power in a coup and urged the international community to not interfere.

• Beijing said it was not in favour of external powers "taking actions that would raise tensions"

There are several lessons to be learnt from the country's tortuous politics.

1. The developments in Myanmar will bring back the old debate around the prudence of sanctions.

• The coup in Myanmar coincided with the first month of the Biden administration in the U.S., which has promised to bring back the values of democracy and respect for human rights to the core of the U.S. foreign policy.

• Notwithstanding the western sanctions before 2010, China, Thailand and Singapore were the key trading partners of Myanmar. The present reality is no different.

• Given that the military has been able to economically withstand sanctions by striking deals with Asian countries in the past, sanctions are unlikely to bring any major political change.

2. The limited European trade with Myanmar that started after 2010 benefits the poor — the European Union's 'Everything But Arms' scheme targets the poor in Myanmar's garment industry.

• The scheme allows the world's least-developed countries, such as Myanmar, to export most goods to the EU free of duties.

3. The old debate around the need for accountability for crimes against humanity will resurface.

- As political changes got underway in 2010, many generals, such as Than Shwe, who was the de-facto head of Myanmar from 1992 to 2011 and was on the radar of the international community for perpetuating a regime of human rights abuses, quietly vanished from the scene. This bred a culture of impunity.

- During the 2017 Rohingya crisis, senior military officials openly exploited social media to mobilise public support for brutality against Rohingyas.

Way Forward:

1. A critical international player in Myanmar is China.

   - China has appointed specific envoys for Asian affairs, who are de-facto working on Myanmar-related issues since 2013.

   - The international community, particularly the West, has to factor in China's multi-layered influence on Myanmar.

2. Many international mechanisms comprising Western and Asian countries that were formed to coordinate strategies on Myanmar were disbanded after the 2015 election.

- Relevant actors should be brought on a common platform by reviving past mechanisms.

3. The expectation that Myanmar will see a nationwide protest against the Tatmadaw after the coup, needs to be examined with the geographical extent of Bamar (Myanmar's largest ethnic group, who support the National League for Democracy).

- The minorities in the country form around 35% of the population.

- In the current scenario, the military will continue to exploit ethnic and religious fault lines.

- Engagement with domestic stakeholders, including ethnic minorities, especially from the north, should be pursued by the international community.

Conclusion:

- The international community must remember that no change is irreversible, particularly in a context where military leadership scripted the meaning of democracy, domestic forces, as well as geopolitics, continuously fail to deter its actions and impulses to rule.

ART AND CULTURE

Art and Culture - Important personalities

1. **Sant Ravidasji**

   » Prelims: Sant Ravidas; Bhakti movement

   • He was a poet-saint of the Bhakti movement in northern India.

   • He was the founder of the Ravidassia sect.

   • He is believed to have born in 1450 CE and died in 1520 CE but some people believe he lived in the 14th century. He was born in Varanasi.

   • He was also a social reformer, who taught against caste-based discrimination.

   • Ravidasji was a highly venerated figure and is considered a 'Guru' mainly in Uttar Pradesh, Maharashtra, Rajasthan, Madhya Pradesh, Haryana and Punjab.

   • Some of the devotional verses he composed have been included in the Guru Granth Sahib.

   • Sant Ravidas Jayanti or birth anniversary is celebrated every year on Magh Purnima, on the full moon day of Magh month with great enthusiasm.

Art and Culture - Cultural places of interest

2. **Ajmer Sharif Dargah**

   » Prelims: Sufism; important personalities and places of interest

   » Mains: Contribution of Sufism to Indian tradition

   • Ajmer Sharif Dargah is the Sufi saint Khwaja Moinuddin Chisti's tomb.

   • It is considered to be one of the holiest places by Sunni Muslims from the Indian subcontinent. The religious site also attracts people of all faiths.

   • The tomb of Moinuddin Chisti became a venerated site in the century following the preacher's death in 1236.

   • Mughal emperor Akbar, who is believed to have visited the shrine at least 14 times, reconstructed the dargah's sanctum sanctorum in 1579.

   • The dargah's white marble dome was built in 1532.

   • Made using bricks, marble and sandstone, the building represents Indo-Islamic architecture.

   About Moinuddin Chisti (Chishti):

   • He was a Sufi saint who propagated the Chishtiyya order of Sufism.

   • He was a Persian preacher who was born in present-day Iran and had come to Delhi during the reign of Iltutmish of the Delhi Sultanate.

   • He moved to Ajmer in Rajasthan and became known as a compassionate spiritual teacher.

   • He was popular among people of all classes.

   Context:

   • PM hands over a Chadar for Ajmer Sharif Dargah that would be offered on the 809th Urs (death anniversary) of Khwaja Moinuddin Chisti.

Art and Culture - Musical instruments

3. **Tongali**

   » Prelims: Tongali

   • It is a nose flute instrument used by tribes in the Philippines

   • Although tongali resembles a normal flute it is four holed as opposed to regular flutes that have eight or more.

   • While the Kalinga call it tongali, other Filipino tribes call it by names such as pitung ilong and kalaleng.

   • Versions of the nose flute are played in countries such as Taiwan, New Zealand, Congo and Hawaii, although the material varies: wood, bamboo, and even whales' teeth.

Art and Culture - Handicrafts

4. **Monpa Handmade Paper**

   » Prelims: Important handicrafts in India; Monpa Tribe

   • These are handcrafted by artisans from Tawang, Arunachal Pradesh.

   • Monpa Handmade paper is made from the bark of tree Shugu Sheng grown locally in Tawang and is identified by its distinctive translucent fibrous texture.

   • The paper is weightless but its natural fibres add great tensile strength to this paper making it apt for various art works.

   • Monpa handmade paper has been used for writing Buddhist scriptures, manuscripts and for making prayer flags.

   • Writing on this paper is also known to be tamper-proof.

   • The paper was once produced in every household in Tawang and was exported to many countries like Tibet, Bhutan, Myanmar and Japan among others.

- However, with the new technologies coming in, the handmade paper industry almost disappeared in the last 100 years.

Art and Culture - Government initiatives

5. Rashtriya Sanskriti Mahotsav

- » Prelims: Ek Bharat Shreshtha Bharat
- It is the flagship festival of the Ministry of Culture.
- It has been conducted since 2015 with the active participation of Seven Zonal Culture Centres.
- The festivals have been playing a pivotal role to take the vibrant culture of India out to the masses instead of confining it to auditoria and galleries.
- It showcases folk and tribal art, dance, music, cuisines & culture of one state in other states reinforcing the cherished goal of "Ek Bharat Shreshtha Bharat" and at the same time provides an effective platform to the artists and artisans to support their livelihood.
- The 11th edition is being organised in West Bengal, in Cooch Behar, Darjeeling and Murshidabad.
- The festivals are organised under the Ek Bharat Shreshtha Bharat initiative.

Art and Culture - Government initiatives

6. Swachh Iconic Places (SIP)

- » Prelims: Swachch iconic places; Important cultural places
- » Mains: Potential of Indian tourism

Context:

Ministry of Jal Shakti announces selection of 12 sites for transforming them into 'Swachh Tourist Destinations' under Phase-IV.

Details:

- The Swachch Iconic Places initiative, under the Swachch Bharat Mission, is a special clean-up initiative focused on select iconic heritage, spiritual and cultural places in the country.
- The initiative is coordinated by the Ministry of Drinking Water and Sanitation in association with the Ministry of Urban Development, Ministry of Culture, Ministry of Tourism and the concerned State governments.
- The Ministry of Drinking Water and Sanitation has now selected 12 more sites to be included in the SIP programme (phase IV).
- The 12 sites are:
  - * Ajanta Caves, Maharashtra
  - * Sanchi Stupa, Madhya Pradesh
  - * Kumbhalgarh Fort, Rajasthan

- * Jaisalmer Fort, Rajasthan
- * Ramdevra, Jaisalmer, Rajasthan
- * Golconda Fort, Hyderabad, Telangana
- * Sun Temple, Konark, Odisha
- * Rock Garden, Chandigarh
- * Dal Lake, Srinagar, Jammu & Kashmir
- * Banke Bihari Temple, Mathura, Uttar Pradesh
- * Agra Fort, Agra, Uttar Pradesh
- * Kalighat Temple, West Bengal

- The initiative aims at enhancing the experience of both domestic and foreign visitors by improving the sanitation and cleanliness standards at and around the sites.

Art and Culture - Languages

7. International Mother Language Day

- » Prelims: UNESCO; Endangered languages in India.

Context:

- International Mother Language Day is observed on 21 February every year.

About International Mother Language Day (IMLD):

- The Day is celebrated to promote awareness of linguistic and cultural diversity and to promote multilingualism.
- First announced by UNESCO in 1999, it was formally recognized by the United Nations General Assembly in 2002.
- Mother Language Day is part of a broader initiative "to promote the preservation and protection of all languages used by peoples of the world".
- The idea to celebrate International Mother Language Day was the initiative of Bangladesh.
  - * In Bangladesh, 21 February is the anniversary of the day when the people of Bangladesh (then East Pakistan) fought for recognition for the Bangla language.
- The theme for IMLD 2021 is "Fostering multilingualism for inclusion in education and society".

Languages in danger

- According to the latest edition of the UNESCO atlas of the world's languages in danger, as many as 197 of India's indigenous languages were endangered, vulnerable or extinct as of 2017- the highest in the world.
- More than half of India's endangered languages have fewer than 10000 speakers.
- Nearly 60 % of them originated in Northeast and Andaman and Nicobar islands.

- The UN has declared the 10 year period between 2022 and 2032 as the decade of indigenous languages.

Degree of endangerment	Intergenerational Language Transmission
safe	language is spoken by all generations; intergenerational transmission is uninterrupted >> not included in the Atlas
vulnerable	most children speak the language, but it may be restricted to certain domains (e.g., home)
definitely endangered	children no longer learn the language as mother tongue in the home
severely endangered	language is spoken by grandparents and older generations; while the parent generation may understand it, they do not speak it to children or among themselves
critically endangered	the youngest speakers are grandparents and older, and they speak the language partially and infrequently
extinct	there are no speakers left >> included in the Atlas if presumably extinct since the 1950s

SCIENCE AND TECHNOLOGY

Science and Technology - Space Technology

1. **PSLV-C51/Amazonia-1 Mission**

   » Prelims: PSLV and GSLV differences; NSIL; INSPACe

Context:

- PM congratulates NSIL and ISRO on the success of the 1st dedicated commercial launch of PSLV-C51/Amazonia-1 Mission.

Details:

- India's Polar Satellite Launch Vehicle PSLV-C51 successfully launched Amazonia-1 along with 18 co-passenger satellites from the SatishDhawan Space Centre SHAR, Sriharikota.

- PSLV-C51/Amazonia-1 is the first dedicated commercial mission of NewSpace India Limited (NSIL), a Government of India company under the Department of Space and the commercial arm of ISRO.

- PSLV-C51 is the 53rd flight of PSLV and the 3rd flight of PSLV in 'DL' configuration (with 2 strap-on motors).

- With the launch, the total number of customer satellites from foreign countries placed in orbit by PSLV is 342 satellites from 34 countries.

- Amazonia-1 is a Brazilian satellite weighing 637 kg

  * The satellite is Brazil's first independently designed, built and operated satellite

    » It is the first Earth observation satellite entirely developed by Brazil

  * Brazil plans to use the satellite for "alert deforestation" in the region

    » Deforestation is an ongoing concern not only for the region's unique flora and fauna, which are irreplaceable once extinct, but also for health outcomes of human residents.

    » It is intended to monitor deforestation and agricultural activities in the Amazon region in Brazil

Significance

- The successful launch of Brazil's Amazonia-1 satellite by the Indian Space Research Organisation marks a new high point in space cooperation between the two countries

Awareness in the field of Nanotechnology

2. **Nanophotonics: Hyderabad scientists manipulate tiny crystals**

   » Prelims: Nanophotonics

   » Mains: Applications of nanophotonics

Context:

- Development of the "mechanophotonics" technique by researchers of University of Hyderabad.

Background:

Nanophotonics:

- Nanophotonics or nano-optics is the study of the behaviour of light on the nanometer scale, and of the interaction of nanometer-scale objects with light.

- Small lasers have various desirable properties for optical communication including low threshold current (which helps power efficiency) and fast modulation (which means more data transmission). Small photodetectors tend to have a variety of desirable properties including low noise, high speed, and low voltage and power.

- Nanophotonics has immense potential in fields ranging from biochemistry to electrical engineering. Nanophotonics would make it possible to go beyond current electronics and build up circuits driven entirely by photons (light).

Details:

- Researchers from University of Hyderabad have developed a technique named "mechanophotonics" which has allowed them to move, slice, bend, and lift micron-sized waveguiding crystals using atomic force microscopy.

  * Crystals are normally rigid, stiff structures.

  * Generally, millimetre- to centimetre-long crystals were bent using hand-held tweezers. This method lacks precision and control. Also, the crystals used were larger than what was required for miniaturisation.

- The researchers have also been able to develop other crucial photonic elements like polymer microcavities or microresonators (light-trapping elements) using the same technique.

- The researchers have been able to build an 'organic photonic integrated circuit' or OPIC using the technique.

Significance:

- The ability to manipulate micron-sized crystals with precision and control would be very useful in the field of nanophotonics.

- This technique can help achieve an unprecedented level of miniaturisation and pave the way to all-optical-technology such as pliable, wearable devices operated by light entirely.

Awareness in the field of biology and medicine

3. Potential Treatment for Alzheimer's

   » Prelims: Alzheimers disease

Context:

JNCASR Scientists develop a new molecule that could be a potential drug candidate for the treatment of Alzheimer's.

JNCASR – Jawaharlal Nehru Centre for Advanced Scientific Research, autonomous institute under the Dept. of Science and Technology, GOI. Located in Bengaluru.

Details:

- Scientists have developed a small molecule that disrupts the mechanism through which neurons become dysfunctional in Alzheimer's Disease (AD).

- The molecule could be a potential drug candidate to halt or cure the leading cause of dementia (70-80%) worldwide.

Alzheimer's Disease:

- In the Alzheimer's brain, abnormal levels of naturally forming protein clump together to form plaques that collect between neurons and disrupt cell function.

- This is caused by production and deposition of the amyloid peptide (Aβ) that accumulates in the central nervous system.

- The multifactorial nature of Alzheimer's disease attributed to multifaceted amyloid toxicity has kept researchers from developing effective treatment.

The Study:

- The scientists designed and synthesized a set of novel small molecules and identified a lead candidate which they found could reduce the toxicity of Amyloid Beta (Aβ) toxicity.

- The detailed studies established the molecule called TGR63 as the lead candidate to rescue neuronal cells from amyloid toxicity.

- Mice brain affected with Alzheimer's disease when treated with TGR63 showed a significant reduction of amyloid deposits, validating its therapeutic efficacy.

- The mice also showed reduction of learning deficiency, memory impairment, and cognitive decline as revealed by distinct behavioural tests.

- These key attributes have validated the potential of TGR63 as a promising drug candidate for the treatment of AD.

Background:

- Currently available treatments provide only temporary relief, and there are no approved drugs that directly act on the disease mechanisms of Alzheimer's disease.

- Thus, there is an unmet need to develop drug candidates to halt or cure Alzheimer's disease.

- AD severely affects the patients, families, caregivers and hence is a major societal and economic burden globally.

Awareness in the field of biotechnology

4. Detailed genome map of malaria vector

   » Prelims: Malaria vector

   » Mains: Significance of Biotechnology in the fight against diseases

Context:

- Scientists have unveiled the detailed genome of the Asian malaria vector mosquito Anopheles stephensi.

Details:

- Under the newly upgraded Anopheles stephensi genome, more than 3,000 genes that previously undetected genes have been unearthed.

  * The newly discovered genes are found to play key roles in the metabolism of ingested blood meal, reproduction and immunity against microbial parasites.

  * The discoveries also include 29 formerly undetected genes that play crucial roles in resistance to chemical insecticides.

Significance:

- The detailed genome of the malaria mosquito vector including new genes vital for the development of genetic control strategies of disease transmission would help malaria biologists in India and the rest of the world towards the goal of malaria elimination. In order to engineer advanced forms of defence against malaria transmission, including targeted CRISPR and gene drive–based strategies, scientists require intricate knowledge of the genomes of vector mosquitoes.

  * CRISPR technology is a gene-editing tool which allows researchers to easily alter DNA sequences and modify gene function.

- The newly discovered genes can also help address the issue of growing insecticide-resistant mutations in Asian and African An. stephensi populations.

Initiatives in news

5. TIFAC unveils two new initiatives

» Prelims: TIFAC, SAKSHAM and seaweed mission

- Technology Information Forecasting and Assessment Council (TIFAC) is a technology think tank and autonomous body under the GOI's Department of Science & Technology (S&T).

- It was formed in 1988 and is headquartered in New Delhi.

- TIFAC assesses the technology trajectories and supports innovation by networked actions in select areas of national importance.

- It strives for technology development in the country by leveraging technology innovation through sustained and concerted programmes in close association with industry and academia.

Context:

- TIFAC has launched the two schemes.
    * SAKSHAM (Shramik Shakti Manch)
    * Seaweed Mission

SAKSHAM:

- It is a dynamic portal for jobs/mapping the skills of Shramiks vis-à-vis requirements of MSMEs and other industries all across the country.

- The portal with the demand and supply data uses algorithm and Artificial Intelligence (AI) tools, for geo-spatial information on demand and availability of Shramiks, and also provide analysis on skill training programmes of Shramiks.

- The pilot portal originally initiated with two districts is now being launched as an all India portal.

- Key features of SAKSHAM:
    * A dynamic job portal – opportunity for Shramiks and MSMEs.
    * Facilitate creation of 10 lakh blue collar jobs
    * Direct connect between Shramiks and MSMEs, no middleman in between
    * Minimise migration of Shramiks – job opportunity in proximate MSMEs

Seaweed Mission

- It is a mission for the commercial farming of seaweeds and its processing for value addition.

- Despite several advantages, commercial seaweeds cultivation has not been taking place

in the country at an appropriate scale, as being practiced in South-East Asian countries.

- By an estimate, if cultivation is done in ≈10 million hectares or 5% of the EEZ area of India, it can provide employment to approximately 50 million people; set up new seaweed industry; contribute to national GDP; ocean productivity; abate algal blooms, sequester millions of tons CO_2; contribute to a healthier ocean; provide bio-ethanol of 6.6 billion litres.

- Thus, with this objective, TIFAC will showcase a model, in collaboration with other in-line ministries, of the commercial farming of seaweeds and its processing. Seaweed Cultivation would help in boosting the economy.

- Seaweed cultivation:
    * Seaweed Cultivation is also called kelp farming.
    * It is the practice of cultivating and harvesting seaweeds.
    * Seaweed, or macroalgae, refers to thousands of species of macroscopic, multicellular, marine algae.
    * Seaweed species such as kelps provide essential nursery habitat for fisheries and other marine species and thus protect food sources; other species, such as planktonic algae, play a vital role in capturing carbon, producing up to 90% of Earth's oxygen.

Miscellaneous

6. Einsteinium

» Prelims: Einsteinium

- Einsteinium is an element with the symbol Es and atomic number 99.

- Einsteinium is a member of the actinide series. Einsteinium was discovered as a component of the debris of the first hydrogen bomb explosion in 1952.

- It is exceptionally radioactive.

- Recently, chemists have studied and characterised its properties in the lab.

Miscellaneous

7. Cadmium (Cd) doped Silver Antimony Telluride

» Prelims: Thermoelectric energy conversion; SERB

Context:

New material converts waste heat to electricity for small home appliances & vehicles.

What's in the news?

- Scientists have found a new Lead (Pb) free material which can efficiently convert waste heat to power our small home equipment and automobiles.

Background:

- Thermoelectric energy conversion allows generation of electrical voltage when one end of a material is heated while keeping the other side cold.

- Finding an efficient material to realize this scientific principle has been a daunting task for scientists.

- It entails fitting in three seemingly different properties into a single material – high electrical conductivity of metals, high thermoelectric sensitivity of semiconductors, and low thermal conductivity of glasses.

- Most efficient thermoelectric materials developed by scientists so far use Lead as a major constituent element, restricting their use for mass-market applications.

The Study:

- Scientists from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru, an autonomous institution of the Department of Science & Technology (DST), Government of India have now identified a lead-free material called Cadmium (Cd) doped Silver Antimony Telluride ($AgSbTe_2$) which can efficiently allow recovery of electricity from 'waste heat' marking a paradigm shift in the thermoelectric puzzle.

- This work is supported by Swarna-Jayanti fellowship and project fund from Science and Engineering Research Board (SERB) and Department of Science & Technology (DST), India, along with support from New Chemistry Unit (NCU) & International Centre for Materials Science (ICMS), JNCASR, Bangalore.

Miscellaneous

8. National Science Day

- February 28 is annually observed as National Science Day in India to commemorate the discovery of the Raman Effect by Nobel laureate Dr C V Raman.

- The day is celebrated since 1987.

- The theme for National Science Day 2021 is "Future of STI: Impacts on Education, Skills, and Work".

- The observance of this day aims to motivate the students to gain hands-on experience in the field of science.

- The celebration of National Science Day consists of public speeches, science movies, science exhibitions, events based on science themes, concepts, and many more activities.

- The government of India felicitates scientists who have contributed immensely in the field of science

Science and Technology

9. Imparting direction to science in India

> » Mains: Progress made by India in S&T research; challenges and measures needed

The article throws light upon the progress that India has made in science and technology research, problems faced in research and opportunities.

Publications:

- From the report published by the National Science Foundation of the U.S. in December 2019, India was the third largest publisher of peer-reviewed science and engineering journal articles and conference papers.

- The average yearly growth rate was 10.73% from 2008, which was greater than China's 7.81%.

- However, China and the United States had about thrice and twice the number, respectively, of India's publications.

Issue:

- The publications from India are not impactful.

- In the top 1% of the most cited publications from 2016 (called HCA, or Highly Cited Articles), India's index score of 0.7 is lower than that of the U.S., China and the European Union.

- An index score of 1 or more is considered good.

Steps must be taken to ensure that the impact, and hence the citation of publications from India, should improve.

Patents:

- The World Intellectual Property Organization (WIPO) through their Patent Cooperation Treaty (PCT) is the primary channel of filing international patent applications.

- In its report for 2019, WIPO says India filed a modest number of 2,053 patent applications.

- During the same period, China filed 58,990 and the U.S filed 57,840 patents.

- China filed just 276 patent applications in 1999 but rose to become an innovation titan in 2019.

Steps taken:

- The Indian Government has put in place the National Intellectual Property Rights (IPR) Policy in 2016 to stimulate a dynamic, vibrant and balanced intellectual property rights system.

- One of the objectives is human capital development.

- The mission to foster innovation, replicate it at scale and commercialise it is a work in progress consequent to the policy.

Science policies over time:

- India realised early as a republic the need to use science to become a welfare state.
- There have been four science policies after 1947.
- The draft of the fifth policy was released recently.

First Science Policy:

- Scientific Policy Resolution – India's first science policy adopted in 1958, aimed to develop scientific enterprise and lay the foundation for scientific temper.
- It led to the establishment of many research institutes and national laboratories.
- By 1980, India had developed advanced scientific infrastructure with sufficient scientific personnel.

Second Science Policy:

- The focus in the second science policy, Technology Policy Statement, in 1983, was technological self-reliance and to use technology to benefit all sections of society, while strengthening research in fields such as electronics and biotechnology.

Third Science Policy:

- The Science and Technology Policy 2003 was the first science policy after the economic liberalisation of 1991.
- It aimed to increase investment in research and development and brought it to 0.7%.
- The Scientific and Engineering Research Board (SERB) was established to promote research.

Fourth Science Policy:

- In 2013, India's science policy included Innovation in its scope and was called Science, Technology and Innovation Policy.
- The focus was to be one of the top five global scientific leaders.
- India achieved this through:
  - * Building partnerships with States
  - * Establishing more research and development centres
  - * Collaborating in international projects such as the Large Hadron Collider in the European Union.

Draft of the Science, Technology and Innovation Policy 2020 (STIP 2020):

- STIP 2020 is the fifth science policy.
- It was released in January 2021 and offers hope to research in India.
- Vision of the policy:
  - * To double the number of full-time

equivalent (FTE) researchers, Gross Domestic Expenditure on R&D (GERD) and private sector contribution to the GERD every 5 years.

  - * To position India among the top three scientific superpowers in the next decade.

- STIP 2020 defines an Open Science Framework which will create a "one nation, one subscription" solution that will give all individuals and institutions in India access to all top journals through a central subscription.
- This scheme would help in improving access to knowledge.
- It also defines strategies to improve funding for and participation in research.
- The policy seeks to define strategies that are "decentralized, evidence-informed, bottom-up, experts-driven, and inclusive".
- It makes the right moves and strikes the right notes to make India future-ready.
- More specific directives and implementation with a scientific temper will be key to the policy's success.

Way Forward:

- There is a need to improve Gross Domestic Expenditure on R&D (GERD).
  - * India's GERD is currently around 0.6% of GDP.
  - * This is quite low when compared to the investments by the U.S. and China which are greater than 2%.
  - * Israel's GERD is more than 4%.
  - * A key reason is the low private sector contribution.

- STIP 2020 defines solutions to improve funding thus: all States to fund research, multinational corporations to participate in research, fiscal incentives and support for innovation in medium and small-scale enterprises.
  - * The government should also invest more into research.

- There is a need for inclusion of under-represented groups of people in research, support for indigenous knowledge systems, using artificial intelligence, reaching out to the Indian scientific diaspora for collaboration, science diplomacy with partner countries, and setting up a strategic technology development fund to give impetus to research.

Conclusion:

Science diplomacy is at the fore now with India

offering COVID-19 vaccines to many countries; formulating a policy around it will yield dividends. Support for indigenous knowledge systems should enable them to improve upon their limitations in subscribing to transparency and verifiability.

10. NASA's Perseverance rover

» Prelims: Perseverance mission

» Mains: Significance of study of mars

Context:

NASA's Perseverance rover has landed on the surface of Mars. With this, NASA is set to become the first space agency to fly a drone in the atmosphere of another planet.

Details:

- It was launched in July 2020.
- Its primary task is to:
  * Seek signs of ancient life.
  * Collect samples of rock and regolith to possibly return these to Earth.

Perseverance:

- Perseverance is an SUV-sized Mars rover designed to explore the Jezero crater on Mars as part of NASA's Mars 2020 mission.
- It is fuelled by electrical power by using the heat of plutonium's radioactive decay.
- Perseverance carries 23 cameras, including 7 specifically for scientific purposes, and a sample-caching system, which will package and lay aside samples for a later mission to pick up and carry back to Earth.

Perseverance Rover's seven instruments:
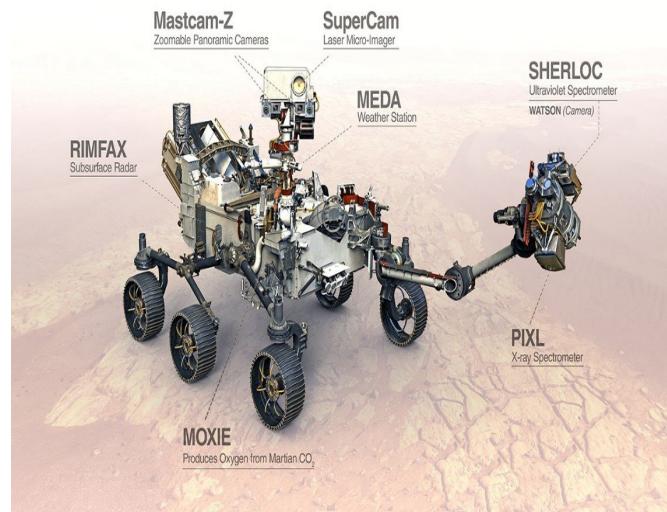
- 1. SuperCam: For imaging, chemical analysis, and mineralogy in rocks and regolith from a distance. It is an upgrade of ChemCam on the Curiosity mission.
- 2. MastCam-Z: For stereoscopic imaging.
- 3. Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC): It is an ultraviolet spectrometer that uses imaging and an ultraviolet laser to determine fine-scale mineralogy and detect organic compounds.
- 4. Planetary Instrument for X-Ray Lithochemistry (PIXL): to determine the elemental composition of Martian surface materials.
- 5. Radar Imager for Mars' subsurface experiment (RIMFAX): Ground-penetrating radar to image different ground densities, structural layers, buried rocks, meteorites, underground water ice, and salty brines.

- 6. Mars Environmental Dynamics Analyzer (MEDA): for measuring temperature, wind speed and direction, pressure, relative humidity, radiation, and dust particles' size and shape.
- 7. Mars Oxygen ISRU Experiment (MOXIE): Technology test to produce oxygen (O_2) from atmospheric carbon dioxide (CO_2).

  * It will, for the first time, manufacture molecular oxygen on Mars using carbon dioxide from the carbon-dioxide-rich atmosphere.

  * ISRU means In Situ Resource Utilization which is the use of local resources to meet human needs or requirements of the spacecraft.

Significance:

- Scientists hope to find biosignatures embedded in samples of ancient sediments that Perseverance is designed to extract from Martian rock for future analysis back on Earth.
- These would be the first such specimens ever collected by humankind from another planet.
- Two subsequent Mars missions are planned to retrieve the samples and return them to NASA in the next decade.

Note:

- NASA has been sending rovers on Mars since 1997. It is because Mars is a planet that humans can aspire to visit or to stay for a longer duration. The planet had flowing water and an atmosphere in the distant past.

- Mars Pathfinder Mission was initiated in 1997 by NASA.

- In 2003, twin rovers, Spirit and Opportunity were sent to the planet by NASA.

- In 2012, the space agency sent Curiosity Mission.

SECURITY AND DEFENCE

Security: Emerging challenges to Internal Security

1. ### Mizoram group seeks asylum for coup-hit Myanmar villagers

   » Prelims: Map based information

   » Mains: Internal security challenges along India Myanmar border

   What's in News?

   - Mizoram's apex students' body has asked the State government to provide asylum to some villagers in Myanmar affected by the military coup there.

   Issue:

   - People belonging to Myanmar's Chin community were seeking to migrate to Mizoram to escape a military crackdown.

   - The Chin National Army (CAN) – an extremist group is seeking self-determination in Chin State across the border.

   - Claiming that the Chins have been affected by the civil unrest in Myanmar, the Mizo Students' Union has appealed to the State government to play a proactive role and accept those affected as refugees.

   Note:

   - The Chin community and the Mizos in India belong to the Zo ethnic group, which share the same ancestry.

   Zo Ethnic group:

   - The Zo people are an ethnic group of India, Bangladesh and Myanmar.

   - The word Zo is used to describe an ethnic group, also known as the Mizo, the Kuki, the Zomi, the Chin and a number of other names based on geographic distribution.

   - They are a large group of related Tibeto-Burman people spread throughout the northeastern states of India, north-western Myanmar and the Chittagong Hill Tracts of Bangladesh.

Cyber Security

2. ### NetWire

   » Prelims: NetWire; RAT

   - NetWire, is a malware. It is a remote access trojan, or RAT, which gives control of the infected system to an attacker through a command and control server. The commands emerging from this server is what the infected system will carry out.

   - Such malware can log keystrokes and compromise passwords.

   - While most anti-virus softwares are equipped to counter the threat of data exfiltration (stealing data) posed by malwares, these softwares are found to be largely ineffective in countering infiltration of systems.

Cyber Security

3. ### Disinformation is a cybersecurity threat

   » Mains: Internal security challenge posed by disinformation and measures to mitigate its impact

   Context:

   - The increasing threat posed by disinformation.

   Background:

   - So far cybersecurity has mainly focused on protecting and defending computer systems, networks, and our digital lives from disruption.

   - The main focus of Cybersecurity has been to defend against cyberattacks executed using malware, viruses, trojans, botnets, and social engineering.

   - There has been very little attention to the threat posed by disinformation attacks.

   - Also, the industry has treated these attacks (cyberattacks and disinformation attack) independently and has separate teams working in silos to protect and defend against these attacks. The lack of coordination between teams leaves a huge gap that is exploited by malicious actors.

   Details:

   Disinformation:

   - Disinformation attacks are the intentional dissemination of false information, with an end goal of misleading, confusing, or manipulating an audience. These attacks are commonly employed to reshape attitudes and beliefs, drive a particular agenda, or elicit certain actions out of a target audience.

   - Nation-state actors, ideological believers, violent extremists, and economically motivated enterprises manipulate the information ecosystem to create social discord, increase polarisation, influence the outcome of an election, etc.

- Disinformation attacks can be employed through traditional media outlets such as TV channels or through social media.
- Disinformation attacks use manipulated, miscontextualised, misappropriated information, deep fakes, and cheap fakes.
- They pose the possibility of societal breakdown, business interruption, and violence in the streets.

Cognitive hacking:

- A cognitive hacking attack attempts to change the target audience's thoughts and actions, galvanise societies and disrupt harmony using disinformation.
- Disinformation is used for social engineering threats on a mass scale.

Examples of disinformation attacks and their impacts:

- QAnon spread false information about the U.S. 2020 presidential election. This led to rioting in the nation.
- Conspiracy theorists (in the United Kingdom, the Netherlands, Ireland, Cyprus and Belgium) burned down 5G towers because they believed it caused the novel coronavirus pandemic.
- COVID-19 disinformation campaigns have prevented people from wearing masks, using potentially dangerous alternative cures, and not getting vaccinated, making it even more challenging to contain the virus.

Factors aiding disinformation attacks:

- The advertisement-centric business modes and attention economy allow malicious actors to fill the information channels with disinformation with unprecedented speed and scale.
- Deep fakes add a whole new level of danger to disinformation campaigns.
- With the advent of social media, disinformation attacks have become increasingly widespread and potent. Digital tools such as bots, algorithms, and AI technology are leveraged to spread and amplify disinformation and micro-target populations on online platforms like Instagram, Twitter, Facebook, and YouTube.

Way forward:

- There is a need to defend, protect and respond, and find effective and practical solutions to counter and intervene against infodemics.

Recognizing disinformation as a cybersecurity threat:

- By treating disinformation as a cybersecurity threat we can find effective countermeasures to cognitive hacking.

Defense-in-depth:

- We need a defense-in-depth strategy for disinformation. The defense-in-depth model identifies disinformation actors and removes them. Authenticity solutions can intervene before disinformation gets posted online.
- If the disinformation still gets by, detection solutions using humans and artificial intelligence, internal and external fact-checking can label or remove the content.

Information sharing:

- ISAC (Information sharing and analysis centers) like mechanism to share the identity, content, context, actions, and behaviours of actors and disinformation across platforms is needed. Information sharing will help disinformation countermeasures to scale better and respond quickly.

Education:

- A critical component of cybersecurity is education. The technology industry, civil society and the government should coordinate to make users aware of the threat of disinformation attacks.
- The industry with public-private partnerships must also invest in media literacy efforts to reach out to the discerning public. Intervention with media education can make a big difference in understanding context, motivations, and challenging disinformation to reduce damage.

Balanced approach:

- There is a need to balance the rights of speech and the freedom of expression with the dangers of disinformation.
- Need to have well-defined laws and regulations for cybersecurity criminals.

Co-ordinated approach:

- The disinformation infodemic requires a concerted and coordinated effort by governments, businesses, non-governmental organisations, and other entities to face the threat posed by disinformation attacks.

Border Security

4. 'Smart walls' for Indian borders

  » Mains: Smart wall technology; Challenges of border security in India

Context:

- United States President Joe Biden has stopped the construction of the border wall between the U.S. and Mexico as part of a series of executive actions.

- However, an alternative has been offered.

- Proposed is a 'smart' wall that replaces the physical and armed patrolling with advanced surveillance technology.

Smart Wall:

- The 'smart wall' technology could solve border security issues without the need for a physical barrier.

- The wall would use sensors, radars, and surveillance technology to detect and track border break-ins, and technology capable of performing the most difficult tasks dedicated to border security.

Novelty of "Smart Wall":

- The concept of a smart wall between the U.S. and Mexico is not novel.

- Donald Trump envisaged this concept.

  * It was indicated that artificial intelligence shall be used at a novel scale to complement the border wall project and a technology firm was sought to be hired.

  * It was stated that hundreds of mobile surveillance towers would be deployed, in addition, the complete system of a virtual wall would consist of a radar satellite, computer-equipped border-control vehicles, control sensors and underground sensors.

  * Along with surveillance towers and cameras, thermal imaging would be used, which would help in the detection of objects.

  * The system would even be capable of distinguishing between animals, humans, and vehicles, and then sending updates to handheld mobile devices of the U.S. patrol agents.

Can such a project be undertaken to secure Indian borders?

- India has been struggling with the problem of terrorists and smugglers infiltrating into the country and efforts are ongoing to secure our borders and curb cross-border infiltration.

- Therefore, it is proposed that it is high time that India uses such technology to secure its borders.

- A critical factor that must be considered to enable the usage of such a system along Indian borders is that the terrain in the region is rugged, and not even clearly defined. Hence, erecting fences, walls or any physical structures is extremely difficult.

  * A smart wall makes use of systems that would be designed in such a way that they can operate even in rugged areas.

- In the U.S., various other benefits, such as cost-effectiveness, less damage to the environment, fewer land seizures, and speedier deployment are being noted that give the "smart wall" concept an edge over traditional physical borders.

- Such a system, even if not feasible for our long boundaries, may still be deployed to enhance critical security establishments of the country and complement the already-existing physical fencing and walls.

Conclusion:

- It is imperative for Indian armed forces to be well-equipped and simultaneously have the latest technological advantage over its enemies.

- Experts must explore this idea to effectively counter the problem of cross-border infiltration.

Military exercises

5. TROPEX

  » Prelims: TROPEX

- TROPEX (Theatre Level Operational Readiness Exercise) is Indian Navy's largest exercise.

- It sees participation from all operational units of the Navy including ships, submarines, aircraft as well as units of the Indian Army, Indian Air Force and the Coast Guard.

- The exercise is being conducted over a vast geographical expanse in the Indian Ocean Region including its adjunct waters and is aimed at testing combat readiness of the Navy in a complex multi-dimensional scenario set in the context of the current geo strategic environment.

- The Theatre Level exercise also aims to validate Navy's offensive-defence capabilities, safeguard national interests in the maritime domain and promote stability and peace in the Indian Ocean Region.

Internal Security-Naxalism

6. On the alert, always

  » Prelims: CoBRA

  » Mains: Challenge posed by naxalism in India and way forward

Context:

- Death of Assistant Commandant of the CoBRA (Commando Battalion for Resolute Action) unit, in an improvised explosive device (IED) blast in 2020.

- The IED went off while an anti-Maoist operation was underway and also injured eight others.

Background:

History of Left-wing extremism:

- 80 personnel of the Central Reserve Police Force were killed (CRPF) in Chhattisgarh due to land mine blasts in various incidents in 2008.

  * In a move aimed at containing LWE, massive deployment of CRPF personnel was ordered in the left-wing extremism (LWE)-affected States of Chhattisgarh, Jharkhand, Odisha, West Bengal, Madhya Pradesh and Uttar Pradesh.

  * These newly inducted CRPF battalions underwent 12 weeks of induction training in Chhattisgarh so that they would be familiar with the terrain, the modus operandi of the Maoists, and the precautionary measures to be taken. They were also put through intensive firing practice. Soon the Border Security Force and the Indo Tibetan Border Police joined the CRPF and the State police forces in combating the Maoists.

- Despite the training and precautionary measures adopted, security forces lost many personnel in 2009 and 2010, with 76 CRPF men killed in an attack in Dantewada in 2010.

- The CRPF was able to neutralise close to 200 Maoists between 2009 and 2011. The CRPF slowly gained the upper hand. It has forced the Maoists to be on the run or surrender, which has brought down incidents of violence in the LWE-affected States.

Way forward:

- Much more needs to be done for left-wing extremism to be completely wiped out.

Improve intelligence system:

- There is a need to enhance our intelligence system. This will help preempt any attacks on the security forces and help save lives.

- The intelligence set-up in the LWE-affected States needs to be geared up not only to avert attacks on security forces but also so that they can be on the offensive against the extremists.

- Efforts are also needed to upgrade technical intelligence to intercept communication among the left-wing extremists.

Employing technology/Novel methods:

- The use of drones could be used as force multipliers in the battle against the extremists.

- The extensive use of Belgian Malinois dogs could help in timely detection of IEDs.

Higher budgetary allocation for security:

- There is a need for timely and adequate allocation for security-related expenditure among the LWE-affected States.

Training the local forces:

- Even after certain districts are declared free of LWE activities, CAPFs will have to be stationed for some years until the States rely completely on their own Commando outfits like the Greyhounds of Andhra Pradesh and the Jharkhand Jaguars to prevent the re-emergence of Maoism.

Miscellaneous

7. 'No blanket nod given for surveillance'

» Prelims: NATGRID

The Centre has denied granting blanket permission to any agency for interception or monitoring of any messages or information under its surveillance programmes such as the Centralised Monitoring System, the Network Traffic Analysis, and the National Intelligence Grid.

- An affidavit was filed by the Ministry of Home Affairs before the Delhi High Court in response to a petition seeking to constitute a permanent, independent oversight body for reviewing lawful interception and monitoring orders or warrants under the provisions of the Indian Telegraph Act and the Information Technology Act.

- The affidavit said that there is no blanket permission to any agency for interception or monitoring or decryption.

- It also said that permission from the competent authority (Union Home Secretary) is required, as per due process of law and rules in each case.

- The ministry said that the existing safeguards of oversight by a high-level committee chaired by Cabinet Secretary at the Central level and chaired by Chief Secretary at the State level, are adequate and provide effective supervision.

Centralised Monitoring System:

Background

- In 2009, following the Mumbai 2008 terrorist attacks, the Government of India envisioned the creation of a Central Monitoring System (CMS) which would centralize the interception of communications data and enable access to it by law enforcement agencies.

Details

- It was designed to allow the government to monitor and intercept telephone calls, email messages, and communications on the Internet,

- The CMS is based on the Telegraph Act of 1885 which states that the central or state government may intercept messages if the government is "satisfied that it is necessary or expedient to do so in the interests of the sovereignty and integrity of India, the security of the state, friendly relations with foreign states or public order or for preventing incitement to the commission of an offence."

How does it work?

- It would be a centralized mechanism where the telecommunication and internet connections can be analyzed by Indian government and its agencies.

The project is run by Centre for Development of Telematics (C-DOT)

- It is an Indian Government owned telecommunications technology development centre.
- It was established in 1984 with initial mandate of designing and developing digital exchanges. C-DOT has expanded to develop intelligent computer software applications.
- It is a registered society under the Societies Registration Act,1860.
- It is a registered public-funded research institution with the Department of Scientific and Industrial Research (DSIR), Government of India.

Network Traffic Analysis:

- NETRA is a software network developed by India's Centre for Artificial Intelligence and Robotics (CAIR), a Defence Research and Development Organisation (DRDO) laboratory, and is used by the Intelligence Bureau, India's domestic intelligence agency, and the Research and Analysis Wing (RAW), the country's external intelligence agency to intercept and analyse internet traffic using pre-defined filters
- The internet spy system will be capable of detecting words like 'attack', 'bomb', 'blast' or 'kill' in a matter of seconds from reams of tweets, status updates, emails, instant messaging transcripts, internet calls, blogs and forums.

Defence technology

8. Advanced Indigenous Mob Control Vehicle Prototype

- » Prelims: CSIR-CMERI:

Context:

- CSIR-CMERI demonstrates three variants of advanced indigenous design and featured Mob Control Vehicle prototypes.

Details:

- CSIR-Central Mechanical Engineering Research Institute (CMERI – Durgapur) has demonstrated three innovative variants 'Compact, Medium, Heavy' category of Mob Control Vehicles (MCVs) to a team of the Home Affairs Ministry
- The aim was to elevate modern technical support to paramilitary forces engaged in maintaining law and order situation; train and equip them with advanced options.

- This is the first of its kind advanced indigenous design and featured development in the country.
  - * The Heavy category of these MCV prototypes has a 7.5-ton payload capacity.
  - * The Medium category is of 2.5-ton payload capacity,
  - * The compact one is a tractor-based vehicle for easy manoeuvring.
- The prototypes are fitted with many features such as height adjustable front shovel, retractable protective front shield, all round irritant spray system, foam spray system and tear smoke munitions system.
- The other capabilities are cabin pressurization system, retractable multi barrel tear gas launcher with appropriate electronic vision systems, wide angle surveillance, multi-channel video transmission system, GPS tracker and GPS navigator.

Defence technology

9. Advanced Light Helicopters (ALH) Mk III

- » Prelims: ALH

Context:

- HAL hands over five ALHs Mk III to Indian Navy and Indian Coast Guard.

About ALH Mk III:

- The ALH Mk III or the Mark III Advanced Light Helicopter is meant for coastal security.

- The helicopter features a full glass cockpit with HAL's Integrated Architecture Display System (IADS), more powerful "Shakti" (Safran Ardiden 1H1) engines, and a host of new systems.

- It is fully loaded, multi-mission and fitted with an array of advanced sensors.

- These helicopters have come up with latest-generation avionics and role equipment.

- It is primarily meant for use in a shore-based role.

- The Mk-III ALH are also equipped with an indigenous low frequency dunking sonar (LFDS) developed by Kochi-based Naval Physical and Oceanographic Laboratory.

- The aircraft has also a nose-mounted surveillance radar with 270-degree coverage that can detect, classify and track multiple marine targets.

- It also has synthetic-aperture radar, inverse synthetic-aperture radar, and moving target indication classification functions.

Defence technology

10. Anti-Tank Guided Missile Systems

» Prelims: Helina and Dhruvastra

Context:

- Successful user trials of DRDO-developed Anti-Tank Guided Missile Systems 'Helina' and 'Dhruvastra'.

About Helina and Dhruvastra:

- The 'Helina' and 'Dhruvastra', that are third-generation anti-tank guided missiles, were successfully test-fired by India.

- Both were indigenously developed by DRDO.

- The successful trials paved the way for Helina's induction into the Indian Army and Dhruvastra's induction into the Air Force.

- The missiles were test-fired at Pokhran deserts in Rajasthan.

- These missiles are one of the most advanced anti-tank weapons in the world according to the Defence Ministry.

- The system has all-weather day-and-night capability and can defeat battle tanks with conventional armour as well as with explosive reactive armour.

- These anti-tank missiles can engage targets both in direct hit mode as well as top attack mode.

Defence technology

11. Arjun Mk-1A

» Prelims: Arjun tank

Context:

- Prime Minister Narendra Modi handed over the indigenously developed Arjun Main Battle Tank (MK-1A) to the Indian Army

What is the Arjun Main Battle Tank?

- The Arjun Main Battle Tank project was initiated by DRDO in 1972 with the Combat Vehicles Research and Development Establishment (CVRDE) as its lead laboratory.

- It is indigenously designed, developed and manufactured by CVRDE and DRDO along with 15 academic institutions, eight labs and several MSMEs.

- The objective was to create a "state-of-the-art tank with superior fire power, high mobility, and excellent protection".

What are the features of the Arjun tank?

- The Arjun tanks stand out for their 'Fin Stabilized Armor Piercing Discarding Sabot (FSAPDS)' ammunition and 120-mm calibre rifled gun.

- It also has a computer-controlled integrated fire control system with stabilized sighting that works in all lighting conditions.

- The secondary weapons include a co-axial 7.62-mm machine gun for anti-personnel and a 12.7-mm machine gun for anti-aircraft and ground targets.

How is the Mk-1A different?

- The Mk-1A version has 14 major upgrades on the earlier version. It is also supposed to have missile firing capability as per the design, but this feature will be added later as final testing of the capability is still on.

- However, the biggest achievement with the latest version is 54.3 per cent indigenous content against the 41 per cent in the earlier model.

Defence technology

12. K9 Vajra howitzer

» Prelims: K9 Vajra howitzer

- It is a tracked self-propelled howitzer built by Larsen & Toubro (L&T).

- As a part of its 'Make-in-India' initiative, the company established a green-field manufacturing-cum-integration and testing facility at its Hazira manufacturing complex near Surat to produce the guns.

- It was built at L&T's armoured system complex at Hazira in Gujarat.

13. LRSAM Missile System

- » Prelims: LRSAM missile system

- Long Range Surface to Air Missiles (LRSAM) is jointly developed by DRDO and Israel Aerospace Industries (IAI) to equip the latest ships of the Indian Navy.

- The missile system can provide point and area defence against various aerial targets including fighter aircraft, subsonic & supersonic cruise missiles.

- The missile is powered by indigenously developed dual-pulse rocket motor and dual control system to impart the required manoeuvrability at the terminal phase.

- This state of art weapon system is designed with active Radio Frequency (RF) seeker to identify, track, engage and destroy the target with high kill probability.

14. Software Defined Radio (SDR) for Indian Army

- » Prelims: SDR

Context:

- Software Defined Radio (SDR) for Indian Army under Aatmanirbhar Bharat Abhiyaan.

- The Indian Army is in the process of revamping its communication systems by procuring Very/Ultra High Frequency (V/UHF) Manpack SDRs under Make-II category.

Background:

- Communication is vital and critical to all military operations.

- The Combat Net Radio (CNR) is the mainstay of communications for the Indian Army in the battlefield.

- The contemporary CNR equipment in the Indian Army supports voice communication only and has limited or no data transmission capability.

What's in News?

- To arm the soldiers with advantages offered by technology and equip them to fight a war in the net–centric battle space, the existing radios are to be replaced soon by indigenously developed Software Defined Radio (SDR).

- SDR defines a collection of hardware and software technologies where some or all of the radio's operating functions (also referred to as physical layer processing) are implemented through modifiable software or firmware operating on programmable processing technologies.

Advantages

- SDR have enhanced data transmission capability, enhanced voice clarity and data transmission accuracy in spectrally noisy environments, support multiple waveforms, greater system security and better communication survivability in clear and secure mode to meet the operational requirements of the Indian Army.

ENVIRONMENT AND ECOLOGY

Environmental degradation

1. A bullet through an island's heart

» Prelims: Little Andaman location

» Mains: Significance of the development project; challenges and concerns

Context:

- The NITI Aayog's 'Sustainable Development of Little Andaman Island – Vision Document', proposing to set up a megacity in the Little Andaman Island.

Details:

- The plan envisages sustainable and holistic development of the 680 sq km, Little Andaman Island in the Andaman and Nicobar group.

- The plan proposes the building of a new greenfield coastal city in the island, that will be developed as a free trade zone.

- The plan proposes three development zones:

    * Zone 1, planned along the east coast of Little Andaman, will be the financial district and medi city and will include an aerocity, and a tourism and hospital district.

    * Zone 2, spread over pristine forest, will house the leisure zone, will have a film city, a residential district and a tourism SEZ.

    * Zone 3, again spread over pristine forest zone will be a nature zone, further categorised into three districts: an exclusive forest resort, a nature healing district and a nature retreat, all on the western coast. The nature resort complex is to have theme resorts, floating/ underwater resorts, beach hotels, and high-end residential villas.

- Necessary infrastructure like an international airport, Greenfield ring road, mass rapid transit network, jetty has also been proposed.

Significance of the proposal:

- The proposal aims to leverage the strategic location and natural features of the island to ensure development in the islands.

Little Andaman

- The location of the island and its development would augur well for India's stand in the Indian Ocean region, which it considers as its zone of influence. The document envisages developing the islands into "veritable jewels for the country".

- The Greenfield city could compete with the likes of Singapore and Hong Kong and emerge as an alternative for business establishments. This augurs well for the Indian economy.

- The infrastructural development could aid employment generation in the region. This could stimulate the development process in the entire Andaman and Nicobar chain of islands.

'Blocks' to development:

- There are certain factors that could act as impediments in the proposal to develop Little Andaman.

Lack of connectivity:

- Lack of good connectivity with the Indian mainland and global cities.

Fragile biodiversity of the region:

- Fragile biodiversity and natural ecosystems in the islands.

- 95% of Little Andaman is covered in forest, a large part of it the pristine evergreen type. Some 640 sq km of the island is Reserve Forest under the Indian Forest Act.

Supreme Court notifications:

- Supreme Court notifications pose an impediment to development in environmentally-vulnerable areas.

Concerns:

Impact on the indigenous tribes of the island:

- There is a notable presence of indigenous tribes on the island. Nearly 450 sq km of the island area is protected as the Onge Tribal Reserve.

- The vision suggests the relocation of the tribals to other parts of the island if the need arises. The development process could therefore lead to their displacement and have an impact on their welfare.

Environmental impact:

- The plan has raised an alarm among conservationists. The regional forest department too has raised serious concerns over the ecological impact of the project considering the ecological fragility of the region.

- The vision needs around 35% of the island land area and the plan suggests de-reserving 32% of the reserved forest and de-notifying 138 sq km or 31% of the tribal reserve.

- The large diversion of forest land would lead to large scale deforestation and would hence have an adverse impact on the various wild animals that inhabit the area.

  * More than 2 million trees stand in the forest land sought for these projects.

  * The western coast is one of the most important nesting sites of the globally endangered Giant Leatherback sea turtle.

Lack of environmental impact assessment:

- The plan has no inventorisation of forests and ecological wealth and no details of any environment impact assessment. This would handicap the ability to correctly assess the impact of the plan.

Geological vulnerability:

- The vision document fails to consider the geological vulnerability of the place, which was amongst the worst-affected in the earthquake-tsunami combination in 2004.

Conclusion:

- The island serves as a unique and rare socio-ecological-historical complex of high importance and this needs to be factored in while planning the development of the island.

Environmental conservation efforts

2. **Make peace with nature now**

   » Prelims: UNEP; Making peace with nature report

   » Mains: Environmental crisis: causes and remedial measures

Context:

- The three environmental crises facing humans — climate change; nature loss; and the pollution of air, soil and water.

Details:

- Human activity has been degrading nature.

- Anthropogenic activity in the form of unsustainable use of natural resources has led to mass species extinctions and is leading to pollution of air and water. The increasing Green House Gas emissions have resulted in climate change.

- These human actions are not only detrimental to the planet and other species but are also equally detrimental to humans themselves.

- The per capita stock of natural capital (the resources and services nature provides to humanity) has fallen by 40% in just over two decades.

- Nine out of 10 people worldwide breathe polluted air. This is causing millions of premature deaths.

- Despite overwhelming evidence available to establish the unsustainable activities of humans and the increasing calls to rectify, yet the actions of the governments, financial institutions, businesses and individuals are falling short of what is needed to protect current and future generation interests.

- The UN Environment Programme (UNEP) notes that despite a dip in greenhouse gas emissions caused by the pandemic, the world is still headed for global warming of more than 3°C by the end of the century.

Way forward:

Integrated approach:

- Mankind's environmental, social and economic challenges are interlinked. They must be tackled together.

- The achievement of the Sustainable Development Goals by 2030 would require climate action given that climate change and ecosystem collapse are undermining food and water supplies in the world's poorest countries.

Enhancing climate action:

- The number of countries promising to work towards net-zero emissions currently stands at 126. The nations should seek to further stretch their nationally determined contributions and immediately kickstart the transitions to net-zero.

- At the upcoming climate COP, governments must also finally agree on the rules for a global carbon trading market.

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- The $100 billion global climate fund under which the developed countries promised to provide financial help to developing nations to cope with the impacts of climate change must be operationalized.

Transformation of economy:

- There is the need to move towards circular economic systems that reuse resources and thus reduce emissions.
- The government should focus on green growth and invest in sectors such as renewable energy, social infrastructure, etc. Governments should invest in nature-positive farming and clean energy and water.
- They must create opportunities for future industries that generate prosperity. They must also ensure that transitions are fair and equitable, creating jobs for those who lose out.

Societal effort:

- Addressing our planetary emergency is a whole-of-society effort with the governments taking the lead.
- There is the need for a radical transformation of our societies by valuing nature and putting its health at the heart of all our decisions. People should work towards shrinking their environmental footprint.
- Climate action should be a participatory effort with the citizens given a voice in the far-reaching decisions regarding climate action.

Additional Information:

Making Peace with Nature report:

- The UN has released the Making Peace with Nature report.
- The report pulls together all the evidence of environmental decline from major global scientific assessments, with the most advanced ideas on how to reverse it.
- This report would act as a blueprint for a sustainable future that can secure human well-being on a healthy planet.

Environmental Conservation efforts

3. Clean energy post COVID-19

  » Prelims: UNESCAP

  » Mains: Green growth strategy

Context:

- The report, titled Shaping a Sustainable Energy Future in Asia and the Pacific: A greener, more resilient and inclusive energy system, released by the United Nations Economic and Social Commission for Asia and the Pacific.

Details:

- The report observes the healthy pace of renewable energy development in countries such as China and India, throughout 2020.
- The report notes that the Asia-Pacific region has been moving towards clean, efficient and low-carbon technologies.

Significance:

Added resilience:

- Renewable energy systems can help transform energy systems to help ensure resilience to future crises such as COVID-19.
- Evidence shows that renewable energy and energy efficiency projects create more jobs for the same investment in fossil fuel projects. Renewable energy presents opportunities for an inclusive recovery after the pandemic.
- Increasing expenditure on clean cooking and electricity access can help enhance economic activity in rural areas and support modern infrastructure that can make the communities more resilient and inclusive.

Climate goals:

- Investing in low-carbon technologies can help achieve the ambitious climate pledges the world needs to fulfil to reach the Paris Agreement target of a 2-degree global warming limit.

Green growth strategy:

- A focus on renewable energy can help launch a 'green recovery' post-COVID-19 that simultaneously rebuilds our economies and puts us on track to meet global climate and sustainability goals.
- The energy sector offers multiple opportunities to align stimuli with clean industries of the future.

Way forward:

- The global community should not waste the opportunities this crisis presents. The world should work towards making modern energy available to all and decarbonising the energy system through a transition to sustainable energy.
- There is the need to phase out the use of coal from power generation portfolios and substitute it with renewables. This could be realized by ending fossil fuel subsidies and implementing carbon pricing.

Environmental Pollution and degradation

4. Oil from Titanium factory spills into sea

» Prelims: Methods available to deal with oil spills

Context:

A glass furnace pipe of Travancore Titanium Products Ltd (TTP), a public sector unit making titanium dioxide, broke leading to a major oil spill into the sea and parts of coastal area in Thiruvananthapuram.

Oil Spill:

The contamination of seawater due to an oil pour, as a result of an accident, human error, or natural calamity, is termed as an oil spill.

Details:

- Roughly 5,000 litres of oil is spilt in the sea and coastal area.
- It has contaminated the beach and coastal waters.
- The thick oil has mixed with the sea sand and sedimented at the coast.

Threats:

- An oil leak could have a prolonged impact on marine resources, and consequently, on the livelihood of the fishing community.
- Tourism could also be affected.

Measures taken:

- The leak has been promptly plugged.
- An emergency clean-up was launched along the coast to mitigate the fallout of furnace oil leak.
- Fishing activities along these regions are banned.
- Sand sediments are being removed from the coast. The top soil along the affected stretch of coast would also be removed.
- The Coast Guard is closely monitoring the situation using a ship and a Dornier aircraft.

How is oil spill controlled in general?

- Skimmers: Once the oil is bounded by oil booms, it can be extracted or skimmed easily with the help of skimmers or oil scoops. These skimmers are fitted onto boats to remove the floating oil or greasy contaminants.
  - * Booms are temporary floating barriers used to contain marine spills, protect the environment, and assist in recovery.
- Sorbents: Materials that can absorb liquids are termed as sorbents. The use of sorbents is a natural process of oil clean-up. The most common types of sorbents are peat moss, vermiculite (straw), and hay.
- In situ burning: is the process of burning spilled oil where it is on the ocean. Any burn operation includes careful air monitoring to ensure smoke or residue resulting from the burn do not adversely impact people or wildlife.
- Dispersion: Chemical dispersion is achieved by applying chemicals designed to remove oil from the water surface by breaking the oil into small droplets.

Species in news - Fauna

5. Giant Leatherback turtle

» Prelims: Giant leatherback turtle; Galathea bay.

- Giant Leatherback turtles are the largest of the seven species of sea turtles on the planet.

Habitat:

- The most long-ranging, Leatherbacks are found in all oceans except the Arctic and the Antarctic.
- Within the Indian Ocean, they nest only in Indonesia, Sri Lanka and the Andaman and Nicobar Islands.
- South Bay and West Bay on Little Andaman and Galathea on Great Nicobar, along with other nesting beaches in the islands are Important Marine Turtle Habitats in India and the largest Leatherback nesting grounds in India.

Conservation status:

- They are also listed in Schedule I of India's Wildlife Protection Act, 1972, according it the highest legal protection.

Note:

- Galathea Bay was proposed as a wildlife sanctuary in 1997 for the protection of turtles and was also the site of a long-term monitoring programme.
- The monitoring was stopped after the tsunami devastation of 2004.
- However, it provided the first systematic evidence of the numbers and importance of these beaches.

Species in news - Fauna

6. Mandarin duck/Aix galericulata

» Prelims: Mandarin duck; Maguri Motapung wetland

- It is considered the most beautiful duck in the world
- It was first identified by Swedish botanist, physician and zoologist Carl Linnaeus in 1758.
- It is a "small-exotic looking bird" native to East Asia.
- The migratory duck breeds in Russia, Korea, Japan and northeastern parts of China

Context:

- A rare Mandarin duck floating in the Maguri-Motapungbeel (or wetland) of Assam's Tinsukia district.

Details

- The duck, rarely visits India as it does not fall in its usual migratory route.

- While birds usually follow a regular route for migration, "it is also common for them to stray from the path

- This is what possibly happened to the Mandarin duck, which was spotted at Maguribeel.

Maguribeel

- The Maguri Motapung wetland — an Important Bird Area as declared by the Bombay Natural History Society — is located close to the DibruSaikhowa National Park in Upper Assam.

Species in news - Fauna

7. Footfall in the flurry: tracking the elusive snow leopard in Himachal

» Prelims: Snow Leopard Range and habitat

Context:

A study by wildlife officials and Nature Conservation Foundation reports that the Himachal's hilly terrain is home to as many as 73 snow leopards.

Details:

- The first-ever such study on snow leopards was completed in January 2021 by the Himachal Pradesh Wildlife Department and the Mysore-based Nature Conservation Foundation (NCF).

- The entire snow leopard habitat of the State [of Himachal Pradesh] was first stratified into three categories — high, low or unknown snow leopard occurrence, based on questionnaire surveys of local communities residing in these areas.

- Camera trap surveys were then carried out in areas under each of the categories.

Key observations:

- In Himachal Pradesh, the snow leopard's habitat covers a greater part of the districts of Lahaul-Spiti and Kinnaur.

- Its potential habitat also extends into the upper regions of the districts of Shimla, Kullu, Chamba and Kangra.

- The population of the primary wild ungulate prey of snow leopards, blue sheep and ibex for the entire snow leopard habitat was assessed by using the double observer survey technique.

- It was found that the snow leopard density was positively correlated with the wild prey density, indicating that higher wild prey densities corresponded to higher snow leopard densities.

Snow Leopard Enumeration Project:

- The wildlife wing of the Himachal Pradesh Forest Department commenced the snow leopard enumeration project in 2018.

- This was carried out with techniques aligned to the protocols prescribed by the Union Ministry of Environment, Forest and Climate Change under the Snow Leopard Population Assessment in India (SPAI).

Conservation:

- India has been conserving snow leopard and its habitat through the Project Snow Leopard (PSL).

- Project Snow Leopard (PSL) was launched in 2009 to promote an inclusive and participatory approach to conserve snow leopards and their habitat.

- For Snow Leopard conservation, India has identified three large landscapes, namely, Hemis-Spiti across Ladakh and Himachal Pradesh; Nanda Devi – Gangotri in Uttarakhand; and Khangchendzonga – Tawang across Sikkim and Arunachal Pradesh.

Places in news

8. Dudhwa Tiger Reserve

» Prelims: Tiger reserves of India

- It is a protected area in Uttar Pradesh that stretches mainly across the LakhimpurKheri and Bahraich districts and comprises the Dudhwa National Park, Kishanpur Wildlife Sanctuary and Katarniaghat Wildlife Sanctuary.

- It shares the north-eastern boundary with Nepal.

- The area is a vast alluvial floodplain traversed by numerous rivers and streams flowing in south-easterly direction.

- In 1987, the Dudhwa National Park and the Kishanpur Wildlife Sanctuary were brought under the purview of the 'Project Tiger' as Dudhwa Tiger Reserve. The Katarniaghat Wildlife Sanctuary was added in the year 2000.

- The protected area is home for tigers, leopards, Asiatic black bears, sloth bears, Swamp deer, rhinoceros, elephants, cheetal, hog deer, barking deer, sambar, wild boar and hispid hare.

9. Karlapat Wildlife Sanctuary

» Prelims: Karlapat wildlife sanctuary

- It is a wildlife sanctuary located in Kalahandi district and a popular tourist attraction of Odisha

- It lies within the Eastern Highlands moist deciduous forests ecoregion

Haemorrhagic Septicaemia (HS)

- It is a contagious bacterial disease that afflicts both the domestic and wild animals

Measures taken to prevent the spread

- The stagnant water-bodies in the forest areas are being disinfected to avoid the spread of the disease

- Villagers have been requested not to send their cattle to forest in view of the situation.

10. National Marine Turtle Action Plan

» Prelims: CRZ

» Mains: Significance of National Marine Turtle action plan

National Marine Turtle Action Plan was released by the Ministry of Environment, Forest and Climate Change on 1st February 2021.

- The plan notes that India has identified all its important sea turtle nesting habitats as 'Important Coastal and Marine Biodiversity Areas' and included them in the Coastal Regulation Zone (CRZ) – 1.

- The plan identifies coastal development, including the construction of ports, jetties, resorts and industries, as major threats to turtle populations.

- It also asks for assessments of the environmental impact of marine and coastal development that may affect marine turtle populations and their habitats.

11. World Sustainable Development Summit 2021

» Prelims: TERI, World sustainable development summit

Context:

- PM inaugurates World Sustainable Development Summit 2021.

About the Summit:

- The World Sustainable Development Summit (WSDS) is the annual flagship event of The Energy and Resources Institute (TERI).

- Started in 2001, the Summit has become a focal point for leaders and stakeholders across the world to bridge thought and action for sustainable development.

- The Summit series has emerged as the premier international event on sustainability which focusses on the global future, but with an eye on the actions in the developing world which could bend our common future.

- The Summit series brings together governments, business leaders, academicians, climate scientists, youth, and the civil society in the fight against climate change.

- The WSDS 2021 is being held online with the theme, "Redefining our common future: Safe and secure environment for all".

About TERI:

- TERI is a leading think tank dedicated to conducting research for the sustainable development of India and the Global South.

- TERI was established in 1974 as an information centre on energy issues. However, over the following decades, it made a mark as a research institute, whose policy and technology solutions transformed people's lives and the environment.

- It is located in New Delhi.

12. Central Sector Scheme to address air pollution and manage crop residues

» Mains: Governmental efforts to curb air pollution

Context:

The central sector scheme for the 'Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi' has been implemented during 2018-19 and 2019-20.

Details of the scheme:

- It was announced in Budget 2018.

- The objectives of the scheme are:

  * Protecting environment from air pollution and preventing loss of nutrients and soil micro-organisms caused by burning of crop residue.

* Promoting in-situ management of crop residue by retention and incorporation into the soil through the use of appropriate mechanization inputs.

* Creating awareness among stakeholders through demonstration, capacity building activities and differentiated Information, Education and Communication strategies for effective utilization and management of crop residue.

• This Scheme was further extended for the year 2020-21.

• The residue burning events in 2020 in Punjab, Haryana and UP together have reduced by -30% as compared to 2016. In Punjab the reduction is -22.7%, Haryana – 63.8% and UP – 52.01%.

Miscellaneous

13. The problem of ageing dams

» Prelims: Major dams of India

» Mains: Concerns associated with ageing dams

Context:

• The article discusses the threat posed by the ageing dams in India.

Background:

• The report, titled 'Ageing water infrastructure: An emerging global risk' and compiled by United Nations University's Canadian based Institute for Water, Environment and Health, says most of the 58,700 large dams worldwide were constructed between 1930 and 1970 with a design life of 50 to 100 years.

Details:
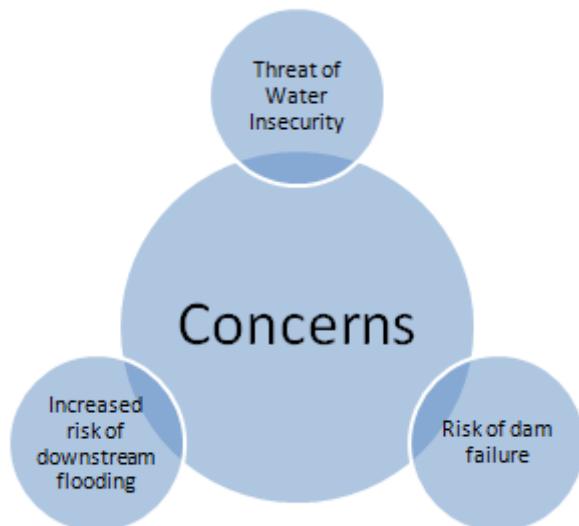
Ageing dams in India:

• Of the over 5,200 large dams built so far, about 1,100 large dams have already reached 50 years of age and some are older than 120 years.

• The number of such ageing dams will increase to 4,400 by 2050. This means that 80% of the nation's large dams face the prospect of becoming obsolete by 2050.

• The situation of medium and minor dams is even more precarious as their shelf life is even lower than that of large dams.

• Ageing signs include increasing cases of dam failures, progressively increasing costs of dam repair and maintenance, increasing reservoir sedimentation, and loss of a dam's functionality and effectiveness.

Siltation in Indian reservoirs:

• As dams age, soil replaces the water in the reservoirs. This is technically known as silt or sediment.

• Sedimentation leads to a decrease in the storage capacity of dams.

• The observed siltation rate in India's dams has been substantially high. Therefore, the storage space in Indian reservoirs is receding at a rate faster than anticipated. Reservoirs are poised to become extinct in less than a few decades.

• Studies show that the design of many of our reservoirs is flawed. Studies on reservoir sedimentation have shown that Indian reservoirs are designed with a poor understanding of sedimentation science. The designs underestimate the rate of siltation and overestimate live storage capacity created.

Concerns/Consequences of ageing dams in India:

Water Insecurity:

- This reduced storage capacity could have a detrimental impact on water security. This could have an impact on not only related economic activities like agriculture but will also have other unwarranted environmental impacts.

  * The reduced water availability will lead to lower water availability for agricultural activities. This could affect the crop yields severely and disrupt the farmer's income, as water is one of the crucial factors for crop yield.

  * It is worth noting that no plan on climate change adaptation like rainwater harvesting will succeed with sediment-packed dams.

Flooding risks:

- The high siltation rates in Indian dams reinforce the argument that the designed flood cushion within several reservoirs across many river basins may have already depleted substantially due to which floods may become more frequent downstream of dams.

  * The flooding of Bharuch in 2020, Kerala in 2018 and Chennai in 2015 are a few examples attributed to downstream releases from reservoirs.

Risk of dam failure:

- Flooding, internal erosion, seepage, and structural instability and deterioration are among the reasons dams might fail. Ageing makes dams more vulnerable to these problems.

- By 2050, most people on Earth will live downstream of tens of thousands of large dams built in the 20th century, many of them already operating at or beyond their design life.

- Dam failures can result in the loss of lives, livelihoods, and properties, as well as the loss of ecosystems and habitats, to flooding.

- Approximately 3.5 million people are at risk if India's Mullaperiyar dam in Kerala, built over 100 years ago, "were to fail".

Way forward:

- India will have to find sufficient water in the 21st century to feed the rising population by 2050, grow abundant crops, create sustainable cities and ensure growth. In this regard, it is imperative

for all stakeholders to come together to address the issue of ageing dams.

Dam decommissioning:

- Dam decommissioning should be seen as equally important as dam building in the overall planning process on water storage infrastructure developments.

  * Public safety, escalating maintenance costs, reservoir sedimentation, and restoration of a natural river ecosystem are among the reasons driving dam decommissioning throughout the world.

Alternative solutions to water security:

- There is also the need to consider other alternatives like smaller dams and focus on groundwater recharge solutions to address water security in India.

Miscellaneous

14. International Commission on Large Dams (ICOLD)

Context:

- International Commission on Large Dams (ICOLD) Symposium on Sustainable Development of Dams & River Basins inaugurated.

Details:

- The symposium is being organised by ICOLD in collaboration with the Central Water Commission (CWC), Dam Rehabilitation Improvement Project (DRIP) and National Hydrology Project (NHP) in New Delhi.

- The symposium is being organised to provide an excellent opportunity to Indian Dam Engineering Professionals and Agencies to share their experiences, ideas and latest developments in new materials and construction technologies, advancement in investigation techniques, best engineering practices, dam safety issues, etc.

About International Commission on Large Dams (ICOLD):

- The International Commission On Large Dams (ICOLD) is a non-governmental International Organization which provides a forum for the exchange of knowledge and experience in dam engineering.

- ICOLD was founded in 1928 and has National Committees from more than 100 countries with approximately 10000 individual members.

- The members are mostly practising engineers, geologists and scientists form governmental or private organizations, consulting firms, universities, laboratories and construction companies.

- ICOLD leads the profession in setting standards and guidelines to ensure that dams are built and operated safely, efficiently, economically, and are environmentally sustainable and socially equitable.

- It is headquartered in Paris, France.

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HEALTH ISSUES

Health care system in India

1. Building a robust healthcare system

» Mains: Status of healthcare sector in India; challenges and measures needed

Context:

- The article written by former health secretary to Tamil Nadu, R Poornalingam discusses the need to focus on a robust public healthcare system and suggests suitable measures in this direction.

Background:

- The COVID-19 pandemic has brought to light the importance of a strong public health system. There has been a growing emphasis on the need to revamp the public health system quickly so as to be better prepared to handle any similar emergencies in the future.

Details:

High variation in health parameters among the states:

- The efficacy of the public health system in India varies widely across the country since it is a State subject.

- An analysis of certain health parameters such as Infant Mortality Rate, Maternal Mortality Ratio and Total Fertility Rate can indicate the variation of public health quality in the different states ofIndia.

Some key health parameters in select States

State	Infant Mortality Rate	Under Five Mortality	Maternal Mortality Ratio	Total Fertility Rate	% deliveries by untrained personnel
Bihar	32	37	149	3.2	19.0
M.P.	48	56	173	2.7	7.2
Rajasthan	37	40	164	2.5	1.6
U.P.	43	47	197	2.9	14.0
T.N.	15	17	63	1.6	0.2
Kerala	7	10	42	1.7	0.1
India	32	36	113	2.2	7.8

SOURCE: SRS DATA FOR 2018

- The northern States are performing very poorly in the above vital health parameters.

  * In Madhya Pradesh, the number of infant deaths for every 1,000 live births is as high as 48 compared to seven in Kerala.

  * In U.P. the Maternal Mortality Ratio is 197 compared to Kerala's 42 and Tamil Nadu's 63.

  * The percentage of deliveries by untrained personnel is very high in Bihar, 190 times that of Kerala.

  * Total Fertility Rate is very high in Bihar (3.2) against the stabilisation rate of 2.1. Tamil Nadu and Kerala have done so well that their population will decline over the years.

Concerns:

Poor health indicators:

- Some of these States are performing so poorly that they are comparable to the poorest countries in the world, pulling down the average for India.

India may fail to achieve SDG-3:

- India failed to achieve the earlier Millennium Development Goals because of the poor performance of the northern States.

- It is doubtful whether India will be able to achieve Goal 3 (good health and well-being) of the Sustainable Development Goals (SDGs).

Lack of accountability on the poorly performing states:

- There is no existing mechanism to hold the poorly performing states responsible and accountable for their performance.

- The State governments too themselves are indifferent to their poor performance.

- The poor performance has been despite the fact that Finance Commissions have been pouring non-Plan funds into these States in addition to substantial Plan allocation from the Ministry of Health and Family Welfare for the Empowered Action Group States. More money has not produced better results.

Wrong approach:

- The Central government seems to be satisfied with the all India averages for the health parameters which are somewhat reasonable thanks to the excellent performance of well-governed States.

- This is a skewed approach given that meaningful development would require equitable health opportunities for all.

Accentuate the existing inequalities:

- The existing inequalities will only increase without equitable access to quality health and life opportunities for the people in the poorer states. Unless they give health the highest priority, rapid

improvement is not possible.

- This would have a detrimental impact on poverty, example-the high TFR in states would lead to over population and can contribute to further poverty.

- Unequal access to healthcare will only increase the wealth of the already wealthy and accentuate income disparity.

Way forward:

Focusing on the low performing states:

- The governments — both at the Centre and the Empowered Action Group States — should take steps to bring these States on a par with the southern States.

- There is the need to hold the Empowered Action Group States accountable to the SDGs. They must be asked to reach the levels of the southern States within three to five years.

States to lead the efforts:

- Since health is a State subject, the primary onus lies with the State governments. Each State government must focus on public health and aim to improve the vital health indicators discussed above first.

Political will:

- An enlightened political leadership which is interested in the health and well-being of the people is the need of the hour. Persistent and focused efforts at the highest level of government are needed.

- When state governments are focused on health and the district health administrations are held accountable, performance is bound to improve.

- Only clear focus and better governance can help improve the public health system in India.

Focus on preventive health care:

- Preventive public healthcare systems offer the most efficient and low cost, high impact intervention when it comes to the domain of healthcare in India.

- The governments must focus on this strategy.

Primacy to public healthcare system:

- An important measure that can make a difference is a public health set-up in these States that addresses primary and preventive health.

- Investing in health is the primary responsibility of any government. The governments must give health its due importance through sufficient resource allocation.

Health care sector in India

2. **First steps in the journey to universal health care**

  » Prelims: Governmental schemes in the healthcare sector; PMJAY;

  » Mains: Shortcomings in the government initiatives

Context:

- For India, the lesson from COVID-19 demands setting forth on a steady and incremental path to universal health coverage.

Budgetary allocations:

- The Union Ministry of Health and Family Welfare budget for 2021-22 saw a 10.2% increase over the Budget estimate (BE) of 2020-21.

- A corpus of ₹64,180 crore over six years has been set aside under the PM AtmaNirbharSwasth Bharat Yojana (PMANSBY) for strengthening health institutions

- ₹13,192 crore have been allocated as a Finance Commission grant.

These could make the first steps of a journey that steadily builds towards sustainable universal health coverage through the incremental strengthening of grass-root-level institutions and processes.

Universal Health Coverage through Insurance:

- Large expenditure projections and time constraints involved in the input-based strengthening of public health care have inspired the shift to the insurance route for achieving universal health coverage.

- However, insurance does not provide a magic formula for expanding health care with measly levels of public spending.

Pradhan Mantri Jan ArogyaYojana (PM-JAY):

- The BE for the Pradhan Mantri Jan ArogyaYojana (PM-JAY) has stagnated at ₹6,400 crore for the current and the preceding couple of years. This should be a cause of concern.

  * PM-JAY covers over 50 crore poor Indians for hospital expenses up to ₹5 lakh per annum.

  * Available estimates have pegged the costs to be between ₹62,000 crore and ₹1,08,000 crore for 2021, if PM-JAY is to meet its stated commitments.

Comprehensive primary care:

- About 1.5 lakh Health and Wellness Centres offering a comprehensive range of primary health-care services are to be operationalized until December 2022.

- Of these, about 1.2 lakh would be upgraded as sub-health centres and the remaining would be primary health centres and urban primary health centres.

- Initially, most States prioritised primary health centres/urban primary health centres for up gradation over sub-health centres, since the former required fewer additional investments.

- However, now, this offers huge cost projections — as per early (conservative) estimates, turning a sub-health centre into a health and wellness centre would require around ₹17.5 lakh, and around ₹8 lakh annually to run it thereafter.

Concerns:

- Since 2018-19, when the health and wellness centre initiative began, allocations have not kept pace with the rising targets each year.

- Making do with meagre spending year after year means that the scheme benefits are being spread out too narrowly or too thin.

- This implies the inability to afford enough protection against catastrophic health expenses to the poor.

- Beyond low allocations, poor budget reliability calls for attention.

- Continuing the expansion of health and wellness centres without enough funding would mean that the full range of promised services will not be available, thus rendering the mission to be more of a re-branding exercise.

- Under-funding would waste an opportunity for the health and wellness centre initiative to at least partially redress the traditional rural-urban dichotomy by strengthening curative primary care in rural areas.

- Another related issue is the persistent and large discrepancies between official coverage figures and survey figures across Indian States, indicating that official public health insurance coverage fails to translate into actual coverage on the ground.

  * This is particularly intriguing for forward States such as Maharashtra, Gujarat, and Karnataka, where state-level public health insurance schemes have been operational for around a decade.

- Also, high actual coverage cannot be equated with effective financial protection.

  * For example, Andhra Pradesh has among the highest public health insurance coverage scores but still has an out-of-pocket spending share much above the national average.

  * In contrast, Himachal Pradesh (H.P.) with a much lower public health insurance coverage has a lower out-of-pocket expenditure.

Way forward:

- Additional funding under the PMANSBY and

Finance Commission grants are reassuring, but a greater focus on rural health and wellness centres is a must.

- Robust research into the implementation issues responsible for discrepancies and addressing them is warranted.

- Alongside the availability of funds, there is a need for robust institutional capacity to assimilate those funds.

- India must not attempt a sudden and giant leap.

  * This is important because enough evidence exists on weak fund-absorbing capacities particularly in the backward States.

  * At times, such unused funds have been to the tune of over half of the State's public health expenditure.

- It demands investing gradually but steadily in public health infrastructure and manpower.

Diseases in news-COVID19

3. ## No to vaccine nationalism, yes to global cooperation

   » Prelims: COVAX facility

   » Mains: India's potential role in global vaccination efforts

Context:

- The pandemic has spared no country and everyone needs access to vaccines. With vaccine diplomacy being a hot topic of discussion worldwide, the article talks about the need for coordinated international efforts to bring COVID-19 under control.

How is vaccine production and distribution being managed?

- The expectation that an early vaccination will bring back normalcy and a required push to economic growth fuelled many advanced countries to engage in vaccine battles.

- While the leading and advanced countries have been mindlessly selfish in amassing approved vaccines, it is the Global South countries, India and China, which have provided a ray of hope to most countries.

- 82% of Pfizer's production in 2021 and 78% of Moderna's have already been advance-purchased by rich countries.

- Advance Purchase Contracts:

  * According to data compiled by Duke University, in their quest for ensuring vaccine security, the advance purchase contracts have been entered into by some advanced countries.

* These contracts would vaccinate their population many times: the European Union, two times, the United States and the United Kingdom, four times, and Canada, six times.

India's role in ensuring global cooperation for COVID-19 vaccination:

- While advanced countries have turned their back on the need of poor countries to access COVID-19 vaccines, India has displayed empathy to their needs.

- India has taken a position that a significant percentage of the approved doses will be permitted for exports.

- India also has shipped out lakhs of doses of the novel coronavirus vaccine to neighbouring countries.

    * New Delhi wants to portray the exercise as yet another testament to its Neighbourhood First policy — the government is going to brand it as "Vaccine Maitri" diplomacy.

- While its exports to neighbouring counties will be under grant mode, the initial shipment of vaccines to the least developed countries will be free of cost.

- And, shipments of vaccines from India have already started reaching different parts of the developing world.

- In a democracy, one can expect the backlash of sending vaccines abroad without vaccinating its population. However, India's gesture was well-appreciated globally.

India's approach only reinforces the need for having coordinated global efforts in bringing COVID-19 under control. This response manifests India's unstinted commitment to global development and has consolidated its name as the world's pharmacy.

Need for global cooperation – Keeping track of Sustainable Development Goals:

- The attitude of India towards vaccinating the populations in the poorer countries has generated discussion in the richer countries about the necessity for more proactive measures to roll out vaccines to the developing nations.

- The reversal of progress on many Sustainable Development Goals, such as SDG 3 ("Ensure healthy lives and promote well-being for all at all ages) could affect the health of the world population, and global growth itself.

- Even before COVID-19, projections have shown that 6% of the global population would be in extreme poverty, which has gone up by 71 million.

    * This has caused enormous challenges to SDG 1 ("End poverty in all its forms everywhere").

- According to estimates by the International Monetary Fund, over 50% of emerging markets and developing economies that were converging toward advanced economies' per capita income over the last decade are expected to diverge over the 2020-22 period.

Way Forward – COVAX as a pathway:

- The COVAX project is a global risk-sharing mechanism for pooled procurement and fair distribution of COVID-19 vaccines, an ambitious programme based on funding from high and middle-income countries.

- Although the funding was not enough for the project, U.S. President Biden's decision to join the project has now raised expectations significantly.

- However, since high and middle-income countries are buying up large amounts of the vaccine directly from suppliers, the promise by COVAX to deliver 2 billion doses by the end of 2021 seems to face new challenges.

- COVAX is a unique case of global cooperation and a strategic shift to enhance global development outcomes.

- Furthermore, since most of the vaccines are purchased from the global south for developing nations, the COVAX project can draw new pathways for global development.

- The lower price of the vaccines is what has attracted many commercial buyers globally, including emerging economies such as Brazil and South Africa.

- The ability to produce large volumes of vaccine at an affordable cost underlines India's importance to developing countries when it comes to drug access.

- The development of vaccines is a classic story of global cooperation between the North and the South.

Issues relating to health

4. **An estimate of WASH across healthcare facilities in India**

    » Mains: Relation between WASH facilities and health status of population; significance of WASH strategy

Context:

- Study into the cost of ensuring WASH (water, sanitation and hygiene) in healthcare facilities of India.

Background:

Lack of WASH facilities:

- A 2019 joint global baseline report by WHO and UNICEF had pointed out that globally, one in four healthcare facilities lacked basic water servicing

and one in five had no sanitation service and 42% had no hygiene facilities at point of care.

Concerns with low coverage of WASH provisions:

* Inadequacies in proving WASH and also lack of infection prevention and control can lead to healthcare associated infections. Pathogens like Acinetobacterbaumannii, Enterococcus faecalis, Escherichia coli, Salmonella typhi, Streptococcuspneumoniae have been implicated as causative agents of healthcare associated infections because of their ability to develop resistance to antibiotics.

* Around 8,27,000 people in low and middle-income countries die as a result of inadequate water, sanitation and hygiene each year. Approximately, death of 2,97,000 children under five years can be prevented each year if better WASH could be provided.

Details:

* The study estimates that improving WASH across the pubic healthcare facilities in India and maintaining this for a year would cost $354 million in capital costs and $289 million in recurrent expenses.

* The study finds that the most costly interventions were providing clean water, linen reprocessing and sanitation while the least expensive were hand hygiene, medical device reprocessing and environmental surface cleaning.

Significance of WASH strategy:

Developmental goal:

* The status of WASH (water, sanitation and hygiene) in healthcare facilities is an important issue in development. Ensuring availability and sustainable management of water and sanitation is one of the 2030 sustainable development goals.

Infection prevention and control:

* WASH is related to infection prevention and control. WASH interventions can help reduce healthcare-associated infections among mother and neonates across the Indian healthcare system. In the fight against the spread of antimicrobial resistance, prevention of infections is an important aspect.

Cost effective intervention:

* A 2012 WHO report had calculated that for every dollar invested in sanitation, there was $5.50 to be gained in lower health costs, more productivity and fewer premature deaths.

* Addressing gaps in WASH across the Indian healthcare system is affordable when compared to other national health campaigns and provides a cost effective health intervention in the Indian context with limited recourses available for health interventions.

Way forward:

* There is the need for a concerted effort from local bodies, State and Central governments to sustainably address quality and inequality issues in WASH provision.

* There is the need to combine the WASH initiative with other national efforts to address health priorities. The intersection between WASH, infection prevention and control and antimicrobial resistance offers policy makers an opportunity to address multiple overlapping problems through interventions on WASH in healthcare facilities.

Miscellaneous

5. National Medicinal Plants Board

* It is an organisation set up by the Government of India to support policies and look into matters regarding medicinal plants in order to promote their trade export and cultivation

* The NMPB comes under the Ministry of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homeopathy (AYUSH).

The functions of the National Medicinal Plants Board are as follows:

* Advise concerned Ministries and State/ Union Territory Governments on policy matters relating to schemes and programs for the development of medicinal plants.

* Identification, Inventorisation and Quantification of medicinal plants.

* Promotion of co-operative efforts among collectors and growers and assisting them to store, transport and market their products effectively.

* Setting up of data-base system for incentivization, dissemination of information and facilitating the prevention of Patents being obtained for medicinal use of plants which is in the public domain.

* Undertaking and awarding Scientific, Technological research and cost-effectiveness studies.

* Development of protocols for cultivation and quality control.

* Encouraging the protection of Intellectual Property Rights.

Miscellaneous

6. India Pharma 2021 & India Medical Devices 2021

Context:

Union Minister inaugurated Global Investors' meet: India Pharma 2021 & India Medical Devices 2021.

Details:

- The event was organised by FICCI along with the Department of Pharmaceuticals, Ministry of Chemicals & Fertilizers, Government of India, and Invest India (India's national investment promotion & facilitation agency, under the Ministry of Commerce and Industry).

- EY-FICCI report titled 'Indian Pharmaceutical Industry 2021: Future is Now' was also launched during the event.

Key Highlights of the EY-FICCI report

- The opportunities that have emerged to accelerate the growth of Indian pharmaceutical and healthcare industry are – innovation led research and development, healthcare delivery (R&D), manufacturing and supply chain, and market access.

- The Indian pharmaceutical industry has to reinvent and undertake fundamental reforms to achieve the ambitious target of $130 billion in size by 2030.

- To reach that target from the current $42 billion, the Indian pharmaceutical industry will require to double the last decade's growth rate of 6% to 12%.

- The overall growth has been driven by the industry's leadership in supplying generic formulations to markets across the globe.

- Accelerating research and innovation:

  * To meet this objective, the industry must consider setting up an overarching regulatory body and a central body to streamline research infrastructure and financing from all government bodies.

- Achieving equitable and sustainable healthcare with support of digital healthcare infrastructure and enabling teleconsulting and focusing on preventive healthcare are also important.

- The focus of manufacturing and supply chain initiatives would be to develop capabilities in active pharmaceutical ingredients (APIs) and enable the manufacturing of complex generics.

- Besides attracting talent, it is vital to encourage and set up pharma machine manufacturing facilities in India to lower fixed costs, enable savings in forex and reduce time to set up additional facilities.

- There is also a need to bolster the logistics infrastructure for connecting the key pharma hubs in the country in order to facilitate quick and cost efficient movement of goods including cold chain facilities.

- Improving access to medicines and various global best practices in drug pricing and procurement models can be contextualized for developing geographies.

- Digital marketing of pharma products too must be considered

Initiatives/schemes/Programmes

7. e-CHARAK

- It is a mobile application as well as a web portal for the promotion and marketing of medicinal plants/herbs.

- It was jointly developed by the National Medicinal Plants Board (NMPB), Ministry of AYUSH and Centre for Development of Advanced Computing (C-DAC).

- It is an e-channel for herbs, aromatics and raw materials and is a platform to enable information exchange between various stakeholders mainly farmers involved in the medicinal plants sector across the country.

- The e-CHARAK application supports different local languages and it also provides fortnightly market price of 100 Medicinal Plants from 25 herbal markets across India.

SOCIAL ISSUES

Government schemes for the vulnerable sections

1. **Indira Gandhi National Widow Pension Scheme**

   » Prelims: NSAP

   - Under this scheme, widow pension is provided to the widows belonging to Below Poverty Line (BPL) households.

   - This is a sub-scheme under the National Social Assistance Programme (NSAP) of the Ministry of Rural Development.

   - Under the scheme, central assistance @ Rs. 300/- per month is provided to widows in the age-group of 40-79 years and the pension amount is enhanced to Rs 500/- per month on attaining 80 years.

Government schemes for the vulnerable sections

2. **Pradhan Mantri Matru Vandana Yojana**

   » Prelims: PMMVY-provisions

   » Mains: relation between women's reproductive health and general health of the population

   - PMMVY is a Centrally Sponsored Direct Benefit Transfer (DBT) scheme under which cash benefits are provided to pregnant women in their bank account directly.

   - Ministry of Women and Child Development is the implementing agency.

Objectives

   - to meet enhanced nutritional needs

     * An undernourished mother almost inevitably gives birth to a low birth weight baby. When poor nutrition starts in - utero, it extends throughout the life cycle since the changes are largely irreversible.

   - Partially compensate for wage loss.

     * Owing to economic and social distress many women continue to work to earn a living for their family right up to the last days of their pregnancy.

   - Providing partial compensation for the wage loss in terms of cash incentive so that the woman can take adequate rest before and after delivery of the first living child.

     * Furthermore, they resume working soon after childbirth, even though their bodies might not permit it, thus preventing their bodies from fully recovering on one hand,

and also impeding their ability to exclusively breastfeed their young infant in the first six months.

Under the 'Scheme', Pregnant Women and Lactating Mothers (PW&LM) receive a cash benefit of Rs. 5,000 in three installments on fulfilling the respective conditionality, viz.

   - first instalment of Rs 1000/ -

     * On early registration of pregnancy at the Anganwadi Centre (AWC) / approved Health facility as may be identified by the respective administering State / UT

   - second instalment of Rs 2000/ - after six months of pregnancy

     * On receiving at least one Ante-Natal Check-Up (ANC)

       » Antenatal care is the systemic supervision of women during pregnancy to monitor the progress of foetal growth and to ascertain the well-being of the mother and the foetus.

       » A proper antenatal check-up provides necessary care to the mother and helps identify any complications of pregnancy

   - third instalment of Rs 2000/ -

     * After child birth is registered and the child has received the first cycle of vaccination like the BCG, OPV, DPT and Hepatitis - B, or its equivalent/ substitute.

     * Registration of the birth of the child and completion of first cycle of vaccination for the first living child of the family.

   - The eligible beneficiaries also receive cash incentive under Janani Suraksha Yojana (JSY). Thus, on an average, a woman gets Rs. 6,000.

Target beneficiaries

   - All Pregnant Women and Lactating Mothers (PW&LM), excluding PW&LM who are in regular employment with the Central Government or the State Governments or PSUs or those who are in receipt of similar benefits under any law for the time being in force.

   - All eligible Pregnant Women and Lactating Mothers who have their pregnancy on or after 01.01.2017 for first child in family

   - Case of Miscarriage/Still Birth :

     * A beneficiary is eligible to receive benefits under the scheme only once.

* In case of miscarriage/still birth, the beneficiary would be eligible to claim the remaining instalment(s) in event of any future pregnancy.

* Thus, after receiving the 1st instalment, if the beneficiary has a miscarriage, she would only be eligible for receiving 2nd and 3rd instalment in event of future pregnancy subject to fulfilment of eligibility criterion and conditionalities of the scheme. Similarly, if the beneficiary has a miscarriage or still birth after receiving 1st and 2nd instalments, she would only be eligible for receiving 3rd instalment in event of future pregnancy subject to fulfilment of eligibility criterion and conditionalities of the scheme.

Government schemes for the vulnerable sections

3. Swadhar Greh Scheme

» Prelims: Swadhar Greh scheme

• The Scheme envisages providing shelter, food, clothing and health as well as economic and social security for women in distress.

• Under this scheme, Swadhar Greh will be set up in every district with capacity of 30 women.

• The scheme also envisages offering legal aid and guidance to these women for their readjustment in family/society.

• It also offers vocational training and economic rehabilitation so that they can start their life afresh with dignity.

• Beneficiaries could include women above the age of 18 years who:

* are deserted and are without any social and economic support;

* are survivors of natural disasters and have been rendered homeless and are without any social and economic support;

* are prisoners released from jail and are without family, social and economic support;

* are victims of domestic violence or family/marital discord and were made to leave homes;

* trafficked women, etc.

Population and associated issues

4. Centre likely to postpone Census to 2022

» Prelims: Census history of India; NPR

Context

• Reports of the Centre's plan to push the 2021 Census to 2022.

Background:

Census:

• Population Census is the total process of collecting, compiling, analyzing or otherwise disseminating demographic, economic and social data pertaining, at a specific time, to all persons in a country or a well-defined part of a country. As such, the census provides a snapshot of the country's population and housing at a given point of time.

• The census provides information on size, distribution and socio-economic, demographic and other characteristics of the country's population. The data collected through the census are used for administration, planning and policy making as well as management and evaluation of various programmes by the government, NGOs, researchers, commercial and private enterprises, etc.

Census history in India:

• The census exercise first began in 1872 under British Viceroy Lord Mayo, however, the first complete census was taken in 1881 under the British Viceroy Ripon.

• Since then the census is undertaken every 10 years.

• The decennial Census of India has been conducted 15 times, as of 2011.

• Post 1949, the census has been conducted by the Registrar General and Census Commissioner of India under the Ministry of Home Affairs, Government of India.

• All the censuses since 1951 were conducted under the 1948 Census of India Act. The last census was held in 2011, whilst the next will be held in 2021. The 2021 Census of India will be the 16th Indian Census.

Details:

• The plan to shift the census is on account of the pandemic.

* The government has been fully occupied in dealing with the COVID-19 pandemic. First, it was the measures taken to deal with the pandemic and now the massive vaccination programme under way across the country.

• The Census exercise was to be conducted in two phases — House Listing and Housing Census and Population Enumeration. The first phase of the Census and the updating of the National Population Register (NPR) were initially to be rolled out in some States on April 1, 2020, but were postponed due to the pandemic.

5. Inter-marriages can reduce caste tensions, says court

> » Mains: Caste system in India; declining importance of caste system in India

Context

- In a recent judgement, the Supreme Court said that educated youngsters are showing the way forward to reduce caste and community tensions in India by tying the knot in inter-marriages.

Details:

- It observed that the departure from the earlier norms of society where caste and community played a major role is possibly the way forward where caste and community tensions will reduce by such inter-marriages.

- Justice Kaul quoted B.R. Ambedkar's Annihilation of Caste – "I am convinced that the real remedy is intermarriage. Fusion of blood can alone create the feeling of being kith and kin, and unless this feeling of kinship, of being kindred, becomes paramount, the separatist feeling — the feeling of being aliens — created by caste will not vanish."

- Also, Justice Kaul in his judgement observed that "consent of the family or community or clan is not necessary once the two adult individuals agree to enter into a wedlock and that their consent has to be piously given primacy".

Social issues - Related to Children

6. Juvenile Law

> » Prelims: Juvenile justice act, 2015- Provisions

What's in News?

- The Union Cabinet has approved a slew of amendments to the Juvenile Justice (Care and Protection of Children) Act, 2015.

Details:

- The amendments are aimed at strengthening the Child Protection set-up to ensure the best interest of children.

- The amendment empowers the District Magistrates (DM) to issue adoption orders as well as monitor the implementation of the law.

- These include empowering the DMs and the additional DMs to monitor the functioning of agencies responsible for implementing the JJ Act.

- The District Child Protection Units will function under the DMs.

- Before someone sets up a shelter home for children and sends their proposal for registration under the JJ Act to the State, a DM will have to assess their capacity and conduct a background check.

- A DM could also independently evaluate the functioning of the Child Welfare Committee, Special Juvenile Protection Units and registered childcare institutes.

Urbanization

7. City Innovation Exchange (CiX)

> » Mains: Challenges associated with urbanization; initiatives being taken

Context

City Innovation Exchange (CiX) launched for fostering innovation in urban ecosystem.

City Innovation Exchange (CiX) Platform:

- The City Innovation Exchange (CiX) will connect cities to innovators across the national ecosystem to design innovative solutions for their pressing challenges.

- The platform will ease the discovery, design & validation of solutions through a robust, transparent and user centric process that will reduce barriers for innovators and cities to discover fitting solutions.

- Built on the concept of 'open innovation', the platform will help in the flow of ideas 'outside in and inside out', enhancing the skills and capacity required to deliver smart urban governance.

- Through interaction with the academia and businesses/startups, the platform will benefit cities in the transfer of ideas from 'labs' to the real environment.

- Similarly, by helping urban governments interact with citizens, the platform will ensure adoption of tested solutions that will be impactful and sustainable.

- The Platform has more than 400 start-ups, 100 smart cities, more than 150 challenges statements and over 215 solutions at the time of launch.

Urbanization

8. National Urban Digital Mission (NUDM)

> » Prelims: National urban digital mission; India urban data exchange

> » Mains: Government initiatives with respect to urbanization

Context

The National Urban Digital Mission (NUDM) has been launched by the Ministry of Housing and Urban Affairs (MoHUA) along with the Ministry of Electronics and Information Technology.

About NUDM:

- The central government has launched the NUDM to create a digital infrastructure for cities in the country.

- According to the MoHUA, this will institutionalise a citizen-centric and ecosystem-driven approach to urban governance and service delivery in cities by 2022, and across all cities and towns by 2024.

- NUDM will create a shared digital infrastructure that can consolidate and cross-leverage the various digital initiatives of the Ministry of Housing and Urban Affairs, enabling cities and towns across India to benefit from holistic and diverse forms of support, in keeping with their needs and local challenges.

Additional Information:

The government also launched India Urban Data Exchange (IUDX) and the SmartCode Platform.

India Urban Data Exchange (IUDX):

- IUDX serves as a seamless interface for data providers and data users, including ULBs, to share, request, and access datasets related to cities, urban governance, and urban service delivery.

- IUDX is an open-source software platform which facilitates the secure, authenticated, and managed exchange of data amongst various data platforms, 3rd party authenticated and authorised applications, and other sources.

- Significance:

  * IUDX is designed to address the problem of data silos, both within and across cities.

  * Cities generate large volumes of data, which are recorded by a wide range of entities, both within government and across industry, academia, and civil society.

  * The combination of these datasets can enable rapid innovation, as well as a better understanding of and planning for urban needs and challenges.

  * IUDX creates a secure and reliable channel for data producers or owners to share their data, with complete control over what is shared and with whom, in order to enable sharing while addressing security and privacy protections by design.

- IUDX has been developed in partnership between the Smart Cities Mission and the Indian Institute of Science (IISc), Bengaluru.

SmartCode Platform:

- SmartCode is a platform that enables all ecosystem stakeholders to contribute to a repository of open-source code for various solutions and applications for urban governance.

- It is designed to address the challenges that ULBs face in the development and deployment of digital applications to address urban challenges, by enabling cities to take advantage of existing codes and customizing them to suit local needs, rather than having to develop new solutions from scratch.

- As a repository of open-source software, the source code available on the platform will be free to use without any licensing or subscription fees, thus limiting costs to those involved with customizing the code and developing a locally-relevant solution.

HISTORY

Modern India-Important events from freedom struggle phase

1. Chauri Chaura Incident

» Prelims: Non Cooperation movement, Chauri Chaura incident

» Mains: End of Non co-operation movement and its impact on the freedom struggle

Context:

• 'Chauri Chaura' Centenary Celebrations.

Details:

• February 4th 2021 marks hundred years of the Chauri Chaura incident that had led to Mahatma Gandhi calling off the Non-cooperation Movement.

Chauri Chaura Incident:

• The Non-cooperation Movement was going on led by Gandhi and the Indian National Congress.

• This was supposed to be a peaceful and non-violent movement wherein people would relinquish their government jobs and titles, stop going to government schools and colleges, not serve in the army and also refuse to pay taxes as an extreme measure.

• Launched in August 1920, it was aimed at attaining Swaraj or self-rule.

• The people readily participated in the movement and it saw partial success at least in the participation level.

• On 4th February 1922, about 2500 people marched towards the Chauri Chaura market (Gorakhpur, UP) in order to picket a shop selling liquor.

• One of their leaders was arrested. A group of people then marched towards the police station demanding the release of the arrested leader.

• The police fired shots in the air hoping to disperse the crowd. However, the crowd became agitated and started pelting stones at the police.

• Things were getting out of hand and the sub-inspector at the station came forward and fired at the crowd killing three people. This incensed the people who then charged at the policemen who were heavily outnumbered. The police station was set ablaze by the people and all the policemen and officials inside were charred to death.

• Gandhi went on a fast for five days after the incident for his 'role' in the event. He withdrew the movement on 12 February officially since he felt that the people were not ready to take up a non-violent movement. He also felt that adequate training was not provided to the people to show restraint in the face of violent attacks.

Medieval India-Important personalities

2. Maharaja Suheldev

» Prelims: Persian literature in India, Advent of Turks in India

• Maharaja Suheldev, also spelt Suhaldev, was a ruler of Shravasti (Uttar Pradesh).

• He is mentioned in the 17th-century Persian-language historical romance Mirat-i-Masudi.

* Mirat-i-Masudi was written by Abd-ur-Rahman Chishti during the reign of the Mughal emperor Jahangir.

* In this chronicle, Suheldev was the son of King Mordhwaj of Shravasti.

• Suheldev is popularly known to have defeated and killed the Ghaznavid general Ghazi Saiyyad Salar Masud (a nephew of Mahmud of Ghazni) at Bahraich in 1034 CE.

• Suheldev is alternatively known as Sakardev, Suhirdadhwaj, Sahardev, etc.

• The Maharaja Suheldev Memorial is being built in Bahraich, UP.

Medieval India-Important personalities

3. Bir Chilarai

» Prelims: Bir Chilarai

» Mains: North east Indian kingdoms

Context:

• PM remembers Bir Chilarai on his Jayanti.

Bir Chilarai:

• Bir Chilarai (1510 – 1571 CE) was a brave warrior and general of the Assamese Koch royal dynasty.

• He was the younger brother of Nara Narayan, the king of the Kamata Kingdom.

• The birth anniversary of Mahabir Chilaray is organised by the Government of Assam annually since 2005.

• He played a big role in the expansion of his brother's empire

Modern India-Important personalities

4. **Mannathu Padmanabhan**

   » Prelims: Mannathu Padmanabhan, Vaikom satyagraha

   » Mains: Important personalities from south India

   Context:

   • PM pays tributes to Sri Mannathu Padmanabhan Ji on his Punya Tithi.

   About Mannathu Padmanabhan:

   • Mannathu Padmanabhan (1878 – 1970) was an Indian social reformer and freedom fighter from Kerala.

   • He took part in anti-untouchability agitations and advocated opening temples for people of all castes.

   • He also participated in the Vaikom Satyagraha.

   • He is also known for his founding of the Nair Service Society (NSS).

DISASTER MANAGEMENT

Natural and manmade disasters

1. Uttarakhand Glacier Burst

» Prelims: Glacier burst, NCMC

» Mains: Counter measures to mitigate the impact of glacier bursts; preventive measures

Context:

• Glacial burst on Nanda Devi triggered an avalanche and caused flash floods in Rishiganga and Dhauliganga rivers in Chamoli district of Uttarakhand.

• It was described as a "glacial burst" by the Centre's National Crisis Management Committee (NCMC).

National Crisis Management Committee (NCMC)

• A National Crisis Management Committee is a committee set up by the Government of India in the wake of a natural calamity for effective coordination and implementation of relief measures and operations.

• It deals with major crises which have serious or national ramifications.

• It is chaired by the Cabinet Secretary.

• Its functions are to oversee the Command, Control and Coordination of the disaster response; giving direction to the Crisis Management Group (CMG).

What is glacial burst?

• A glacial outburst is an uncommon event that occurs when the water dammed by a glacier or moraine is released.

• The glacier containing the body of water melts and overflows the glacier.

• Retreating glaciers, like several in the Himalayas, usually result in the formation of lakes at their tips, called proglacial lakes, often bound only by sediments and boulders.

  * If the boundaries of these lakes are breached, it can lead to large amounts of water rushing down to nearby streams and rivers, gathering momentum on the way by picking up sediments, rocks and other material, and resulting in flooding downstream.

• Glacial lake outburst flood (GLOF) events are not unusual, but their impact depends on the size of the Proglacial Lake that burst, and location.

  * The breach can be caused by several reasons — in this particular case, an avalanche was reported in the region two days ago.

* Other causes could be earthquake, heavy rainfall, snowmelt, longterm dam degradation, etc.

Impact:

• The glacial burst led to the rising of water levels in the river Rishiganga, which washed away the Rishiganga small hydro project of 13.2 MW.

• The flash flood also affected the downstream hydro project of NTPC at Tapovan on the river Dhauliganga (which is a tributary of the river Alaknanda).

  * Tapovan-Vishnugad project has an installed capacity of 520 MW.

• It led to rippling flash floods in the Dhauliganga and the Rishiganga and also impacted the Alaknanda.

Dhauliganga

• Dhauliganga originates from Vasudhara Tal, perhaps the largest glacial lake in Uttarakhand

  * It flows in a meandering course, which takes it through the Nanda Devi National Park.

• Dhauliganga is joined by Rishiganga River at Raini, where the disaster at the power project dam took place.

• The river takes a V-turn and continues to flow in the opposite direction, toward north as the Dhauliganga for another 30-odd km, through Tapovan, until it is joined by the Alaknanda at Vishnuprayag near Joshimath.

What triggered the glacial burst?

• Scientists are not sure what triggered the sudden surge of water near Chamoli in Uttarakhand.

  * Such a glacial burst is an extremely rare event.

  * They suspect the impact of climate change or development.

  * Environmental experts attributed the Nanda Devi glacial melt to global warming.

    » Climate change has driven erratic weather patterns like increased snowfall and rainfall, and warmer winters had led to the melting of a lot of snow.

» According to the latest assessment reports of the UN Intergovernmental Panel on Climate Change, Glacier retreat and permafrost thaw are projected to decrease the stability of the mountain slopes and increase the number and area of glacier lakes.

» It is also predicted that the number and area of glacier lakes will continue to increase in most regions in the coming decades, and new lakes will develop closer to steep and potentially unstable mountain walls, where lake outbursts can be more easily triggered.

* What scientists are certain of is that the incident was not a result of any glacier breaking off. In fact, glaciers are not known to break in a manner that ice-sheets in the polar regions do.

Measures taken:

Rescue:

- Dams in Shrinagar and Rishikesh were emptied out.

- People along riverbanks were evacuated.

- Apart from the local police and the Indo-Tibetan Border Police (ITBP), four columns of the Army were also deployed for rescue operations.

Relief:

- The Prime Minister approved ex-gratia of Rs. 2 lakh each from the Prime Minister's National Relief Fund for the next of kin of those who have lost their lives in the disaster.

Concerns:

- The State's deep gorges and canyons have attracted many hydroelectric projects and dams, with little concern for earthquake risk.

- Red flags have been raised repeatedly pointing to the threat from seismicity, dam-induced microseismicity, landslides and floods from a variety of causes, including unstable glacial lakes and climate change.

  * There was a moderate quake in 1991 in the region where the Tehri dam was built.

  * The 2013 floods devastated Kedarnath.

- India is heavily invested in dam development and growth of hydropower, largely in the Himalaya region — especially to cut carbon emissions.

- By one estimate, if the national plan to construct dams in 28 river valleys in the hills is realised in a few decades, the Indian Himalayas will have one dam for every 32 km, among the world's highest densities.

Geological nature of Uttarakhand:

- Uttarakhand is geologically unique.

- It being a part of the lesser Himalaya, it has numerous earth faults and hence it remains active in terms of deep movement of rock assemblages. It remains fragile from a geological point of view.

- Along the Main Central Thrust (MCT), running east-west along the Himalaya, the Indian and Eurasian plates converge. The northward moving peninsular India presses the lesser Himalaya rock assemblages under the huge pile of the Great Himalayan rocks. As a result of the high geological stresses being induced in the region there is a weakening of rocks in the area.

  * In fact, many locations in a 50-km area within the MCT zone have witnessed several earthquakes of varying intensity, including those with magnitudes of over 5.

Capital intensive projects:

- There are also questions being raised over the financial viability of the hydroelectric projects.

- The hydroelectric projects are "highly capital-intensive". They involve large investments and also the time for installation of large projects is large which further increases the costs of funding such projects.

Ecological impact:

- Though hydropower has been reliable where suitable dam capacity exists, in places such as Uttarakhand, the net benefit of big dams is controversial because of the collateral and unquantified damage in terms of loss of lives, livelihoods and destruction of ecology.

- Large dam projects involve large scale deforestation and destruction and involve massive and permanent alteration of the character and health of the hills.

Way forward:

- Experts have advocated small low-impact dams of less than 5 megawatts as an alternative.

- Additionally preventive and protective measures are also needed to reduce the vulnerability to disasters.

EDUCATION

Issues relating to Education

1. **The blank pages in India's online learning experience**

   » Prelims: Governmental initiatives in e-education

   » Mains: Impact of the pandemic on the education sector; lacunae in digital based education

   Context:

   • The article analyzes the impact of the COVID-19 pandemic on the education sector.

   Background:

   • The COVID-19 pandemic has had an adverse impact on the social, economic and political spheres. COVID-19 has affected all sectors including the education sector.

   • The schools have remained closed for almost a year. The lockdown happened during the last quarter of the academic year which led to the postponement of examinations and the curtailment of the prescribed syllabi.

   Digital learning:

   • Digital distance learning method is being promoted as an alternative to traditional classroom training. The focus has been on the use of text/video/audio content through SMS, WhatsApp, radio and TV programmes to reach out to students and engage them.

   • The Union Ministry of Human Resource Development in March 2020 started sharing free e-learning platforms. They include the Diksha portal, e-Pathshala, SWAYAM portal and SWAYAM Prabha.

     * Diksha portal has e-learning content aligned to the curriculum.

     * e-Pathshala is an app by the National Council of Educational Research and Training for Classes 1 to 12 in multiple languages.

     * SWAYAM portal hosts 1,900 courses including teaching videos, computer weekly assignments, examinations and credit transfers, aimed both at school (Classes 1 to 12) and higher education.

     * SWAYAM Prabha is a group of 32 direct to home channels devoted to the telecasting of educational programmes.

   Details:

   • The COVID-19 pandemic would have the following negative impacts.

   Rise in school dropouts:

   • Currently, around 300 million children across all age groups are reported to be out of school in India.

   • This number is expected to increase going forward, given the adverse economic impact of the pandemic on the poorer sections of society.

     * A survey promoted by the Centre for Budget and Policy Studies found that in families which faced cash and food shortages, only 50% of the boys and girls were confident of returning to school. The abilities of the families and communities concerned to support the educational journeys of the children have been found to be affected.

   Doubts over learning outcome:

   • There are questions on the level of understanding of students who have undergone 'digital learning' at home. Studies conducted on government-run schools in various States indicate poor performance of students who have undergone digital learning.

   • With the educational routine having been disrupted, children, in many cases, have also forgotten what they learnt earlier. The decision to postpone the board examinations and to allow automatic promotion to the higher classes is bound to affect the quality.

   Impact on girl students:

   • The girl students have to bear the extra burden due to the pandemic as apart from poor access to digital data, they were also burdened with household/farm work.

   • There is a growing apprehension that the disruption in education would lead to child marriages in girl students.

   Social impact:

   • The long closure of schools has also meant the disruption of a range of social initiatives such as the mid-day meal scheme, the school health programme and pre-metric scholarships to girl children. These initiatives have helped in enrolment as well as regular attendance.

   Neglect of existing divides:

   • School closures have had a significant impact on both students and their families, more in the case of the vulnerable and underprivileged sections. Studies indicate that the rapid transition to digital learning has been very challenging for this section.

- The digital initiative failed to take into account existing divides — spatial, digital, gender and class.
- Due to this divide, many students were unable to access online education due to a lack of devices and poor or no Internet connectivity. The attempts at digital learning have only exposed the wide digital divide between the rich and the poor and the urban and rural areas.
    * A recent UNICEF report points out that the massive school closures exposed the uneven distribution of technology that is needed to facilitate remote learning.

Lack of capacity:

- The digital initiative seems to have been taken in a haphazard manner.
- Many States lacked adequate digital infrastructure and even teachers were poorly equipped to teach. Also, they were not consulted before the initiative.
- There is credible evidence that students, parents and teachers were unprepared for the pedagogic shift.

Way forward:

- In order to achieve education-enabled social and economic mobility, the following aspects need to be considered.

NGO model as a template:

- Interestingly, schools run by the non-governmental organisation sector did fairly well during the interregnum. Catering mostly to the poor and backward segments, these schools did not go online. Instead, teachers visited individual students at home. They also taught children in small groups.
- This could serve as a model for further replication.

Post pandemic approach:

- Once schools reopen finally, the authorities should establish the re-enrolment of children as mandated by the National Education Policy 2020.
- Mass outreach programmes should be developed with civil society to encourage re-enrolment. Remedial tuitions and counselling are advisable, along with scholarships, targeted cash transfers and other entitlements to retain the poorest at school.

Addressing systemic issues:

- The systemic issues of education that relate to quality, equity and gender need to be addressed. Education planning has to be context-specific, gender-responsive and inclusive.

Issues relating to Education

2. Structural reforms for NEP 2020

- » Prelims: NEP Provisions
- » Mains: Need for structural reforms in governance of universities

Context:

- The article argues for structural reforms in the governance of universities and autonomous colleges.

Details:

- The National Education Policy (NEP) covers a wide spectrum of issues, including reforms in school and higher education. There should also be an equal emphasis on the need to restructure the governing bodies for universities and autonomous colleges.
- Governing bodies for universities and colleges must be reframed to make them equitable. The Board of Management system as recommended by the NEP could be a good starting point in this regard.

Recommendations:

- The system of appointments of vice-chancellors and syndicates or governing councils needs to be revised. The existing system of syndicates, consisting of government nominees and those nominated by Governors or chancellors, should be dispensed with.
- The members to the vice-chancellor's post should be selected based on merit in terms of teaching and research, administrative capabilities, and capacity for fundraising.
- The Board should consist of former vice-chancellors drawn from other universities, members drawn from industry, the alumni, eminent public intellectuals, principals of affiliated colleges on rotation and members representing the non-teaching staff.
- The Board's decisions should be taken by consensus or by a majority of the members present.
- Proceedings should be conducted in virtual mode and made available for stakeholders' viewership.
- An academic audit would ensure better accountability of faculty. Faculty members must be evaluated through their annual plans for research and innovative modes of teaching. They can be evaluated by external peers.

Conclusion:

- An independent governing body constituted on the basis of merit and expertise augurs well for the academic institutions.

3. Too many IITs, unrealistic expectations

» Prelims: UGC

» Mains: Changes needed in higher education sector

Institutes of Technology:

- The Indian Institutes of Technology (IITs) are the crown jewels of Indian higher education.

- They are world-renowned for the quality of their graduates and for their academic programmes in a range of fields in technology and engineering — and in the past decade, in research and innovation through research parks as well.

- They are among the few Indian higher education institutions that do reasonably well in the global rankings.

- The original five IITs were established in the 1950s and early 1960s. Four had a foreign collaborator.

- Currently, there are 23 IITs.

Details:

- The IITs are funded generously by the central government.

- The IITs are not universities; they have neither the range of disciplines nor the size that characterise universities worldwide.

- The IITs were, and are, self-consciously elite institutions aiming at the highest international academic standards.

   * This is a tradition that is important but increasingly difficult to maintain.

- They can be called the most selective institutions in the world.

- Also, IITs have traditionally attracted high-quality faculty, where most have doctorates from the most respected western universities.

- Top quality professors have been attracted to the IITs because of the quality of the students, the chance to work with the best academic minds in India, and a commitment to India's development.

Shortcomings:

- The IITs focused exclusively on technology and engineering.

- They later added humanities and social science. However, these programmes were modest until the 2020 National Education Policy emphasised the IITs should focus more on holistic and multidisciplinary education.

- While salaries of the faculties do not compare well on the international market, working and living conditions on the older IIT campuses are comfortable.

- Most of the new IITs are located in smaller towns.

   * While it is important to provide educational opportunities outside the major metropolitan areas, top institutions are seldom located far away from urban amenities.

- Another area is the lack of correlation between the local needs and IITs. Also, there are few community outreach programmes.

Concerns:

- For the past decade or so, and according to current plans, the IIT system has expanded beyond its capacity to maintain its high standards and is in danger of sinking into mediocrity.

- The recent decision of the University Grants Commission to permit select IITs under the 'Institutions of Eminence' category to set up campuses abroad could further weaken these already stretched institutions.

- With increasing number of IITs and in smaller towns, facilities and infrastructure are unlikely to be "world-class."

- It is, thus, inevitable that quality will decline and the "IIT brand" diluted.

- This would be very unfortunate for India since the IITs are without doubt India's most recognisable and respected academic institutions.

- It is time to rethink the changing role and mandate of IITs in order to ensure that quality and focus are maintained.

Way Forward:

- While excellent engineering/STEM (science, technology, engineering and mathematics) institutions are needed, they all do not have to be IITs.

- Perhaps 10 to 12 "real" IITs located near major cities are practical for India.

- Some of the newly established institutes can be renamed and provided with sufficient resources to produce high-quality graduates and good research.

- A more limited "IIT system" needs to be funded at "world-class" levels and staffed by "world-class" faculty, perhaps with some recruited from top universities internationally.

   * The recent decision to liberalise the recruitment rules to attract more foreign faculty is a good step in the right direction.

- IITs need to pay attention to internationalisation beyond sending their brightest graduates abroad and recruiting Indians with foreign PhDs.

   * In-depth collaboration with the best global universities, and hiring foreign faculty, would yield excellent results, and further build the IITs international brand.

* IIT Bombay-Monash Research Academy, and University of Queensland-IIT Delhi Academy of Research (UQIDAR), are promising examples.

- The IITs need robust policies to attract international students.

- Adequate and sustained funding is mandatory both from the government and from the philanthropy of tremendously successful IIT graduates at home and abroad.

GEOGRAPHY

Geography-Study of space

1. BL Lacertae

» Prelims: BL Lacertae blazar

Context

- Indian astronomers detect a huge optical flare in one of the oldest astronomical objects – BL Lacertae blazar.

Details:

- Indian astronomers have reported one of the strongest flares from a feeding super massive black hole or blazar called BL Lacertae.

- The data collected from the flare observed will help calculation of the black hole mass, size of emission region, and mechanism of the emission from one of the oldest astronomical objects known, hence opening a door to the origin and evolution of the Universe

About Blazars:

- Blazars, or feeding super massive black holes in far off galaxies, are known for their complicated emission mechanism.

- And for this reason alone they are of particular interest to the astronomical community around the world.

- Blazars are one of the most energetic and luminous objects in the Universe and they emit jets of charged particles travelling at nearly the speed of light.

Geography-Oceanography

2. INCOIS to go for aerial mapping of ocean floor

» Prelims: INCOIS

» Mains: Potential resources on ocean floor

What's in News?

- The Indian National Centre for Ocean Information Services (INCOIS) is planning a bathymetric study.

Details:

- INCOIS is planning to take the help of the National Remote Sensing Centre (NRSC) for aerial mapping of the Andaman and Nicobar Islands and Lakshadweep to get a better picture of the ocean floor.

  * NRSC is under the Ministry of Earth Sciences.

- NRSC has already done a similar high-resolution topographic Airborne Laser Terrain Mapping (ALTM) for the entire coastal areas of the country.

  * It is in the process of integrating the data for a 3D multi-hazard mapping of both the east and west coastline for a more precise picture of the ocean floor.

- NRSC had also identified gaps across the coast of Andhra Pradesh and Odisha for installing more tide gauges for better monitoring of the sea and more accurate prediction of impending disasters like cyclones.

- There are 36 already installed tide gauges in the Bay of Bengal.

Need for bathymetric study:

- Such a study has become imperative in view of the tsunamis of the Indonesian coasts.

- During the disaster, more than the quake-related high waves, the damage was due to landslides under the sea beds causing sudden wave surges leading to much damage without giving sufficient time to alert people.

Miscellaneous

3. NGC 6397/ Caldwell 86

- It is a globular cluster in the constellation Ara.

- It is located about 7,800 light-years from Earth

- The cluster contains around 400,000 stars

- NGC 6397 is one of at least 20 globular clusters of the Milky Way Galaxy that have undergone a core collapse

- It means that the core has contracted to a very dense stellar agglomeration.

Miscellaneous

4. WASP-62b

- The planet WASP-62b is 1.39 times the radius of Jupiter, the largest planet in our Solar System.

- That means it has a radius about 14 times that of Earth

- WASP-62b is roughly half the mass of Jupiter and so, given its bloated radius, it has a much lower density.

Geography-Geology

5. Sadiya earthquake

» Prelims: Earthquake prone areas in India, Map based information

Context

Scientists have found the first geological evidence of an earthquake at Himebasti Village on the border of Assam and Arunachal Pradesh, documented by historians as Sadiya earthquake.

Details:

- Sadiya earthquake is recorded to have caused massive destruction in the region and almost destroyed the town in 1697 CE.

- This finding could contribute to a seismic hazard map of the eastern Himalaya, which can facilitate construction and planning in the region.

- Historical archives refer to often recurring earthquakes along the Eastern Himalaya for which geological evidence is lacking, raising the question of whether these events ruptured the surface or remained blind and how they contribute to the seismic budget of the region, which is home to millions of inhabitants.

What is the present study?

- Scientists carried out a mega trench excavation at Himebasti village, Arunachal Pradesh where the most recent event records the imprints of the 1697 Sadiya earthquake and analysed it with modern geological techniques.

- They found the first geological surface rupture signatures in the form of exposed deposits associated with rivers and streams deformed by a thrust fault along a Northeast dipping fault zone.

- In order to constrain the causative faulting event at this site, the team dated twenty-one radiocarbon samples from the trench exposure.

- They also found large tree trunks embedded in the youngest flood deposits at the exit of the Subansiri River (Sadiya town is located roughly 145 km southeast of Subansiri river), suggesting the post-seismic aggradation of the river following an array of aftershocks till six months in an abortive fashion.

Significance:

- The study of the earthquake at Sadiya standing on a grassy plain, almost surrounded by forested Eastern Himalayas on the right bank of the Lohit River, adds an important site to the seismic hazard assessment of the eastern Himalaya.

- This will benefit the inhabitants and help in providing better infrastructure across the Eastern Himalayan foothills which is one of the most densely populated regions in the world.

Who conducted the Study?

- Scientists from Wadia Institute of Himalayan Geology (WIHG), a research institute under the Department of Science and Technology (DST), Govt. of India.

Geography-Study of space

6. Solar Rotation

» Prelims: Indian space observatories, Solar rotation

Context

Kodaikanal Solar Observatory Digitized Data probes Sun's rotation over the century.

Who conducted the study?

- Researchers led by a Ph.D. student from the Aryabhatta Research Institute of Observational Sciences (ARIES), an autonomous institute under Department of Science and Technology (DST), Govt. of India

- Collaborators from Max Planck Institute for Solar System Research, Goettingen, Germany.

- Collaborators from Southwest Research Institute, Boulder, USA.

The researchers studied the solar rotation by tracing sun spots from century-old digitalized films and photographs.

- The old films and photographs were taken at the Kodaikanal Solar Observatory (KoSO) of the Indian Institute of Astrophysics (Bengaluru).

- This estimation would help study magnetic field generated in the interior of the Sun, which causes sunspots and results in extreme situations like the historical mini-ice age on Earth (absence of sunspots).

- It could also help predict solar cycles and their variations in the future.

Solar rotation:

- The Sun rotates more quickly at its equator than at its poles.

- Over time, the Sun's differential rotation rates cause its magnetic field to become twisted and tangled.

- The tangles in the magnetic field lines can produce strong localized magnetic fields.

- When the Sun's magnetic field gets twisted, there are lots of sunspots.

- The sunspots which form at the surface with an 11-year periodicity are the only route to probe the solar dynamo or solar magnetism inside the Sun and hence measure the variation in solar rotation.

- The solar rotation period is 24.47 days at the equator and almost 38 days at the poles. The average rotation is 28 days.

GOVERNANCE

Government schemes

1. Pey Jal Survekshan

» Prelims: Jal Jeevan Mission; AMRUT scheme

• The Union Housing and Urban Affairs Ministry launched a survey to collect data on drinking water in 10 cities under the Jal Jeevan Mission (Urban).

• As part of the survey, 'Pey Jal Survekshan', data will also be collected on wastewater management and condition of water bodies in the cities.

• The mission will be monitored through a technology-based platform on which beneficiary response will be monitored.

• Initially, the survey is being launched as a pilot in ten cities namely, Agra, Badlapur, Bhubaneswar, Churu, Kochi, Madurai, Patiala, Rohtak, Surat and Tumkur.

• Based on the learnings of the pilot survey, this exercise will be extended to all Atal Mission for Rejuvenation and Urban Transformation (AMRUT) cities.

• The mission also has a reform agenda, under which City Water Potability Index, reduction in non-revenue water, municipal finance reforms, rain water harvesting, recycle water to meet at least 20% total water demand by 2025 and rejuvenating three water bodies per ULB are the key proposed reforms.

Miscellaneous

2. The cost of Internet shutdowns

» Prelims: Associated Supreme Court judgments

» Mains: Internet access as a right; concerns associated with internet shutdowns.

Context:

• Farmer protests calling for the withdrawal of farm laws introduced by the government has become a part of our national and international discourse.

• Also, plenty of concerns have been raised on the manner in which the Centre introduced the Bills and its actions towards countering the movement have raised plenty of concerns.

Details:

• A principal concern among these has been the recurrent shutdowns of Internet services around many border areas of NCR ordered by the Ministry of Home Affairs.

• For India, unfortunately, internet blockages are not new.

• India shuts down Internet services more than any other democracy in the world.

  * The past four years have seen over 400 such shutdowns. Jap

• Jammu and Kashmir saw the longest Internet shutdown across the world since the abrogation of Article 370 in the erstwhile State.

Concerns:

• Many, including UN rights groups, termed the internet shutdowns as

  * A form of collective punishment for people.

  * An overreach of governments on citizens' rights and liberties.

• Currently, Indian laws have vague provisions for suspending telecommunication services, including the Internet, during times of public emergencies, or, if required, for protecting the public interest.

Impact of Internet shutdown:

Impact during the pandemic:

• The impact of shutdowns becomes even more pronounced during a pandemic.

  * During the COVID-19 outbreak, the ones with good connectivity and know-how of digital tools were able to carry on with their lives with relatively fewer disruptions.

  * The ones without digital literacy or connectivity found themselves completely left out of all social and economic systems.

• Blanket bans on digital connectivity during the COVID-19 crisis may breed deep-rooted societal difficulties.

  * The most vulnerable among us may be cut off from health and welfare alerts.

  * There could be breaks in vital digital services, including those currently being used by hospitals to monitor the well-being of their patients at risk of infection, including the elderly, and pregnant women.

  * Students may lose access to avenues of learning as classes shift online.

  * Journalists may find it impossible to do ground-reporting from already volatile areas.

Massive Losses:

- Internet shutdowns will freeze economic activity in affected areas and cause large-scale disruptions in economic output.

- Today, almost all white-collar employment sectors are encouraging their employees to work from home.

- India is estimated to have lost over ₹20,000 crore in 2020 because of Internet shutdowns.

Supreme Court ruling:

- In 2020, the Supreme Court had declared that the right to access the Internet is one of our fundamental rights, alongside the freedom to carry on any trade, business or occupation over the medium of the Internet, under Article 19 of the Constitution.

Conclusion and Way Forward:

- Despite the costs and inconveniences involved, the shutdowns, on very rare occasions, do become necessary evils. However, it is hard to classify the ones initiated by the Central government in recent years under those categories.

- As the pace of globalization, digitization and connectivity accelerate, balancing civil liberties with security concerns will become an increasingly difficult task.

- Governments must find a way other than digital curbs to balance civil liberties and security.

- Internet bans should be a last resort and must be enforced following well-formulated protocols.

- Emergency response and relief systems for the vulnerable have to then work in parallel.

- Upgrading cyber divisions of law enforcement agencies with new-age innovations may offer several alternatives.

  * The use of some of these technologies, including mass surveillance systems and communication interceptors, also presents its own ethical dilemmas.

- Governments, especially in democracies, will have to create modern, independent institutions that have the authority and expertise to create frameworks that meet these challenges, without falling back on measures that result in state overreach.

Miscellaneous

3. Fine-tuning the State-of-the-app technology

» Mains: Issues related to data protection and privacy

Context:

- The article discusses the need for strict scrutiny of the technology platforms in India as Indian consumers become more aware and concerned about data protection and privacy.

Platforms and COVID-19:

- Since the announcement of the first lockdown, at least 35 mobile apps that specifically address COVID-19 were developed by 25 States and Union Territories of India.

- The governments, unlike the private sector, typically have a monopoly in providing public services. Therefore, the issue of privacy is crucial for government technology platforms and services.

- Also, "porting out" or "digital migration" is not an option.

- What is needed instead, is an examination of government technological platforms to create better awareness.

  * This was seen in action in the case of Aadhaar and Aarogya Setu.

No consistency:

- An analysis shows that the various mobile apps on COVID-19 operated by the different State governments lack consistency in terms of the features, functionalities, and frequency of information updates they offer.

- It leads to multiple sources of truth.

Privacy issues:

- Privacy issues stem from the information or permissions that the apps request from the user.

- Most of these State mobile apps on COVID-19 differ significantly on the data privacy they provided.

Still a case of digital exclusion:

- The development of COVID-19 mobile apps was well-received and perceived as a strong proactive initiative, especially by sections of the population that were digitally empowered.

- However, more than 40% of mobile phone subscribers in India lack access to Internet services.

- India's digitally excluded could be more than 50%.

- While the creation of mobile applications makes information readily available to those with technology access, it does not solve the problem for individuals that remain excluded digitally.

Way forward:

- The governments should continue to set up functional helplines, auto-diallers, SMS text messages, and other channels to ensure that the digitally restricted have access to the same information as the digitally empowered, more so during crises such as the pandemic.

- Data requests must always meet the two commonly accepted principles of data privacy — necessity and proportionality.

- The mobile applications developed must proactively follow established principles of privacy by design, such as minimal data collection and end-to-end data security.

- The adoption of an API-based microservices architecture and federated database structure with an appropriate governance framework could address these issues.

  * It would allow, for instance, Aarogya Setu to integrate with the myriad of State mobile apps to offer both its standard services.

  * That is, contact tracing and real-time information on cases as well as State-specific customised services or sub-applications such as information on hospital beds and grocery shops, among others.

- In the future, the design considerations of these mobile apps should evaluate the need for a centralised approach and ascertain whether the same goals can be achieved through a decentralised information flow.

Note:

- Many countries in Europe have considered moving from an information flow that is centralised to a decentralised information flow for contact-tracing applications.

- This was largely driven by concerns regarding privacy, as centralised databases can have a higher risk of data leaks and security breaches.

- Besides, a decentralised information flow, owing to information residing in many individual systems and not in a centralised system, increases the cost while reducing the reward of effecting a successful breach.

Conclusion:

- Given the presence of structured audits that continuously put the spotlight on Government of India-backed technologies, extending the same level of scrutiny to technology platforms developed by the States brings the opportunity of improved public services overall, and the public confidence needed to encourage wider adoption

Issues relating to civil services

4. A proper transfer policy needed

» Mains: Concerns associated with frequent transfer of civil servants; efficient transfer policy

Context:

- The article analyzes the issue of frequent transfers of civil servants.

Details:

Frequent transfers of civil servants:

- The issue of frequent transfers of civil servants is a significant issue across India.

  * The analysis of the SUPREMO (Single User Platform Related to Employees Online) database of the Department of Personnel and Training, Government of India, shows that the average posting spell of civil servants in India is only about 15 months. This is despite an increase in the median tenure since 2014 at the national level.

  * The Union Minister of Personnel, Public Grievances and Pensions, has publicly accepted the issue of frequent transfer of officers in States.

- Ashok Khemka and Pradeep Kasni are two Haryana-based IAS officers whose cases symbolise the issue of frequent transfers. Mr. Khemka has been transferred more than 50 times in his career and Mr. Kasni 65 times.

Recommendations:

- The Fifth Pay Commission had recommended that no premature transfer should be allowed and that there should be a fixation of a minimum tenure for each post.

- The Second Administrative Reforms Commission too has highlighted this issue.

- The Hota Committee had argued against frequent transfers.

Concerns:

- Despite multiple recommendations there continues to be the continued undermining of transfer guidelines and this has become a major shortcoming of personnel administration in India.

Effect on public servants' morale:

- Frequent transfers have a deleterious impact on officer morale, leading to a reduction in efficiency and effectiveness.

Weakens administration:

- Frequent transfers deny the civil servants the opportunity to settle down into an official role. This could weaken the administration.

- The absence of a fixed tenure of officials is one of the most important reasons for the tardy implementation of government policies, for lack of accountability of officers, for the waste of public money because of inadequate supervision of programmes under implementation and for large-scale corruption.

- The lack of administration impacts development and governance and acts as a collective punishment to the population of that place. This could cause distrust, disconnect and alienation in the region.

Against core civil service values:

- The frequent transfer of officials is mostly blamed on the interference of local politicians.

- Transfers often reflect administrative favouritism and create divisions among civil servants.

- If they are done on a political basis, this impacts the neutrality of the civil services. The core values of the civil services — neutrality, impartiality and anonymity are bound to be affected.

Conclusion:

- Good governance and better administration of development is a sine qua non in present times.

- Civil servants, no matter how dedicated, innovative and efficient they may be, need stability of tenure to govern well and this necessitates an efficient transfer policy.

Miscellaneous

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

   » Prelims: IT rules provisions

   » Mains: Need for regulation of social media platforms; criticisms regarding IT rules

Context:

The government has notified the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules.

What is the context in which these rules have been framed?

- The persistent spread of fake news, abuse of these platforms to share morphed images of women have been issues of concern.

- Questions about how social media platforms can be made accountable for the spread of fake news and pornographic content have been raised in Parliament and by the Supreme Court in recent years.

- The question of stricter regulation of digital media came up in 2020 when the Supreme Court was hearing a case involving Sudarshan TV. In the course, it asked the government for suggestions to improve the self-regulatory mechanism for electronic media.

- Recently, there has also been a face-off between the government and Twitter over its non-compliance with the government order to block several hashtags and handles of journalists, activists and politicians in the backdrop of the ongoing farmers' protests.

- It is a soft-touch oversight mechanism to deal with issues such as the persistent spread of fake news and other misinformation.

Details:

- Under the ambit of the rules, the government has brought in detailed guidelines for digital content on both digital media and Over The Top (OTT) platforms, while giving itself overriding powers.

- The guidelines seek to provide a grievance redressal mechanism for users of digital platforms of all kinds including social media sites, messaging apps, over-the-top (OTT) streaming services, and digital news publishers.

- It makes it mandatory for platforms such as WhatsApp to help identify the originator of unlawful messages.

- The guidelines also require streaming services to classify content based on its nature and type.

- On receiving a court order or being notified by the appropriate government agency, an intermediary will need to remove or disable access to any unlawful information as early as possible, but in no case later than 36 hours.

- Social media platforms have been divided on the basis of the number of users.

   * Smaller platforms are social media intermediaries.

   * The big ones have been classed as significant social media intermediaries.

- Significant social media intermediaries will have to appoint a chief compliance officer, a nodal contact person who will coordinate with law enforcement agencies and a resident grievance officer.

   * All three have to be residents of India.

   * The chief compliance officer shall be liable in any proceedings relating to any relevant third-party information, data or communication link made available or hosted by that intermediary.

   * The intermediaries will also have to appoint a nodal contact person for 24×7 coordination with law enforcement agencies.

Framework for regulation:

It lays down a three-tier grievance redressal mechanism

- First Tier: The first level of the grievance redressal system will be at the level of each OTT provider

   * Each complaint will have to be addressed within 15 days.

- Second Tier: If the complaint is not satisfactorily addressed, then the complainant can scale it up to a self-regulatory body collectively established by the OTTs.

* This body will be headed by a retired judge of the Supreme Court, a High Court, or an independent eminent person from the field of media, broadcasting, entertainment, child rights, human rights or other relevant fields.

* This self-regulatory body also has censuring powers in case of any incriminating content.

- Third Tier: At the third tier, the government has equipped itself with overriding powers in the form of an oversight mechanism.

  * An inter-ministerial committee will perform this function.

  * It will largely have the same powers as the collective self-regulatory body of the OTTs.

- Emergency Powers: Over and above this framework, the government has equipped itself with emergency powers to block public access to any information.

  * As per the rules, in case of emergency nature, the Secretary, Ministry of Information and Broadcasting may, if he is satisfied that it is necessary or expedient and justifiable, give orders to block access.

  * Such orders can be released without giving an opportunity of hearing to the publishing platform.

What has changed from earlier?

- The scope of regulation of the digital space has been expanded.

- The new guidelines replace the Information Technology (Intermediaries Guidelines) Rules, 2011.

- They also regulate digital news publishers and streaming services, which was not the case earlier.

- Under Section 79 of the Information Technology Act, the intermediaries are not liable for user-generated content, provided they adhere to the rules — "an intermediary shall not be liable for any third-party information, data, or communication link made available or hosted by him," it states. These rules have been tightened now.

- These rules could force a few of the world's most valuable companies to recalibrate their business models in order to stay in line with these regulations.

Criticisms:

- Any grievance that does not get satisfactorily solved at the self-regulatory levels will get escalated to the government panel.

  * The Internet Freedom Foundation (IFF), a digital liberties organisation, refers to this as "excessive governmental control over digital news and OTT content".

- The other rule that has been criticised by the IFF is the requirement of traceability of the originator of a problematic message.

- The new rules are likely to have far-reaching implications for digital media and follow a clash with Twitter over the farmers' protest.

- While the guidelines bring clarity on the responsibilities of intermediaries, in the current form, it could undermine the principles of open and accessible Internet and violate the right to privacy and free speech of users.

- It could also lead to an erosion of the safe harbour protection given to intermediaries under Section 79 of the IT Act.

Conclusion:

While guidelines were needed to hold social media and other companies accountable for "misuse and abuse", these rules have raised concerns over increasing potential for censorship and surveillance. Oversight and regulation should not result in increased political control, unreasonable prohibitions on freedom of expression online and hurting individual privacy.

Miscellaneous

6. Geospatial data policy liberalised

  » Mains: Potential applications of geospatial technology

- Geospatial data (also known as "spatial data") is used to describe data that represents features or objects on the Earth's surface.

- Whether it's man-made or natural, if it has to do with a specific location on the globe

What is Geo-Spatial Data?

- Geospatial data is data about objects, events, or phenomena that have a location on the surface of the earth.

Categorisation

- The location may be static in the short-term, like the location of a road, an earthquake event, malnutrition among children, or

- Dynamic like a moving vehicle or pedestrian, the spread of an infectious disease.

How is data collected?

- Geospatial data combines location information, attribute information (the characteristics of the object, event, or phenomena concerned), and often also temporal information or the time at which the location and attributes exist.

- Geo-spatial data usually involves information of public interest such as roads, localities, rail lines, water bodies, and public amenities.

Data is split into three types: point, line (or arc), and polygon data.

Point Data

- Point data is most commonly used to represent nonadjacent features and to represent discrete data points.

Line Data

- Line (or arc) data is used to represent linear features. Common examples would be rivers, trails, and streets.

Polygon Data

- Polygons are used to represent areas such as the boundary of a city (on a large scale map), lake, or forest.

Attributes

- Spatial data contains more information than just a location on the surface of the Earth. Any additional information, or non-spatial data, that describes a feature is referred to as an attribute.

- Spatial data can have any amount of additional attributes accompanying information about the location.

What is the present policy on geo-spatial data?

- There are strict restrictions on the collection, storage, use, sale, dissemination of geo-spatial data and mapping under the current regime.

- The policy had not been renewed in decades and has been driven by internal as well as external security concerns.

- The sector so far is dominated by the Indian government as well as government-run agencies such as the Survey of India and private companies need to navigate a system of permissions from different departments of the government (depending on the kind of data to be created) as well as the defence and Home Ministries, to be able to collect, create or disseminate geo-spatial data.

- Initially conceptualized as a matter solely concerned with security, geo-spatial data collection was the prerogative of the defence forces and the government.

Changes

- Until now, New Delhi required Indian firms to seek licenses and additional approvals to create and publish topographical data.

- Local firms will no longer need a license or other permission to collect, generate, store and share geospatial data of the country

- Indian firms will also be provided access to terrestrial mobile mapping surveys, street view surveys and surveying in Indian territorial waters.

Why has the government deregulated geo-spatial data?

- This system of acquiring licenses or permission, and the red tape involved, can take months, delaying projects, especially those that are in mission mode – for both Indian companies as well as government agencies.

- The deregulation eliminates the requirement of permissions as well as scrutiny, even for security concerns. Indian companies now can self-attest, conforming to government guidelines without actually having to be monitored by a government agency- these guidelines therefore place a great deal of trust in Indian entities.

Private Investments

- There is also a huge lack of data in the country which impedes planning for infrastructure, development and businesses which are data-based.

- The mapping of the entire country that too with high accuracy, by the Indian government alone could take decades.

- The government therefore felt an urgent need to incentivise the geo-spatial sector for Indian companies and increased investment from private players in the sector.

What impact is this expected to have?

- By liberalising the system, the government will ensure more players in the field, competitiveness of Indian companies in the global market, and more accurate data available to both the government to formulate plans and administer, but also for individual Indians.

- Startups and businesses can now also use this data in setting up their concerns, especially in the sector of e-commerce or geo-spatial based apps – which in turn will increase employment in these sectors.

- Indian companies will be able to develop indigenous apps, for example an Indian version of google maps.

- There is also likely to be an increase in public-private partnerships with the opening of this sector with data collection companies working with the Indian government on various sectoral projects.

- The government also expects an increase in investment in the geo-spatial sector by companies, and also an increase in export of data to foreign companies and countries, which in turn will boost the economy.

7. News Media Bargaining Code – Australia Vs Facebook

» Prelim News Media bargaining code s:

» Mains: Australia's new bill and potential takeaways for countries like India

Context:

In a strong pushback to Australia's new media bargaining laws, Facebook decided to black out news content from its social networking platform in Australia.

What is Australia's media bargaining law?

• Australia's new media bargaining code was introduced in parliament in December 2020.

• It requires big tech companies like Google and Facebook to enter into agreements with news outlets that result in a commercial contract for showing the latter's content on their platforms.

• It mandates a bargaining code that aims to force Google and Facebook to compensate media companies for using their content.

• The proposed code would require Facebook and Google to open up their algorithmic black boxes, and their datasets that underpin the advertising market, to regulatory scrutiny.

• It would enable the Australian Competition and Consumer Commission to compel Google and Facebook to carry certain news services for a yet-to-be specified fee.

Significance:

• The Australian law is being seen as an initial attempt to regulate tech giants to take back some of the control they have on global communications.

• The Australian process is one of many taking place around the world in the last three to five years, including in India.

• The days of voluntary self-regulatory efforts from the large platforms seem to be ending with many countries preferring mandated regulatory requirements.

• The legislation sets a precedent in regulating social media across geographies, and is being closely watched the world over.

Why does Facebook have an issue with the code?

• Google and Facebook have engaged in desperate attempts to avoid regulation under the Australian government's proposed mandatory news media bargaining code.

• The code would force them to pay Australian news companies for content that appears on their platforms.

• It also requires they abide by certain minimum standards, including informing media companies about the type of data collected through users' interactions with news, and providing advance notice of any algorithmic changes that affect news content.

How does the deal impact Facebook?

• Not much, as Facebook says that news makes up less than 4% of the content people see in their news feed.

• Over the years, Facebook has been less interested in news as it has moved towards softer and more engaging video content that could drive conversations within a network.

• Also, its experience with the way news feeds were gamed during the 2016 US presidential elections has made it wary of becoming a large platform for news.

What does this mean for the rest of the world?

• Facebook and Google rightly fear the action in Australia could trigger similar laws across the world.

• They might move towards making the inflow of news into its platforms more contractual.

Concerns:

There are questions on whether this code could provide an ideal regulatory model for regulating big tech. Few concerns over the regulation are:

Affect free speech adversely:

• Requiring the platforms to compulsorily carry some content amounts to compelled speech and goes against the ideal of free speech.

Liable to misuse:

• The provision requiring the platforms to compulsorily carry some content could be misused by the state authority.

• If the platforms are required to carry official speech, they can be used by the state to spread their ideology.

Significance of internet platforms:

• Social media has been an important platform for voices not heard in the mainstream media given its easy accessibility.

• Social media's role in the #BlackLivesMatter and #MeToo movement signifies the efficacy of social media platforms.

• The regulation of internet platforms could have a detrimental impact on the effectiveness of these platforms.

Counterview:

Arguments in favour of regulation of big tech are based on the following aspects:

Need to counter growing inequity in the sector:

- There are concerns being raised that the Internet has been hijacked by a small group of companies that are rewiring it.

- These companies control the critical audience data and also enjoy a substantial share of online advertising.

  * Most countries including Australia have a highly concentrated Internet with Google accounting for a large share of search queries.

  * Google and Facebook account for a large share of online advertising.

Increasing power and influence of internet platforms:

- The recent case of Twitter permanently suspending the account of U.S. President, Mr. Donald Trump is an example of the power being wielded by these platforms which allowed a private corporate actor the power to de-platform the most powerful politician.

- Though there are arguments both in favour of and against this move, the lack of clear cut guidelines in such a scenario enables such platforms to misuse their control on users for vested interests.

- The increasing reach of the platforms also provides them with greater influence among the masses. This could be used to their advantage.

Dangers posed by internet platforms:

- The internet platforms can also be misused for disinformation operations, and to fan the flames of political polarisation, hate speech, misogynistic abuse, terrorist propaganda.

- A conception of freedom of speech that does not draw boundaries around assaults on democracy amounts to a fundamentally wrong approach to freedom of speech.

- An institutional arrangement like the proposed code can help regulate the misuse of internet platforms.

Conclusion:

- One cannot label must-carry laws as compelled speech. Though making platforms common carriers is not a good idea, it would help move towards fair carriage of news.

- This would also help ensure that certain public interest-oriented journalism is also carried on the internet platform This idea may not be antithetical to democratic ideals.

- Reasonable regulation is democratic, but the moral panic around big tech needs to be avoided.

- The European-Canadian international human rights standards for freedom of expression and opinion which recognize the inherent right of freedom of speech and expression but subject to limits established through the rule of law, which

is compatible with that of a democratic society may serve as the right model for regulation of the internet platforms.

Miscellaneous

8. Twitter-Government Showdown

  » Prelims: Information technology act

  » Mains: Regulation of social media platforms

Background

- More than 250 accounts were tweeting, or retweeting, 'farmer genocide' hashtag, and making "fake, intimidatory and provocative tweets" in connection with the farmers' protest.

- The government had said that the hashtag was a "motivated campaign to abuse, inflame and create tension in society on unsubstantiated grounds. Incitement to genocide is not freedom of speech; It is threat to law and order"

Government Order

- The Ministry of Electronics and Information Technology had sought "emergency blocking of 257 URLs and 1 Hashtag under section 69 A of the Information Technology Act"

  * Power to issue directions for blocking for public access of any information through any computer resource

  * An intermediary includes "telecom service providers, network service providers, internet service providers, web-hosting service providers, search engines, online payment sites, online auction sites, online marketplaces, cyber cafes etc"

- The Government's initial order was issued under Section 69A of the Information Technology Act, 2000, under which it can direct an intermediary to block any information for public access "in the interest of sovereignty and integrity of India, defence of India, security of the State, friendly relations with foreign States or public order or for preventing incitement to the commission of any cognizable offence relating to above…"

  * This is the same Section under which hundreds of Chinese apps have been banned in recent months.

Twitter

- Twitter initially complied with the order but then restored these tweets and handles, which included those of media houses.

- Twitter did block the content but many of these accounts were unblocked later.

Obligations of intermediaries

- Intermediaries are required to preserve and retain specified information in a manner and format prescribed by the Centre for a specified duration.

- When a direction is given for monitoring, interception or decryption, blocking access to the public, the intermediary, should extend required technical assistance and must comply with the request. Failure to do so is punishable with imprisonment and fines.

Liability of the intermediary:

- Though Section 79 of the Act makes it clear that "an intermediary shall not be liable for any third-party information, data, or communication link made available or hosted by him", the exemption from liability does not apply if there is evidence that the intermediary abetted or induced the commission of the unlawful act involved.

- The intermediaries have the responsibility to remove offensive content or block access to it, as soon as it is brought to their notice

Government's View

- The government had said that Twitter may face action if it does not comply with the government's orders, stressing that the social media giant "unilaterally unblocked" accounts and tweets.

Supreme Court (SC)

- Supreme Court in a landmark judgment struck down section 66A of the Information Technology Act, 2000

- Though the use of Section 69A has been often criticised for the secrecy surrounding the process, it was upheld by the Supreme Court in the landmark Shreya Singhal vs Union of India (2015).

- The Court then was satisfied with the safeguards available.

Concerns

- In a very sensitive setting, one that at least at one point was simmering with the potential for large-scale violence, provocation of any kind was unacceptable.

- Twitter's act of defying the orders as per the law means it is on slippery territory.

Arguments against the provisions of the IT Act:

- The root of the problem is Section 69A of the IT Act. There are a number of problems with this legal structure.

- It makes censorship an easy and almost completely costless option, for the government.

    * The government can simply direct intermediaries to block content, and place the burden of going to court upon the users.

    * The easier it is to censor speech, the more likely it is that any government will resort to that option.

- Confidentiality requirement means that the user will not even know why their account has been blocked and, therefore, will be in no position to challenge it.

- There are no procedural safeguards — no opportunity for a hearing to affected parties, and no need for reasoned orders.

    * This violates both free speech rights, as well as the right to due process.

Way forward

Co-operative and collaborative approach:

- Cooperation between technology services companies and law enforcement agencies is deemed a vital part in handling the threats from the cyber world.

- The potential of the Internet and its offshoots such as mail and messaging services and social media networks to disseminate potentially harmful content such as hate speech, rumours, inflammatory and provocative messages and child pornography, is on the rise.

Balancing the often contradicting interests:

- There is the need to balance the national security and the desire to maintain peace and law and order situation on the part of the governments with the intermediary's concerns about the threat of privacy violations and online surveillance.

Using technology to counter the threats:

- The intermediaries should deploy automated tools for proactively removing or disabling public access to unlawful information, and to have a 24×7 mechanism to deal with requisitions of law enforcement.

Conclusion

- Therefore the affected parties must be given the opportunity of a fair hearing before a blocking order is issued.

- A transparent process will also ensure that the blocking order is a reasoned one, and can be effectively challenged before a court, if need be.

- There is, thus an urgent need for both legal and jurisprudential reform.

MISCELLANEOUS

1. **Dickinsonia**

   - Dickinsonia is an extinct genus of a basal animal that lived during the late Ediacaran period.

   - Basal animals are animals which have radial symmetry in their body plans.

   Context

   - Dickinsonia remains are found on the roof of the 'Auditorium Cave' at Bhimbetka

   Details

   - It dates back 570 million years.

   - The fossils were found in the roof of Auditorium Cave at Bhimbetka Rock Shelters, a UNESCO World Heritage site for Paleolithic and Mesolithic cave art, near Bhopal.

Government initiatives

2. **E-Chhawani**

   - The portal (https://echhawani.gov.in/) has been created to provide online civic services to over 20 lakh residents of 62 Cantonment Boards across the country.

   - Through the portal, the residents of cantonment areas will be able to avail basic services like renewal of leases, application for birth & death certificates, water & sewerage connections, trade licences, mobile toilet locators and payment of different types of taxes and fees, with just a click of a button.

   - The portal has been jointly developed by eGov Foundation, Bharat Electronics Limited (BEL), Directorate General Defence Estates (DGDE) and National Informatics Centre (NIC).

   - The portal is expected to ensure effectiveness and transparency of the services distribution system of the Cantonment Boards and provide time-bound solutions to the residents.

   Context:

   - Raksha Mantri launches E-Chhawani portal & mobile app.

Government initiatives

3. **GrapeNet**

   - The GrapeNet is a web-based certification and traceability software system for monitoring fresh grapes exported from India to the European Union.

   - It is an internet based electronic service offered by APEDA to the stakeholders for facilitating testing and certification of Grapes for export from India in compliance with the standards identified by NRC Pune, on the basis of consultation with the exporters.

   - GrapeNet collects, stores and reports forward and backward traces and quality assurance data entered by the stakeholders, i.e., exporters, laboratories and PSC authorities within the grapes supply chain in India.

   - GrapeNet is a first of its kind initiative in India that has put in place an end-to-end system for monitoring pesticide residue, achieve product standardization and facilitate tracing back from retail shelves to the farm of the Indian grower, through the various stages of sampling, testing, certification and packing.

   - Now, in a bid to ensure cyber security protection for its traceability initiative, APEDA has adopted Blockchain and cloud migration technologies in GrapeNet.

Important days

4. **International Day of Women and Girls in Science**

   Context

   - Women & Child Development Ministry in association with MyGov launches online campaign to celebrate women in science.

   Details:

   - The campaign honours our young girls from across the country who have performed well in the subjects of Maths and Science & encourage these STEM STARS to make us proud in days to come.

   International Day of Women and Girls in Science:

   - This is an UN-declared celebration started in 2015.

   - It is observed on the 11th day of February.

   - The day recognizes the critical role women and girls play in science and technology.

   - Theme for 2021: "Women Scientists at the forefront of the fight against COVID-19".

   Vigyan Jyoti Programme

   - It is a new initiative to encourage girls to take interest in science and build a career in this field.

   - It was launched by the Department of Science & Technology (DST) to create a level-playing field for meritorious girls to pursue STEM.

   - It had been running successfully in 50 Jawahar

Navodaya Vidyalayas (JNV) since December 2019 and has now been expanded to 50 more JNVs for the year 2021-22.

- The programme addresses the under-representation of women in certain areas of STEM.

- Vigyan Jyoti activities include student-parent counselling, visit to labs and knowledge centres, partners role model interactions, science camps, academic support classes, resource material distribution and tinkering activities as well as online academic support.

Government Initiatives

5. Rashtriya Yuva Sashaktikaran Karyakram Scheme

- It is a Central Sector Scheme of the Ministry of Youth Affairs & Sports and has been continuing since the 12th Five Year Plan.

- The Scheme aims to develop the personality and leadership qualities of the youth and to engage them in nation building activities.

- The Scheme beneficiaries are youth in the age-group of 15-29 years. In case of programme components specifically meant for adolescents, the age group is 10-19 years.

- It is an umbrella scheme comprising the following sub-schemes:

  * Nehru Yuva Kendra Sangathan (launched in 1972, it is one of the largest youth organisations in the world)

  * National Youth Corps

  * National Programme for Youth and Adolescent Development

  * International Cooperation

  * Youth Hostels

  * Assistance to Scouting and Guiding Organisations

  * National Young Leaders Programme

Government Initiatives

6. TECHNOGRAHIS

Context

- An Enrolment Module for TECHNOGRAHIS has been launched by the Ministry of Housing and Urban Affairs (MoHUA).

Who are TECHNOGRAHIS?

- TECHNOGRAHIS are students from IITs, NITs, engineering, planning and architecture colleges, faculty members, academicians, and stakeholders.

- They can register themselves to visit Live Laboratories at six Light House Project (LHP) sites for learning, consultation, generation of ideas and solutions, experimentation, innovation, and technical awareness.

- This will help them in getting a first-hand account of the technologies being used and in turn, they can adapt and adopt them as per their requirements in the construction sector for a 'Make in India' approach.

Live Laboratories of LHP:

- MoHUA is promoting six Light House Projects (LHPs) as Live Laboratories for transfer of technology to the field.

- The primary goal is to encourage large scale participation of people to create technical awareness for on-site learning.

Light House Project (LHP):

- LHPs are being built as part of the Global Housing Technology Challenge-India (GHTC- India) initiative under the Pradhan Mantri Awas Yojana-Urban (PMAY-U).

- The LHPs are model housing projects.

- About 1,000 houses at each location are being built with allied infrastructure facilities.

- This technology revolution is cost-effective, environment-friendly, disaster-resilient and promotes speedier construction.

- The initiative will prove to be a major push towards technical transformation in India.

Important days

7. Unani Day

Context

- World Unani Day is observed on February 11 annually.

About Unani Day:

- It is celebrated on the birth anniversary of great Unani scholar and social reformer Hakim Ajmal Khan (1868 – 1927). He was a Unani medical educationist and founder of scientific research in the Unani system of medicine.

- The day is marked to spread awareness about health care delivery through the Unani system of medicine.

- Unani is a preventive and curative philosophy that has been used in India for many years. Today, India is one of the leading countries as far as the practice of Unani medicine is concerned.

- The first Unani Day was celebrated in 2017 at the Central Research Institute of Unani Medicine (CRIUM), Hyderabad.

About Unani:

- The Unani system of medicine was originated in

Greece, however, its present form was saved by the Arabs.

- Unani medicine is also known as Unani Tibb, Arabian medicine, or Islamic medicine.

- It is a healing philosophy that takes from ancient Greek medicine. In Arab, Unani means 'Greek.'

- It assumes the four main elements – Fire, Water, Air and Earth which corresponds to four humours – Phlegm, Black bile, Blood, and Yellow bile respectively.

- It was introduced in India by the Arabs and Persians sometime around the eleventh century. India is one of the leading countries in so for as the practice of Unani medicine is concerned. It has the largest number of Unani educational, research and health care institutions.

Important days

8. **World Pulses Day**

Context

- February 10 is observed as World Pulses Day.

About World Pulses Day:

- The UN General Assembly in 2019 decided to dedicate a day to Pulses to increase awareness and access to pulses globally known as World Pulses Day.

- The World Pulses Day falls on February 10 every year and recognised pulses as a global food.

- On this Day, people make efforts in creating awareness about the importance of pulses in sustainable food production.

- World Pulses Day 2021 theme – #LovePulses

Significance of pulses:

- Pulses are important for a healthy diet.

- Pulses are rich in nutritional and protein values.

- Pulses, and legumes (lentils, peas, chickpeas, beans, soybeans, and peanuts) play an equally important role in health maintenance and overall improvement.

- Pulses also contribute majorly to achieving the goals of the 2030 Agenda of Sustainable Development.

- Pulses and legume crops help in improving the feasibility of agricultural production systems.

- Pulses provide environmental benefits. The nitrogen-fixing properties of pulses improve soil fertility, which increases the productivity and fertility of the farmland.

Important days

9. **World Radio Day**

- The World Radio Day is observed on 13 February annually.

- It was first proclaimed by UNESCO in 2011.

- World Radio Day 2021 theme: "New World, New Radio".

- February 13 was chosen as the day to celebrate the medium because, on this day, the United Nations radio was established back in 1946.

- Radio is a powerful medium for celebrating humanity in all its diversity and constitutes a platform for democratic discourse.

- At the global level, radio remains the most widely consumed medium.

Government initiatives

10. **Saras Aajeevika Mela 2021:**

- The Saras Aajeevika Mela 2021 was organised at Noida Haat by the Ministry of Rural Development.

- More than 300 rural self-help groups and craftsman from 27 states participated in the Mela.

- Stalls showcasing regional cuisines and cultural performances were organised at the Mela (fair).

- During the Mela, workshops on product packaging and design, communication skills, social media publicity and Business 2 Business marketing was organised to educate the rural self-help groups and craftsman.

- Through participation in SARAS Aajeevika Mela, these rural SHG women get vital national level exposure to understand the demand and taste of urban customers.

Prelims related facts

11. **New light on rise of mammals**

What's in News?

Scientists have documented the earliest-known fossil evidence of primates.

Details:

- Several fossils of Purgatorius – the oldest genus in a group of the earliest-known primates called plesiadapiforms, were analysed.

  * These ancient mammals were small-bodied and ate specialised diets of insects and fruits that varied by species.

- The scientists also analysed fossilised teeth found in the Hell Creek area in the U.S.

- Based on the age of the fossils, the scientists said the ancestor of all primates, including the

plesiadapiforms and modern day primates such as lemurs, monkeys and apes, likely lived alongside large dinosaurs.

Significance:

- It sheds light on how life on land recovered after the extinction event 66 million years ago that wiped out the dinosaurs and led to the rise of mammals.

- The discovery represents the oldest dated occurrence of archaic primates in the fossil record.

- It adds to the understanding of how the earliest primates separated themselves from their competitors following the demise of the dinosaurs.

PRACTICE QUESTIONS

1. **Which of the following statement/s is/are correct?**

   1. Andaman and Nicobar Islands have the highest number of National Parks and Wildlife sanctuaries for any state/Union Territory in India.

   2. Andaman and Nicobar Islands house the largest number of Particularly Vulnerable Tribal Groups (PVTG) for any state/Union territory in India.

   Options:

   A. 1 only

   B. 2 only

   C. Both 1 and 2

   D. Neither 1 nor 2

2. **Which of the following statement/s is/are correct?**

   1. The census exercise in India first began in 1872 under British Viceroy Lord Mayo.

   2. The first complete census in India was undertaken in 1881 under the British Viceroy Ripon.

   Options:

   A. 1 only

   B. 2 only

   C. Both 1 and 2

   D. Neither 1 nor 2

3. **Periyar Tiger reserve is located in which of the following states?**

   A. Tamil Nadu

   B. Kerala

   C. Karnataka

   D. Andhra Pradesh

4. **Which of the following statement/s is/are correct with respect to Biomethanation?**

   1. It involves microbiological conversion of bio-degradable material under aerobic condition.

   2. The major products of Biomethanation are methane and carbon monoxide

   Options:

   A. 1 only

   B. 2 only

   C. Both 1 and 2

   D. Neither 1 nor 2

5. **Which of the following statement/s is/are correct with respect to the Kaladan Multi-Modal Transit Transport project?**

   1. It marks a collaboration between India and Myanmar.

   2. It would connect to the state of Manipur in India.

   Options:

   A. 1 only

   B. 2 only

   C. Both 1 and 2

   D. Neither 1 nor 2

6. **What are the possible benefits of vehicle scrappage policy?**

   1. Will boost the automobile sector

   2. Promoting circular economy

   3. Reduce the nation's dependency on critical raw materials for vehicle manufacturing

   4. Reduce environmental pollution

   5. Increase energy security

   6. Increase employment opportunities

   Options:

   A. 1, 2, 3, 4 and 6 only

   B. 1, 2, 3, 4, 5 and 6

   C. 1, 2, 4, 5 and 6 only

   D. 1, 4 and 6 only

7. **Which of the following statement/s is are correct with respect to Agriculture Infrastructure Fund?**

   1. The scheme shall provide a medium – long term debt financing facility for investment in projects for post-harvest management infrastructure and community farming assets.

   2. One Lakh Crore is the amount earmarked for the fund.

   3. APMCs can also seek loans from the AIF.

   Options:

   A. 1 only

   B. 1 and 2 only

   C. 1, 2 and 3

   D. 2 and 3 only

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8. **Which of the following are the criteria considered by the 15th Finance Commission in the devolution of funds to the states from the divisible pool of taxes?**

   1. Income Distance
   2. Demographic performance
   3. Population, 1971
   4. Tax efforts
   5. Area
   6. Forest cover
   7. Population density

   Options:

   A. 1, 2, 3, 4, 5, 6 and 7
   B. 1, 2, 4 and 5 only
   C. 1, 2, 4, 5 and 6 only
   D. 1, 3, 4 and 7 only

9. **Rekhapida, Pidhadeul, Khakra are the features of which of the following temple Architectures?**

   A. Tamil Nadu
   B. West Bengal
   C. Assam
   D. Odisha

10. **Consider the following statements with respect to Ekamra Kshetra:**

    1. It is a UNESCO World Heritage site.
    2. It is a series of ancient sandstone temples, heritage ponds and water tanks in Bhubaneshwar in Odisha.
    3. It includes a 13th-century Sun Temple also known as the "Black Pagoda".

    Which of the given statement/s is/are INCORRECT?

    A. 1 only
    B. 1 and 3 only
    C. 2 and 3 only
    D. None of the above

11. **Consider the following statements with respect ATMA Scheme:**

    1. "Support to State Extension Programs for Extension Reforms" is popularly known as ATMA Scheme.
    2. It is a Centrally sponsored scheme.
    3. The scheme promotes decentralized farmer-friendly extension system in the country.

    Which of the given statement/s is/are INCORRECT?

    A. 2 only
    B. 1 and 3 only

C. 1 and 2 only
D. None of the above

12. **Consider the following statements:**

    1. Chauri Chaura incident led Gandhi to call off the Non-Cooperation Movement from Bardoli in February 1922.
    2. Subhash Chandra Bose supported Gandhi's decision to stop the Non-Cooperation Movement after Chauri Chaura.
    3. Motilal Nehru and Chittaranjan Das were against the calling off of the Non-Cooperation Movement.

    Which of the given statement/s is/are INCORRECT?

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

13. **Consider the following statements with respect to Lithium:**

    1. It finds its use in ceramics, glass, telecommunication and aerospace industries.
    2. It is a "Prescribed substance" under the Atomic Energy Act.
    3. It is a high energy additive to rocket propellants.

    Which of the given statement/s is/are INCORRECT?

    A. 1 only
    B. 2 and 3 only
    C. 3 only
    D. None of the above

14. **"Orobanche" recently seen in news is:**

    A. A parasitic weed that causes severe yield loss in mustard.
    B. A recently discovered medicinal plant in the Western Ghats that has immune-modulating properties.
    C. A bacteria used in oil spill clean-ups.
    D. A carnivorous plant that is endemic to the Eastern Ghats.

15. **Consider the following statements with respect to Gobardhan Scheme:**

    1. It was launched by the Ministry of Jal Shakti.
    2. It is being implemented as part of the Swachch Bharat Mission (Gramin).
    3. The scheme aims to support villages in effectively managing their cattle waste and help augment farmers' incomes.

Which of the given statement/s is/are correct?

A. 1 and 3 only

B. 2 and 3 only

C. 1, 2 and 3

D. None of the above

16. Which of the following countries share land boundary with Myanmar?

1. Laos

2. Thailand

3. India

4. China

5. Bangladesh

6. Cambodia

Choose the correct option:

A. 1, 2, 3 and 4 only

B. 2, 3, 4, 5 and 6 only

C. 2, 3, 4 and 6 only

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

17. Lord's Resistance Army's activities are spread across which of these African Nations?

1. Uganda

2. Central African Republic

3. Nigeria

4. Sudan

5. Congo

Choose the correct option:

A. 1, 2, 4 and 5 only

B. 1 and 2 only

C. 2, 3 and 4 only

D. 2, 3 and 5 only

18. Consider the following statements with respect to Micro Irrigation Fund (MIF):

1. The fund was set up under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).

2. It was instituted with NABARD with an initial corpus of Rs. 5000 crore.

3. The fund is to be accessed by individual farmers only.

Which of the given statement/s is/are INCORRECT?

A. 2 only

B. 3 only

C. 1 and 3 only

D. 2 and 3 only

19. What is the primary objective of the KAPILA campaign launched by the government?

A. Intellectual Property Literacy and patent awareness.

B. Promoting STEM Careers for Women.

C. Ensuring good prices to the jute farmers.

D. Forming SHGs and developing the skills of people in rural areas to promote self-employment.

20. Consider the following statements with respect to National Safety Council (NSC):

1. National Safety Council (NSC) was set up by the Ministry of Health in the wake of the COVID-19 pandemic.

2. It is an apex not-for-profit tripartite body.

3. The chairperson of the NSC is nominated by the government.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1, 2 and 3

D. 2 only

21. Consider the following statements with respect to Start-up India Seed Fund Scheme (SISFS):

1. It is an early-stage funding for start-ups.

2. The implementing body of the scheme is the Department for Promotion of Industry and Internal Trade (DPIIT).

Which of the given statement/s is/are correct?

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

22. Consider the following statements with respect to 'e-CHARAK':

1. It is a mobile application as well as a web portal for the promotion and marketing of medicinal plants/ herbs.

2. It is a mobile application for ensuring seamless export of khadi from India.

3. It was jointly developed by the National Medicinal Plants Board (NMPB), Ministry of AYUSH and Centre for Development of Advanced Computing (C-DAC).

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 only

C. 1 and 3 only

D. 3 only

23. **Consider the following statements with respect to Hathkargha Samvardhan Sahayata (HSS) Yojana:**

   1.   The scheme was introduced to facilitate technology up-gradation in the handloom sector.

   2.   The scheme aims at providing 90% subsidy for the purchase of looms and accessories by the weavers.

   3.   The scheme is under the Ministry of Textiles.

   Which of the given statement/s is/are correct?

   A.   1 and 2 only

   B.   2 and 3 only

   C.   1 and 3 only

   D.   1, 2 and 3

24. **Which of the following factors affect the oceans salinity?**

   1.   Evaporation

   2.   Wind

   3.   Ocean Currents

   4.   Precipitation

   Options:

   A.   1, 2 and 3 only

   B.   2, 3 and 4 only

   C.   1, 3 and 4 only

   D.   1, 2, 3 and 4

25. **The terms Pima and Giza are associated with which of the following?**

   A.   Crude oil grades

   B.   Cotton varieties

   C.   Wheat varieties

   D.   Sugarcane varieties

26. **Which of the following is incorrectly matched?**

   A.   S-400 missile system: Russia

   B.   Ka-226T: Russia

   C.   Heron UAVs: Israel

   D.   K9 Thunder artillery guns: France

27. **Which of the following statement/s is/are correct with respect to Western Disturbances?**

   1.   It is an extra-tropical storm.

   2.   They are more frequent and strong in winter season.

   Options:

   A.   1 only

   B.   2 only

   C.   Both 1 and 2

   D.   Neither 1 nor 2

28. **Which of the following statement/s is/are correct with respect to trans-fatty acids?**

   1.   They help increase the shelf life of foods and oils by lowering their oxidation potential.

   2.   They increase levels of High-Density Lipoprotein (HDL) and decrease levels of Low-Density Lipoprotein (LDL) cholesterol.

   Options:

   A.   1 only

   B.   2 only

   C.   Both 1 and 2

   D.   Neither 1 nor 2

29. **Consider the following statements:**

   1. Only the United States, India, the former Soviet Union, and the European Space Agency have successfully sent missions to orbit Mars.

   2.   Al-Amal is the first Arab space mission to Mars.

   Which of the given statement/s is/are INCORRECT?

   A.   1 only

   B.   2 only

   C.   Both 1 and 2

   D.   Neither 1 nor 2

30. **Consider the following statements about K2 mountain:**

   1.   It is the highest peak in the Karakoram.

   2.   It is the world's second-highest mountain.

   3.   It is known as 'five treasures of snow'.

   Which of the given statement/s is/are INCORRECT?

   Options:

   A.   3 only

   B.   2 and 3 only

   C.   1 and 3 only

   D.   None of the above

31. **Which of the following does the Department of Investment and Public Asset Management (DIPAM) deal with?**

   1.   Strategic Disinvestment

   2.   Asset Monetisation

   3.   Capital Restructuring

   4.   Sale of Central Government equity through offer for sale or private placement

   Choose the correct option:

A. 1 and 4 only

B. 2, 3 and 4 only

C. 1, 2, 3 and 4

D. 2 and 3 only

32. **The National Crisis Management Committee is chaired by:**

A. Prime Minister

B. Cabinet Secretary

C. Home Minister

D. None of the above

33. **Consider the following statements with respect to UN Human Rights Council:**

1. Its members are elected by the members of the General Assembly.

2. The members are elected for staggered three-year terms.

3. No member may occupy a seat for more than two consecutive terms.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1, 2 and 3

D. 2 only

34. **Consider the following statements:**

1. Article 341 of the Constitution of India defines who would be Scheduled Castes with respect to any State or Union Territory.

2. 103rd Constitutional Amendment granted 10% reservation to the EWS category in government jobs and educational institutions.

3. 103rd Constitutional Amendment aims to fulfil the commitments of the directive principles of state policy under Article 46.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 1 and 3 only

C. 2 only

D. None of the above

35. **Consider the following statements:**

1. 'Water' subject falls under the concurrent list mentioned in the Indian Constitution.

2. The Central Water Commission (CWC) monitors and

prepares monthly reports on the state of glacial lakes and waterbodies measuring 10 hectares and above via satellite.

3. The CWC is headed by a Chairman, with the status of Ex-Officio Secretary to the Government of India.

Which of the given statement/s is/are incorrect?

A. 1 only

B. 1 and 3 only

C. 2 and 3 only

D. None of the above

36. **Consider the following statements:**

1. Dhauliganga originates from Chemayungdung Glacier.

2. Dhauliganaga flows through the Nanda Devi National Park and meets Alaknanda river at Vishnu Prayag.

3. Tapovan Vishnugad power plant is a run-of-river project being constructed on Dhauliganga River.

Which of the given statement/s is/are correct?

A. 1 and 3 only

B. 2 and 3 only

C. 1, 2 and 3

D. 2 only

37. **Consider the following statements with respect to Lokpal:**

1. The Lokpal has jurisdiction over the central government to inquire into allegations of corruption against its public functionaries and for matters connected to corruption.

2. Lokpal consists of a chairperson and a maximum of eight members.

3. Selection of chairperson and members of Lokpal is through a selection committee consisting of PM, Speaker of Lok Sabha, leader of opposition in Lok Sabha, Chief Justice of India or a sitting Supreme Court judge nominated by CJI.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 only

C. 2 and 3 only

D. None of the above

38. **Carotene is necessary for the production of which vitamin in human body?**

A. Vitamin D

B. Vitamin A

C. Vitamin C

D. Vitamin B12

39. Consider the following statements with respect to Avian Influenza:

1.   It is a highly contagious bacterial infection affecting birds.

2.   It can infect not only birds but also humans and other animals.

3.   Wild birds act as a natural reservoir of Avian Influenza viruses.

Which of the given statement/s is/are INCORRECT?

A.   1 only

B.   1 and 3 only

C.   2 and 3 only

D.   1 and 2 only

40. Salma Dam and Shatoot Dam are built by India as a part of the development Cooperation with which county?

A.   Afghanistan

B.   Nepal

C.   Bangladesh

D.   Myanmar

41. World Sustainable Development Summit (WSDS) is the annual flagship event of:

A.   The Energy and Resources Institute (TERI)

B.   United Nations Framework Convention on Climate Change (UNFCCC)

C.   United Nations Commission on Sustainable Development (CSD)

D.   UN Economic and Social Council

42. Which was the first-ever aircraft carrier warship of India?

A.   INS Viraat

B.   INS Vikrant

C.   INS Vikramaditya

D.   INS Varun

43. Consider the following statements:

1.	Tianwen-1	China National Space Administration
2.	Mars Orbiter Mission	Indian Space Research Organisation
3.	Mars Express Mission	Roscosmos State Corporation for Space Activities
4.	Al-Amal	United Arab Emirates

Space Agency

Which of the given pairs are correctly matched?

A.   1, 2 and 3 only

B.   1, 2 and 4 only

C.   2, 3 and 4 only

D.   2 and 4 only

44. Consider the following statements with respect to Unlawful Activities (Prevention) Act (UAPA):

1.   Under UAPA, both Indian and foreign nationals can be charged.

2.   Organisations as well as individuals can be designated as terrorists under the act.

3.   It empowers the officers of the NIA, of the rank of Inspector or above, to investigate cases of terrorism.

Which of the given statement/s is/are INCORRECT?

A.   1 only

B.   2 and 3 only

C.   3 only

D.   None of the above

45. Consider the following statements with respect to Unani system of medicine:

1.   The Unani system of medicine originated in Greece.

2.   Unani was introduced in India by the Arabs and Persians.

3.   It assumes the four main elements – Fire, Water, Air and Earth.

Which of the given statement/s is/are correct?

A.   1 only

B.   1, 2 and 3

C.   2 only

D.   None of the above

46. Consider the following statements with respect to the National Coal Index (NCI):

1. It is a price index which reflects the change of price level of coal on a particular year relative to the fixed base year.

2.   It was rolled out by the Ministry of Commerce and Industry.

3.   The indices are separate for Non-Coking and Coking Coal.

Which of the given statement/s is/are INCORRECT?

A.   3 only

B.   2 and 3 only

C.   1 and 2 only

D.   None of the above

47. Consider the following statements with respect to Swadhar Greh Scheme:

1.   It is a social welfare flagship programme, created by the Central Government, to provide housing for the rural poor in India.

2.   It aims at providing housing for all in rural areas by the year 2022.

3.   The scheme was launched by the Ministry of Rural Development.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1, 2 and 3

D. None of the above

48. Consider the following statements with respect to the Hindu Kush – Himalayan region:

1.   The Hindu Kush – Himalayan region spans across 8 countries.

2.   The region stores more snow and ice than anywhere else in the world outside the Polar Regions.

3.   The region hosts four biodiversity hotspots.

Which of the given statement/s is/are INCORRECT?

A.   1 only

B.   3 only

C.   1 and 2 only

D.   None of the above

49. Which of the given pairs are correctly matched?

1.   Tholu Bommalata – Karnataka

2.   Ravanachhaya – Tamil Nadu

3.   Tolpavakoothu – Kerala

4.   Chamadyache Bahulya – Maharashtra

Choose the correct option:

A.   1, 3 and 4 only

B.   3 and 4 only

C.   2 and 4 only

D.   1, 2 and 3 only

50. Consider the following statements with respect to Saubhagya scheme:

1.   Under the scheme, free electricity connections to all households to both APL and poor families in rural areas and poor families in urban areas are provided.

2.   Rural Electrification Corporation (REC) has been designated as the nodal agency for the scheme.

Which of the given statement/s is/are INCORRECT?

A.   1 only

B.   2 only

C.   Both 1 and 2

D.   Neither 1 nor 2

51. Consider the following statements:

1.   While the 'Basic Structure of the constitution' was not defined in the original Constitution, subsequent amendments defined the term in the Indian Constitution.

2.   The Constitution of India defines its 'basic structure' in terms of federalism, secularism, fundamental rights and democracy.

Which of the given statement/s is/are INCORRECT?

A.   1 only

B.   2 only

C.   Both 1 and 2

D.   Neither 1 nor 2

52. Consider the following statements with respect to Kalaripayattu:

1.   Kalaripayattu is a traditional martial art form originating from Andhra Pradesh.

2.   The word kalari appears in Sangam literature to describe a battlefield and combat arena.

3.   The art form is restricted only to men.

Which of the given statement/s is/are correct?

A.   1 only

B.   2 and 3 only

C.   2 only

D.   1, 2 and 3

53. Which of the following are the potential advantages offered by Nanophotonics?

1.   Faster processing speeds

2.   Higher degree of miniaturisation of Integrated circuits

3.   Higher power efficiency

Options:

A.   1 only

B.   1 and 2 only

C.   1, 2 and 3

D.   2 only

54. What are the benefits that could accrue due to the

Human Genome Project?

1. Understand vulnerability to certain diseases

2. Diagnosis of diseases

3. Application in forensic applied sciences

4. Development of new drugs

5. Better understanding of human evolution

Options:

A. 1, 2 and 4 only

B. 1, 2,3,4 and 5

B. 2, 3 and 5 only

D. 1, 4 and 5 only

55. Which of the following statement/s is/are correct?

1. Malaria is caused by Plasmodium parasites.

2. Malaria parasites are spread to people mostly through the bites of infected female Anopheles mosquitoes.

Options:

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

56. Which of the following statement/s is/are correct?

1. Humboldt penguin is endemic to South America.

2. In South America the Humboldt penguin is found only along the Pacific coast.

Options:

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

57. Consider the following statements:

1. The largest volcano in the solar system is on Mars.

2. Martian year is longer than the Earth year.

3. Phobos and Deimos are martian moons.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 only

C. 1 and 3 only

D. None of the above

58. Karlapat Wildlife Sanctuary is located in:

A. Karnataka

B. West Bengal

C. Odisha

D. Assam

59. Consider the following statements with respect to exercise Jidar-ul-Hadeed:

1. It is a multinational naval exercise with participation from the U.S., Russia, China and Turkey.

2. The exercise is hosted by Pakistan.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

60. Consider the following statements with respect to the Arctic Council:

1. The Arctic Council was established by the Ottawa Declaration.

2. Its decisions, recommendations or guidelines are non-enforceable and strictly the prerogative of the individual state.

3. Its mandate includes military security.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 and 3 only

C. 1 and 2 only

D. 1, 2 and 3

61. Consider the following statements with respect to Giant Leatherback turtle:

1. It is the largest of all living turtles.

2. Most of these turtles are found in the Arctic and the Antarctic.

3. They are also listed in Schedule II of India's Wildlife Protection Act, 1972.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 1 only

C. 2 and 3 only

D. 1, 2 and 3

62. Consider the following statements with respect to

Bhashan Char Island:

1. Bhashan Char Island is located in the Bay of Bengal.

2. The Island was formed by Himalayan silt.

3. Myanmar has built a relocation camp for the Rohingyas at the Bhashan Char Islands.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 3 only

D. 1 only

63. Galathea Bay Wildlife Sanctuary is located in:

A. Gujarat

B. Odisha

C. Andaman and Nicobar Islands

D. West Bengal

64. Consider the following statements with respect to Pangong Tso:

1. It is the first trans-boundary wetland in South Asia identified as a wetland of international importance under the Ramsar Convention.

2. It is a brackish water, endorheic lake.

3. The Karakoram Mountain range ends at the north bank of Pangong Tso.

Which of the given statement/s is/are INCORRECT?

A. 2 only

B. 2 and 3 only

C. 1 only

D. None of the above

65. Consider the following statements with respect to Lieutenant Governor (LG):

1. The LG is appointed by the President of India for a term of five years.

2. The LG holds office at the pleasure of the President.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 only

C. Both 1 and 2

D   Neither 1 nor 2

66. Nainativu and Neduntheevu are located in:

A. Palk Bay

B. Persian Gulf

C. Gulf of Cambay

D. Gulf of Oman

67. Consider the following statements with respect to Indian Leopard:

1. The Indian leopard is listed as Vulnerable on the IUCN Red List.

2. It is listed on a par with Tigers in Wildlife Protection Act (WPA), 1972.

3. A melanistic leopard is called Black Panther or jaguar.

4. The rosettes of each leopard are unique in shape and size, making the species identifiable individually.

Which of the given statement/s is/are INCORRECT?

A. 2 only

B. 1 and 2 only

C. 3 and 4 only

D. None of the above

68. Which of the following Commissions recommended that Governors must not be removed before completion of their five year tenure, except in rare and compelling circumstances?

A. 2nd Administrative Reforms Commission

B. Punchi Commission

C. Sarkaria Commission

D. Rajmannar Commission

69. Consider the following statements:

1. Both money bills and financial bills can be introduced in the Lok Sabha only.

2. There is no provision for a joint sitting, in case of a deadlock over the provisions in a money bill.

3. A money bill is defined by Article 110 of the Constitution.

Which of the given statement/s is/are correct?

A. 3 only

B. 1 and 3 only

C. 2 and 3 only

D. 1, 2 and 3

70. Consider the following statements:

1. The Coalition for Epidemic Preparedness Innovations (CEPI) is a global partnership launched in 2020 in the backdrop of COVID-19 pandemic to develop vaccines to stop future epidemics.

2. It was launched at the World Economic Forum.

3. India is one of the founders of CEPI.

4. It is headquartered in Oslo, Norway.

Which of the given statement/s is/are incorrect?

A. 1 and 2 only

B. 3 and 4 only

C. 2 and 4 only

D. 1 only

71. **Consider the following statements with respect to Trincomalee Harbour:**

1. Trincomalee Harbour is in the northeastern coast of Sri Lanka.

2. It is a natural deep-sea harbour.

3. It was formerly a British naval base.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 1, 2 and 3 only

C. 1 only

D. 2 and 3 only

72. **Consider the following statements:**

1. It is a very significant pronouncement of the Supreme Court on the question of reservation of posts for backward classes.

2. It set a 50% limit on quota for reservations.

3. The concept of a creamy layer was laid down and it was directed that such a creamy layer be excluded while identifying backward classes.

The judgment being talked about is of:

A. Puttaswamy Case

B. Maneka Gandhi Case

C. Indra Sawhney Case

D. Kesavananda Bharati vs State of Kerala Case

73. **Consider the following statements:**

1. Hyderabad has been bestowed with the 'Tree Cities of the World' title.

2. Haritha Haram is a large-scale tree-planting program implemented by the Government of Telangana to increase the amount of tree cover in the state.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

74. **Consider the following statements with respect to**

Arunachal Pradesh:

1. It is the largest of the Seven Sister States of Northeast India by area.

2. It shares the longest border with Myanmar.

3. Indian Grey Hornbill is its state bird.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1 only

D. 1, 2 and 3

75. **Consider the following statements:**

1. The first delimitation exercise was conducted by the Indian President in 1950-51.

2. The Delimitation Commission is a high-level body appointed by the President.

3. The present delimitation of constituencies has been done on the basis of the 2001 census under the provisions of the Delimitation Act, 2002.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 and 3 only

C. 2 only

D. 1, 2 and 3

76. **Consider the following statements:**

1. The QUAD is an informal strategic forum between the United States, Japan, Australia and India.

2. The idea of QUAD was first mooted by Indian Prime Minister Narendra Modi in 2017.

3. Exercise Malabar originally began as an exercise between the QUAD members.

Which of the given statement/s is/are INCORRECT?

A. 2 only

B. 2 and 3 only

C. 1 and 2 only

D. 1 only

77. **"Aoleng" and "Lao Ong Mo" are the festivals of which of the following tribes?**

A. Konyak Nagas

B. Khasi

C. Bodo

D. Kuki

78. **Which of the following is/are the component/s of Atal**

Mission for Rejuvenation and Urban Transformation (AMRUT):

1. Water supply systems, water treatment plants and universal metering.

2. Sewerage connections.

3. Urban transport, constructing facilities for non-motorized transport.

4. Development of green space and parks.

Choose the correct option:

A. 1 and 2 only

B. 3 and 4 only

C. 1, 2, 3 and 4

D. 2 and 3 only

79. **Consider the following statements with respect to District Development Councils (DDC):**

1. The Jammu and Kashmir Panchayati Raj Act, 1989 was amended to facilitate the setting up of District Development Councils (DDC).

2. DDCs will prepare and approve district plans and capital expenditure.

3. The term of the DDC is three years.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 3 only

D. 1, 2 and 3

80. **Consider the following statements with respect to Perseverance rover:**

1. It is a rover designed as part of NASA's Mars 2020 mission.

2. It is fuelled by electrical power by using the heat of plutonium's radioactive decay.

3. It carries a technology test to produce oxygen (O_2) from atmospheric carbon dioxide (CO_2).

Which of the given statement/s is/are INCORRECT?

A. 3 only

B. 1 and 2 only

C. 2 only

D. None of the above

81. **Which of the following is wrongly matched?**

A. Jhum: India

B. Roca: Brazil

C. Ladang: Myanmar

D. Milpa: Mexico

82. **The News Media and Digital Platforms Mandatory Bargaining Code Bill 2020 is associated with which of the following country?**

A. Australia

B. Canada

C. France

D. U.S.

83. **Which of the following statement/s is/are correct with respect to Einsteinium?**

1. It was discovered as a component of the debris of the first hydrogen bomb explosion in 1952.

2. It is exceptionally radioactive.

Options:

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

84. **In which of the following multilateral organizations are both India and Maldives both members?**

1. SAARC

2. Commonwealth of Nations

3. Indian Ocean Regional Association

Options:

A. 1 only

B. 1 and 2 only

C. 1,2 and 3

D. 1 and 3 only

85. **Consider the following statements with respect to Reverse Transcription Polymerase Chain Reaction (RT-PCR):**

1. It is a nuclear-derived method for detecting the presence of specific genetic material from any pathogen, including a virus.

2. It helps to measure the amount of a specific RNA in a sample.

3. It combines reverse transcription of RNA into DNA and amplification of specific DNA targets using polymerase chain reaction.

Which of the given statement/s is/are correct?

A. 1 only

B. 1, 2 and 3

C. 2 and 3 only

D. 3 only

86. **Consider the following with respect to Sant Ravidasji:**

1. He was a poet-saint of the Bhakti movement in northern India.

2. Some of the devotional verses composed by him are included in the Guru Granth Sahib.

3. He was the founder of the Ravidassia sect.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 and 3 only

C. 3 only

D. None of the above

87. Consider the following statements with respect to International Atomic Energy Agency:

1. It is a specialised agency of the United Nations.

2. The organisation's first name when it was formally established was 'Atoms for peace'.

3. India is a founding member of the IAEA.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 2 only

D. 3 only

88. Consider the following statements with respect to International Mother Language Day:

1. It is part of the initiative to promote the preservation and protection of all languages used by peoples of the world.

2. The idea to celebrate International Mother Language Day was the initiative of India.

3. First announced by UNESCO in 1999, it was formally recognized by the United Nations General Assembly in 2002.

Which of the given statement/s is are correct?

A. 1 and 2 only

B. 3 only

C. 1 and 3 only

D. 1, 2 and 3

89. Consider the following statements with respect to Animal Husbandry Infrastructure Development Fund (AHIDF):

1. It has been set up with an outlay of Rs. 15,000 crore.

2. Individual entrepreneurs are not eligible for loans from the fund.

3. Beneficiaries will have to contribute 10 per cent

margin towards the proposed infra project and the rest 90 per cent would be a loan component by scheduled banks.

Which of the given statement/s is are correct?

A. 1 and 3 only

B. 1 only

C. 2 only

D. None of the above

90. Consider the following statements with respect to Comprehensive Economic Cooperation and Partnership Agreement (CECPA):

1. It provides for an institutional mechanism to encourage and improve trade between two countries.

2. India has signed the CECPA with Mauritius.

3. It is India's first such free trade agreement with an African country.

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 2 only

C. 2 and 3 only

D. 1, 2 and 3

91. Consider the following statements:

1. A motion of "No Confidence" against the Government can be introduced only in the Lok Sabha.

2. No prior reason needs to be stated for its adoption in the Lok Sabha.

3. The Constitution of India does not mention the No Confidence Motion.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 and 3 only

C. 3 only

D. None of the above

92. Consider the following statements:

1. The Financial Action Task Force (FATF) was established by a Group of Seven (G-7) countries

2. Countries in FATF Grey List are "High-Risk Jurisdictions subject to a Call for Action".

3. The first FATF blacklist was issued in 2000.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 and 3 only

C. 2 only

D. None of the above

93. Consider the following statements:

1. The UN has declared the period between 2022 and 2032 as the decade of indigenous languages.

2. Ahom, Andro, Rangkas, Sengmai, Tolcha are among the extinct languages of India.

3. In India, there are 22 scheduled languages.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1, 2 and 3

D. None of the above

94. **Consider the following statements with respect to Black-necked crane:**

1. It has a key role in Buddhist culture.

2. It is listed as Vulnerable in the IUCN Red-List.

3. It is listed in Schedule I of Wildlife (Protection) Act 1972.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 only

C. 2 and 3 only

D. None of the above

95. **Consider the following statements:**

1. Mission Indradhanush aims to immunize all children under the age of 2 years and pregnant women.

2. Intensified Mission Indradhanush (IMI) 3.0 is a campaign to reach the children and pregnant women who were left out of the Routine Immunisation Programme during the pandemic.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

96. **Blue Mormon is the state butterfly of:**

A. Karnataka

B. Tamil Nadu

C. Maharashtra

D. Andhra Pradesh

97. **Consider the following statements with respect to Assamese Gamosa:**

1. Uka and phulam are its two types.

2. It is also known as Bihuwaan.

3. They are made of cotton or Pat silk.

Which of the given statement/s is/are correct?

A. 1 and 3 only

B. 3 only

C. 1, 2 and 3

D. 2 only

98. **Senkaku Islands or Diaoyu Islands are located in:**

A. South China Sea

B. East China Sea

C. Pacific Ocean

D. Indian Ocean

99. **Consider the following statements with respect to President's Rule in a state:**

1. President's Rule is valid initially for a period of six months. Later, it can be extended for a period of five years with parliamentary approval annually.

2. When President's rule is imposed, the governor carries on with the administration of the state on behalf of the President.

3. Revocation of the President's rule in a state does not require approval by the Parliament.

Which of the given statement/s is/are correct?

A. 1, 2 and 3

B. 2 and 3 only

C. 3 only

D 1 and 2 only

100. **Consider the following statements with respect to the Production Linked Incentive (PLI) scheme:**

1. It aims to give companies incentives on incremental sales from products manufactured in domestic units.

2. It offers incentives to boost domestic manufacturing and cut down on import bills.

3. The scheme has been extended to the pharmaceuticals sector and IT hardware.

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 2 only

C. 1, 2 and 3

D. None of the above

101. **Consider the following statements with respect to Krishnadevaraya of the Vijayanagara empire:**

1. 1He belonged to the Tuluva dynasty.

2. He is the author of Amuktamalyada and Jambavati Kalyan.

3. He founded Vijayanagar City on the southern banks

of River Tungabhadra.

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 2 only

C. 2 and 3 only

D. 1, 2 and 3

102.   Consider the following statements with respect to Financial Action Task Force (FATF):

1. It is the global money laundering and terrorist financing watchdog.

2. FATF works to stop funding for weapons of mass destruction.

3. The FATF Secretariat is located at the Organisation for Economic Co-operation and Development (OECD) Headquarters in Paris.

Which of the given statement/s is/are correct?

A. 1, 2 and 3

B. 1 and 3 only

C. 3 only

D. 1 only

103.   Consider the following statements with respect to Indian National Centre for Ocean Information Services (INCOIS):

1. It is an autonomous body under the Ministry of Earth Sciences (MoES).

2. It has an in-house Indian Tsunami Early Warning Centre to provide round-the-clock monitoring and warning services for the coastal population on tsunamis.

3. It is tasked with providing Potential Fishing Zone Advisories.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 and 3 only

C. 2 only

D. None of the above

104.   Consider the following statements with respect to Liquefied Petroleum Gas:

1. It contains propane and butane.

2. It is used as an aerosol propellant and a refrigerant.

3. It is a colourless odourless flammable mixture of hydrocarbon gases.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 only

C. 1, 2 and 3

D. 3 only

105.   Consider the following statements:

1. Brazil is the world's largest coffee producer, immediately followed by India.

2. India exports both Robusta and Arabica varieties of coffee.

3. India is the only country in the world where the entire coffee cultivation is grown under shade, hand-picked and sun-dried.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 only

C. 2 and 3 only

D. 1 only

106.   Which of the following pollutant/s is/are NOT included in the measurement of Air Quality Index (AQI)?

1. Ammonia

2. Carbon Monoxide

3. Carbon Dioxide

4. Ozone

5. Sulphur Dioxide

Choose the correct option:

A. 1 and 4 only

B. 2 only

C. 3 and 5 only

D. 3 only

107.   Consider the following statements:

1. Sri Lankan Tamils are a minority population in the Northern Province and in the Eastern Province of Sri Lanka.

2. Sri Lanka has been facing diplomatic challenges with the United Nations Human Rights Council (UNHRC) in connection with its civil war.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

108.   Consider the following statements:

1.   Index of Eight Core Industries is prepared and released by the Office of the Economic Adviser (OEA), Department for Promotion of Industry and Internal Trade (DPIIT).

2.   Index of Eight Core Industries is released quarterly.

3.   Crude oil has the highest weight among the core industries included in arriving at the Index of Industrial Production (IIP).

Which of the given statement/s is/are correct?

A.   1 only

B.   1 and 2 only

C.   1, 2 and 3

D.   None of the above

109.   Consider the following statements

1.   Channapatna toys are made of ivory wood and are coloured with vegetable dyes.

2.   Channapatna toys have been given the Geographical Indication Tag under the World Trade Organization.

3.   Channapatna is known as the Toy-City of Andhra Pradesh.

Which of the given statement/s is/are INCORRECT?

A.   1 and 3 only

B.   2 only

C.   1 only

D.   3 only

110.   Under which of the following categories is the Snow Leopard listed in the IUCN Red List

A.   Near Threatened

B.   Vulnerable

C.   Endangered

D.   Critically Endangered

111.   Consider the following statements:

1.   National Bamboo Mission is a Centrally Sponsored Scheme.

2.   It is a sub-scheme under the Mission for Integrated Development of Horticulture (MIDH).

3.   The bamboo grown outside forest areas has been excluded from the definition of tree.

Which of the given statement/s is/are correct?

A.   1 and 2 only

B.   2 and 3 only

C.   1, 2 and 3

D.   3 only

112.   Consider the following statements:

1.   Earth is in the Sun's Goldilocks zone.

2.   Goldilocks Zone refers to a habitable zone around a star, where it is not too hot and not too cold for liquid water to exist on the surface of surrounding planets.

Which of the given statement/s is/are incorrect?

A.   1 only

B.   2 only

C.   Both 1 and 2

D.   Neither 1 nor 2

ANSWER KEYS

1	D		21	C
2	C		22	B
3	B		23	D
4	D		24	D
5	A		25	B
6	B		26	D
7	C		27	C
8	B		28	A
9	D		29	D
10	B		30	A
11	D		31	C
12	B		32	B
13	D		33	C
14	A		34	D
15	C		35	A
16	D		36	B
17	A		37	D
18	B		38	B
19	A		39	A
20	B		40	A

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41	A		61	B
42	B		62	A
43	B		63	C
44	D		64	C
45	B		65	C
46	C		66	A
47	D		67	D
48	D		68	C
49	B		69	C
50	D		70	D
51	C		71	B
52	C		72	C
53	C		73	D
54	B		74	C
55	C		75	D
56	C		76	B
57	D		77	A
58	C		78	C
59	A		79	A
60	C		80	D

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81	C
82	A
83	C
84	C
85	B
86	D
87	B
88	C
89	A
90	D
91	D
92	C
93	C
94	B
95	C
96	C
97	C
98	B
99	B
100	C

101	B
102	A
103	D
104	C
105	C
106	D
107	B
108	A
109	D
110	B
111	C
112	D

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MAINS PRACTICE QUESTIONS

GS Paper 2

International Relations

1.   In the context of the military coup in Myanmar, analyze its possible impact on India-Myanmar relations. (10 marks, 150 words)

2.   How has an increasing nationalist tendency of the world during the pandemic challenged global cooperation in terms of the distribution of COVID-19 vaccines? Also throw light upon India's vaccine diplomacy in ensuring global cooperation and public good. (15 Marks, 250 Words)

3.   In the light of the recent developments with respect to the East Container Terminal project in Sri Lanka, examine the factors which are leading to a downturn in India-Sri Lanka ties. (10 Marks, 150 Words)

4.   What do you understand by Euroscepticism? Discuss the major challenges facing the European Union in the backdrop of Brexit and the COVID-19 pandemic. (10 Marks, 150 Words)

5.   Realism dictates that India does not need to compromise on its strategic autonomy. Discuss this statement in the light of recent developments with respect to India's foreign policy approach. (10 marks, 150 words)

6.   The possible shift in the foreign policy of the new administration in the U.S. would have both regional and global repercussions. Elucidate. (15 marks, 250 words)

7.   With the U.S announcing its decision to end support for Saudi Arabia's Yemen war, it is time for Saudi Arabia to end the blockade of Yemen and start talks with rebel factions. Comment. (15 marks, 250 words)

8.   Discuss the growing human rights violations with respect to minority Tamils in Sri Lanka. Evaluate how India's interference in this issue may affect the already strained ties between both countries. (15 Marks, 250 Words)

9.   Analyse the role of the International Atomic Energy Agency (IAEA) in enhancing nuclear accountability of the world. What are the related concerns? (15 Marks, 250 Words)

Polity & Governance

1.   In the light of India's experience of handling the COVID-19 pandemic, discuss the need to revisit the disease control strategy to ensure a more robust and humane response in similar crises. (15 Marks, 250 Words)

2.   In the backdrop of various instances of misinformation being spread on social media during protests, turning them violent, discuss how the government can strike a balance between National Security and Freedom of Speech. (15 Marks, 250 Words)

3.   Discuss the pardoning powers provided to the executives in India. Evaluate the scope of the pardoning power of the President and pardoning power of the Governor. (15 Marks 250 Words)

4.   In the light of the recent order issued by the central government to the micro blogging site, Twitter, evaluate the Indian laws governing the cyber space and their salient provisions. What steps are required to handle the threats emanating from cyberspace? (15 marks, 250 words)

5.   In the midst of an Internet revolution and the world entering an era of enhanced digital connectivity, should the governments find a way other than digital curbs to secure national security and law and order situation? Examine. (15 Marks, 250 Words)

6.   The question of remission should not be a matter of politics and electoral considerations but should be based on law and compassion. Comment. (10 Marks, 150 Words)

7.   What do you understand by Judicial Overreach? Judicial Activism can reduce people's faith in the integrity, quality, and efficiency of the government. Critically comment. (15 Marks, 250 Words)

8. The idea that films must be pre-censored and arbitrary cuts made by government-appointed nominees, is antiquated and repugnant to liberal societies. Critically evaluate the need for regulation of OTT platforms in the light of the code of self-regulation operationalised by them. (15 Marks, 250 Words)

9. In the backdrop of the government and Twitter being at loggerheads over issues related to content removal and freedom of expression, discuss if reforms are needed in the legal regime. Substantiate your answer. (15 Marks, 250 Words)

10. Freedom of speech must not be seen as the antithesis of security of the state, but as one of its key facilitators. Critically analyse the statement. (10 Marks, 150 Words)

11. Examine the feasibility and merits of the proposals to have in India, four national capitals and regional benches of the Supreme Court across the country. (15 Marks, 250 Words)

12. With many countries having decriminalised defamation, is it time for India to do so? Critically analyse with suitable examples. (15 Marks, 250 Words)

13. The proposed bill on Conclusive Land Titling envisages a fundamental legal and procedural shift in how land titles are awarded in India and this would yield multiple benefits to various stakeholders. Comment. (10 marks, 150 words)

14. Even laws that are unquestionably desirable and necessary cannot be enacted using dubious legislative mechanisms. Comment in light of the recent concerns associated with the legislative process in India. (15 marks, 250 words)

15. Given the poor implementation of the law and judicial guidelines related to Section 124A and its increasing misuse, there have been calls for a complete relook of the provision. Discuss. (15 marks, 250 words)

16. Civil servants, no matter how dedicated, innovative and efficient they may be, need stability of tenure to govern well and this necessitates an efficient transfer policy. Comment in the light of the issue of frequent transfers of civil servants in India. (10 marks, 150 words)

17. Recent events have highlighted the structural fragility of Union Territories (UTs) in the Indian federation and the issues in the functioning of Union Territories having legislatures but ultimate control having been vested in the central administrator. Analyze. (15 marks, 250 words)

18. Fiscal federalism lies at the core of decentralization. In this regard, discuss the relevant constitutional provisions and initiatives taken to deepen fiscal federalism in India. Also discuss the associated concerns and challenges. (15 marks, 250 words)

19. The anti-defection law in India has been detrimental to the functioning of the legislatures and has also not been able to fulfil the intended objective of ensuring the stability of the governments by ending the practice of political defections. Analyze. (10 marks, 150 words)

20. Australia's new code for regulation of tech giants has drawn mixed reactions. Discuss the arguments both in favour of and against the bill in the context of global efforts at regulating big tech. (15 marks, 250 words)

21. In a modern democracy, the repeated misuse of sedition law underscores the need to scrap it altogether. Critically comment. (15 Marks, 250 Words)

22. Critically evaluate the Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021 unveiled by the government. (15 Marks, 250 Words)

Health

1. COVID-19 has prodded nations to make a stout effort in terms of investing in health. In light of this statement, discuss the challenges in India's journey towards universal health care and also suggest a suitable framework in this direction. (15 Marks, 250 Words)

2. COVID-19 has prodded nations to make a stout effort in terms of investing in health. In light of this statement, discuss the challenges in India's journey towards universal health care and also suggest a suitable framework in this direction. (15 Marks, 250 Words)

3.   Vaccine nationalism poses the risk of the COVID-19 virus becoming endemic. In the light of this statement, discuss the strategy to be adopted to deal with the ever-evolving virus. (15 Marks, 250 Words)

Education

1.   There is a dire need to rethink the changing role and the mandate of the IITs in order to ensure that they remain world-renowned for the quality of their graduates and for their academic programmes. Elucidate. (15 Marks, 250 Words)

2.   Analyze the impact of the COVID-19 pandemic on the education sector. Also evaluate if the initiatives taken by the government for the promotion of digital distance learning have been effective in addressing the challenges put forth by the pandemic. (15 marks, 250 words)

GS Paper 3

Environment & Ecology

1.   In light of the NITI Aayog's 'Sustainable Development of Little Andaman Island – Vision Document', proposing to set up a megacity in the Little Andaman Island, discuss the possible benefits and concerns associated with this proposal. (15 marks, 250 words)

2.   In the light of the existential threat posed by the three environmental crises – climate change; nature loss; and the pollution of air, soil and water, discuss the measures to be taken to secure human well-being on a healthy planet. (15 marks, 250 words)

Infrastructure

1.   Discuss the threats posed by the ageing dams in India. Also suggest necessary measures in this direction. (10 marks, 150 words)

Economy

1.   In light of the recently presented annual budget, discuss the salient provisions, their potential impact on the economic recovery process for India and also the associated concerns. (15 marks, 250 words)

2.   The Budget by adhering to large deviations from the fiscal framework of the FRBM Act, 2003 marks a departure from fiscal orthodoxy. Discuss the arguments both in favour of and against this proposal. (15 marks, 250 words)

3.   In the light of the recent proposal to set up an asset reconstruction company, discuss the need for such an entity in the Indian context. Also discuss the significance and concerns associated with the idea of a government backed 'bad bank' to deal with bad loans. (15 marks, 250 words)

4.   What are the possible benefits and concerns associated with the usage of cryptocurrencies in India? Suggest suitable measures in this regard. (10 marks, 150 words)

5.   Given the argument that farmers in India are being "net taxed" through restrictive trade policies, the farm acts of 2020 are a welcome relief. Critically evaluate. (10 marks, 150 words)

6.   Sri Lanka's pullout from the Colombo port deal calls for a rethinking of India's approach towards Bilateral Investment Treaties. Comment. (10 marks, 150 words)

7.   Despite the considerable decrease in inflation rates, the outlook for inflation is far from reassuring. Comment. Also discuss the significance of inflation in ensuring macroeconomic stability in the post-COVID scenario. (10 marks, 150 words)

8.   In the light of the new policy for central public sector enterprises (CPSEs) announced by the Finance Minister in the Budget speech for 2021-22, evaluate the significance and challenges therein with respect to disinvestment of government-owned firms. (15 marks, 250 words)

9.   The Animal Husbandry Infrastructure Development Fund (AHIDF) announced in 2020 under the AtmaNirbhar Bharat Abhiyan stimulus package would help bring important social, economic, and nutritional benefits to India. Comment. (10 marks, 150 words)

10.   In light of the continued increase in petrol and diesel prices, analyze the government initiatives to reduce India's energy import dependence and also suggest what additional measures are needed in this direction. Also enumerate the benefits that would accrue to India from such a policy. (15 marks, 250 words)

Internal Security

1.   Discuss the relevance of SAMADHAN strategy propounded by the Home Ministry in the fight against Left Wing Extremism. (10 marks, 150 words)

2.   Critically analyse the feasibility of deploying a virtual surveillance system such as a smart wall in India's international borders to secure its boundaries. (10 Marks, 150 Words)

3.   Given the increasing threat posed by disinformation attacks, analyze the measures needed to counter this threat. (15 marks, 250 words)

Disaster Management

1.   The recent Uttarakhand flash floods call into question the feasibility of large hydroelectric power projects in the state of Uttarakhand. Comment. Also suggest suitable measures in this direction. (15 marks, 250 words)

Science and Technology

1.   Analyze the potential of biotechnology in addressing the challenges that humanity faces in the domain of health and wellbeing. (10 marks, 150 words)

2.   Throw light upon the progress India has made in science and technology research and evaluate the draft of the Science, Technology and Innovation Policy, 2020. (15 Marks, 250 Words)

INTERVIEW TRANSCRIPT

Candidate Details:

- Name: Abhishek Surana

- AIR: 10 (CSE 2017)

- Chairperson: Air Marshal Ajit Bhonsle

- Duration: 25 – 30 minutes

- Hometown: Bhilwara, Rajasthan

Abhishek Surana

Optional Subject: Physics

Work Experience:

- IPS Probationer

- Co-founder Zestbuds (Mobile-based app start-up in Chile)

- Worked in the corporate sector

Education: B Tech from IIT Delhi

Hobbies: Astrophysics, Cooking, Travel Photography, Reading Memoirs

Interview

Background

- Why have you filled IPS again?

- Why do you want to change cadre?

- What did you do to get the 'Ambassador of Change' award?

- Do you think you were successful? Why so?

- What is needed to bring the change?

- Three changes that you would like to bring in the district?

- What was Zestbuds? (Startup)

Astrophysics

- How did you get interested in Astrophysics?

- Who gave the Theory of Evolution and what was the name of the book?

- Who said that we should leave the Earth in 100 years? What could be the rationale? Do you subscribe to it?

- Some wise man said that Venus was like Earth before? Why did he say so?

Hobby

- What do you like to cook?

- How do you cook Daal Baati?

- What is the last memoir you've read? What is your favourite memoir and what do you like about it?

Policing

- Don't you think there are certain cons of home cadre? What are the pros and cons of home cadre?

- Why do you want to opt for IAS? What will you do if you get West Bengal again in IAS?

- Will you leave police service for IFS?

- Is police service or force?

- West Bengal has WB police and WB police service? What's the difference?

- What is the perception of people about the police? Why is it so?

- What are the issues being faced by the police? What will you do to address these? What are the three challenges faced in India?

- Have you watched Dabang? What's the image of the police it portrays? Is it correct?

Women Empowerment

- What should India do for women empowerment, to bring them to the level they are in Singapore?

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AK Puri
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DGP, Himachal Pradesh)

B L Vohra
(IPS Retd., Former
DGP, Tripura)

Vineet Ohri
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Chief Commissioner,
Customs & Excise)

B S Lamba
(IAS Retd., Former
Indian Envoy to UNO)

Prabhakar Mani Tripathi
(Sr. Psychologist)

G. Subba Rao
(IAS Retd., Former Chairman,
Gujarat State Police
Complaints Authority)

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