

Union Budget 2022

A Blueprint to Steer the Economy



UPSC MONTHLY CURRENT AFFAIRS



Russian Invasion of Ukraine

Why Russia Chose War?



Essential Religious Practices (ERP)

Intervention of Judiciary in Religious matters



Creating a Sun in a Lab

Harnessing Energy from Nuclear Fusion



Taking a Byte Out of Cyber Threats

Cyber Security Threats and Trends

Outstanding performance by BYJU'S students in IAS 2020

Congratulations to our toppers

02

Ranks in
Top 10

18

Ranks in
Top 50

36

Ranks in
Top 100



RANK 02

Jagrati Awasthi



RANK 8

Kartik Jivani



RANK 13

Gaurav Budania



RANK 14

Karishma Nair



RANK 17

Sarthak Agarwal



RANK 25

Vaibhav Rawat



RANK 26

Pulkit Singh



RANK 28

Divya Mishra



RANK 30

Divyanshu
Choudhary



RANK 31

Megha Swaroop



RANK 32

Rallapalli Jagat Sai



RANK 35

Aparna Ramesh



RANK 37

Narwade Vinayak



RANK 38

Varuna Agarwal



RANK 41

Aswathy Jiji



RANK 42

Pooja Gupta



RANK 46

Jubin Mohapatra



RANK 50

Abhishek Shukla

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

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March (13, 19, 20, 26 & 27) + April (02, 03, 09, 10, 16 & 17)	Economics	Economics			
April (23, 24 & 30) + May (01, 07, 08, 14, 15, 21, 22 & 28)	Modern History + Post Independent	Modern History + Post Independent	Modern History + Post Independent		
May (29) + June (04, 05, 11, 12, 18, 19, 25 & 26) + July (02 & 03)	Geography	Geography	Geography	Geography	
July (10, 16, 17, 23, 24, 30 & 31) + August (06, 07, 13 & 14)	Ancient India + Medieval India + Art & Culture	Polity	Polity	Polity	Polity
August (20, 21, 27 & 28) + September (03, 04, 10, 11, 17, 18 & 24)	International Relations + World History	International Relations + World History	Economics	Economics	Economics
September (25) + October (01, 02, 08, 09, 15, 16, 22, 23, 29 & 30)	Environment & Ecology + Science & Technology + Disaster Management	Environment & Ecology + Science & Technology + Disaster Management	Environment & Ecology + Science & Technology + Disaster Management	Modern History + Post Independent	Modern History + Post Independent
November (05, 06, 12, 13, 19, 20, 26, 27) + December (03, 04 & 10)	Social Issues & Social Justice + Essay + Compulsory Language Paper	Social Issues & Social Justice + Essay + Compulsory Language Paper	Social Issues & Social Justice + Essay + Compulsory Language Paper	Social Issues & Social Justice + Essay + Compulsory Language Paper	Geography
December (11, 17, 18, 24 & 31) + January '23 (07, 08, 14, 15, 21 & 22)	Ethics + Governance	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT	Internal Security + CSAT
January '23 (28 & 29) + February '23 (04, 05, 11, 12, 18, 19, 25 & 26) + March ' 23 (04)	Internal Security + CSAT	Ancient India + Medieval India + Art & Culture	Ancient India + Medieval India + Art & Culture	Ancient India + Medieval India + Art & Culture	Ancient India + Medieval India + Art & Culture
March '23 (05, 11, 12, 18, 19, 25 & 26) + April '23 (01, 02, 08 & 09)	Focus Prelims	Focus Prelims	International Relations + World History	International Relations + World History	International Relations + World History
April '23 (15,16,23,29 & 30) + May '23 (06,07,13,14,20 & 21)		Focus Prelims	Focus Prelims	Environment & Ecology + Science & Technology + Disaster Management	Environment & Ecology + Science & Technology + Disaster Management
May '23 (27 & 28) + June '23 (17, 18, 24 & 25) + July (01, 02, 08, 09 & 15)		Ethics + Governance	Ethics + Governance	Ethics + Governance	Ethics + Governance
31st May to 11th June, 2023	PRELIMS 2023	PRELIMS 2023	PRELIMS 2023	PRELIMS 2023	PRELIMS 2023
July '23 (16, 22, 23, 29 & 30) + Aug '23 (05, 06, 12, 13, 19 & 20)					Social Issues & Social Justice + Essay + Compulsory Language Paper
1st September to 30th September, 2023	MAIN 2023	MAIN 2023	MAIN 2023	MAIN 2023	MAIN 2023

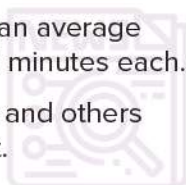


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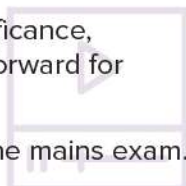
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POLITY

Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure

1. The Governor's role in approving a Bill

- » Prelims: Related Constitutional provisions

Context:

- The Tamil Nadu Assembly has once again adopted a Bill, granting exemption from the mandatory National Entrance-cum-Eligibility Test (NEET) for seats allotted by the Government in undergraduate medical and dental courses in Tamil Nadu. Notably, this bill was earlier returned by the Governor.
- This development brings to question whether a Governor can override the decision of the Legislative Houses. In this context, the article discusses the related constitutional provisions.

Related Constitutional Provisions:

Article 200:

- Article 200 deals with the Governor's function in passing a Bill of the state legislature.
- Under Article 200 of the Indian Constitution, the Governor may (a) grant assent (b) withhold assent (c) return for reconsideration by the Legislature or (d) reserve for the consideration of the President any Bill passed by the State legislature and presented to him for assent. Notably, there is no timeframe fixed in the Constitution for any of these functions.
- Article 200 enables the Governor to return a Bill, that is not a Money Bill, with a message requesting the House, or Houses, if there is an upper chamber, to reconsider the Bill, or any provisions, and also consider introducing amendments he may recommend. The House will have to reconsider as suggested. If the Bill is passed again, with or without changes, and presented for assent, "the Governor shall not withhold assent therefrom".
- The Governor shall reserve for the consideration of the President, any Bill which in the opinion of the Governor would, if it became law, so derogate from the powers of the High Court as to endanger the position which that Court is by this Constitution designed to fill.

Interpretation of the constitutional provision:

- The Governor does not have discretion on matters of the Assembly and is bound to follow the advice of the ministerial Council even on

matters where he/she might be withholding assent. Going by this interpretation the Governor will now have to grant his assent to the Bill under question as mandated by Article 200 of the Constitution.

- Also, a general understanding of the functioning of the constitutional framework suggests that the Governor, who normally functions on the aid and advice of the Council of Ministers, is bound to go by their advice in the matter of granting assent to bills of the state legislature. An analysis of the debates of the Constituent Assembly also emphasizes the same principle.
- The framers of the Constitution envisaged such a provision to accommodate any of the following situations:
 - * When the Council of Ministers feels that a Bill has been hastily adopted or that it requires changes, the Council may want to recall its Bill, and accordingly advise the Governor to return it.
 - * If after a Bill is passed the Ministers resign before the Bill gets the Governor's assent, the new Ministry may not want to go ahead with the Bill and might advise against assent being given. This was also noted by the Sarkaria Commission on Union-State Relations.

Article 201:

- Article 201 of the Indian Constitution deals with provisions related to bills reserved for the consideration of the President.
- As per Article 201, when a Bill is reserved by a Governor for the consideration of the President, the President shall declare either that he assents to the Bill or that he withholds assent therefrom.
- The President may also direct the Governor to return the Bill, where the Bill is not a Money Bill, with a message.
 - * When a Bill is so returned, the House or Houses shall reconsider it accordingly within a period of six months from the date of receipt of such message and, if it is again passed by the House or Houses with or without amendment, it shall be presented again to the President.
- Here there is no time limit that is fixed within which the President should take a decision. There have been instances where Bills have been pending with the President for periods up to six years or more.

Interpretation of the constitutional provision:

- Given that the current bill under question has been enacted under an entry in the Concurrent List on a subject that is covered by a central law, the bill will have to be sent to the President for his assent.
 - * NEET is mandatory under Section 10D of the Indian Medical Council of India Act, an amendment introduced in 2016.
- Notably, unlike Article 200 which explicitly mentions that the Governor shall not withhold assent after a suggested reconsideration of the bill, Article 201 has no such provisions mentioned.
- This means that the Bill will become law if the assent is given, but nothing can be done if the Bill is denied assent by the President or if he makes no decision.

Nut Graf

The recurrent instances of differences between the state legislatures and the Governors remain a cause of concern both in respect of the principle of separation of power as well as federalism. The relevant constitutional provisions should be the guiding pillar for the resolution of any such differences.

Structure, organization and functioning of the Judiciary**2. The supreme failure****Context:**

- The huge pendency of cases, including high profile cases in the Supreme Court.

Concerns associated with high Pendency of cases in the Supreme Court

- Pendency of cases: As per the Vidhi Centre comprehensive tracker, there are 25 main cases pending before the five-judge constitution bench and five cases each pending before the seven-judge and nine-judge benches.
- Interdependent Cases: Related to these pending main cases, there are more than 500 connected cases. These cases cannot be decided till the legal issues in the main cases before the constitutional benches are addressed.
- Repercussions on the Fundamental Rights: Pending cases relate to significant constitutional and other legal matters that can have serious repercussions on the fundamental rights of ordinary citizens and our core republican values.
- Eroding respect for the law: The huge pendency of cases erodes respect for law among citizens.

Some of the important cases pending in the Supreme Court are as follows:

- Petitions against Citizenship (Amendment) Act, 2019: A deluge of petitions challenging the constitutionality of the Citizenship (Amendment) Act, 2019 are pending for more than two years.
- Petitions against Article 370: Innumerable petitions have been filed challenging the Presidential Order that effectively diluted Article 370 of the Constitution and split Jammu and Kashmir into two Union Territories.
- Petitions against reservation for Economically Weaker Sections (EWS): Petitions challenging the constitutionality of the Constitution (One Hundred and Third Amendment) Act, 2019 are also languishing in the Supreme Court.
- Petition against Demonetisation: A momentous case known as Vivek Narayan Sharma v. Union of India, relating to the legality of demonetisation, has been in the Supreme Court for more than five years.
- Petition against Electoral bonds: The Supreme Court has failed to accord proper hearing in the last four years to the constitutional challenge to the electoral bonds scheme.

Way Forward:

- The Supreme Court should perform its constitutional duty of being a balancing force against the legislature and executive. The power of judicial review which is critical to democracy should be exercised assiduously.

Recommendations of Law Commission of India 229th Report:

The Law Commission of India in its 229th Report recommended models to reduce the workload of the Supreme Court:

- A Constitution Bench be set up at Delhi to deal with constitutional and other allied issues as aforesaid.
- Parliament should enact a suitable legislation/Constitutional amendment for this purpose.

Nut Graf

By abjectly failing to decide key constitutional cases in a time-bound manner, the Supreme Court has not acted as the "sentinel on the qui vive".

Powers, functions and responsibilities of various Constitutional Bodies**3. Imperial excess**

- » Mains: The issues and concerns associated with the office of Governor

Context:

- The Chief Minister of West Bengal has expressed outrage against the state's Governor and blocked him on a social media platform.

Details

- Tired of the Governor's constant attack against her on Twitter, the West Bengal CM blocked him on the platform.
- The Chief Minister said the Governor was trying to treat the elected government as "bonded labour".
- The Governor then sent her a message for dialogue and harmony amongst constitutional functionaries.
- The recent events have once again brought back the limelight on the role of the Governor in relation to the elected government and legislature.

West Bengal Case

- The governor has been summoning the Chief Secretary and the Director-General of Police on a regular basis, and taking to Twitter and often tagging the Chief Minister when they do not turn up.
- The governor also had an argument with the Assembly Speaker recently, in the State Assembly premises.
- He has withheld assent to the Howrah Municipal Corporation (Amendment) Bill 2021, delaying polls to the civic body.
- He has made allegations of misconduct in welfare schemes and questioned Government claims about investments in the State.
- He has often been criticized for taking stances that support the opposition in the Assembly.

Maharashtra case

- The Governor has stalled the election of Speaker since the post fell vacant in February 2021.
 - * He has taken exception to the amendments in the legislative rules for holding the Speaker's election through voice vote instead of secret ballot.
- The Governor's view that the State Assembly cannot decide its own rules is unacceptable to the ruling coalition, but is being cheered by the Opposition.
- The governor was criticised in the past for supporting opposition parties and their demands for a special session of the Assembly on women's safety and security.
- He had refused to accept the recommendation of the Council of Ministers on the nomination of 12 members to the Legislative Council, until the matter reached the High Court.

Tamil Nadu's Case

- The governor has not acted upon the T.N. Admission to Undergraduate Medical Degree Courses Bill, adopted by the Assembly in September 2021.
 - * The Governor is required to either send it to the President of India for approval or return it for reconsideration by the Assembly, but the indefinite delay in taking a decision amounts to undermining the legislature, and is regarded unjustifiable.
 - * The Bill relates to a question of State-Centre relations, as it proposes to dispense with the National Eligibility cum Entrance Test (NEET) for medical graduate admissions in the State. NEET has been criticised for curtailing State powers, and the Governor's delay in processing the Bill is aggravating the situation.

Conclusion

The imperialistic attitude of the governor has huge implications on the constitutional scheme of functioning and requires the governor to act within the prescriptions of the Constitution and be a friend, philosopher and guide to his government.

Nut Graf

Regular controversies surrounding the functioning of the office of the Governor in the states do not auger well for constitutional democracy. It is important for the Governor to work within the constitutional parameters and respect the mandate of an elected government.

Issues and challenges pertaining to the federal structure**4. Local job laws that raise constitutional questions**

- » Mains: Constitutionality of Haryana State Employment of Local Candidates Act.

Context:

- The Supreme Court will be hearing a petition to remove the stay on the Haryana State Employment of Local Candidates Act.

Haryana State Employment of Local Candidates Act

- The Act reserves 75% of jobs in the private sector in the State for local residents.
- The Act applies to jobs that pay up to ₹30,000 per month, and employers have to register all such employees on a designated portal.
- The Government may exempt a few industries and has exempted new start-ups and new Information Technology Enabled Services (ITES) companies, along with farm labour, domestic work, and promotions and transfers within the State.

Similar acts in other states

- The Jharkhand State Employment of Local Candidates Bill, 2021
 - * Every employer shall fill up 75% of the total existing vacancies by local candidates to such posts where the gross monthly salary or wages are less than ₹40,000.
- A.P. Employment of Local Candidates in Industries/Factories Act
 - * The Andhra Pradesh law, passed by the Assembly in July 2019, reserved 75% of jobs for locals in industries and factories, including any joint venture and project taken up under the public-private partnership (PPP) mode.

Constitutional questions arising from these Acts.

- **Against Article 19(1)(g)**
 - * Article 19(1)(g) of the Constitution guarantees freedom to carry out any occupation, trade or business.
 - * Reasonable restrictions include public interest, and in particular related to specifying any professional or technical qualifications, or to reserve a sector for government monopoly.
 - * These Acts, by imposing private businesses to reserve 75% of lower-end jobs for locals, encroach their right to carry out any occupation.
- **The provision of reservation based on domicile or residence is unconstitutional**
 - * Article 16 of the Constitution provides for equality of opportunity for all citizens in public employment. It prohibits discrimination on several grounds including place of birth and residence.
 - * However, it permits Parliament to make a law that requires residence within a State for appointment to a public office.
 - * This provision is for public employment and not for private-sector jobs and the law needs to be made by Parliament, and not by a State legislature.
- **The questions on 75% reservation**
 - * In the Indra Sawhney case in 1992, the Supreme Court capped reservations in public services at 50%. However, it said that there may be extraordinary situations that may need relaxation in this rule.
 - * Telangana, Rajasthan and Maharashtra have passed Acts that breach the 50% limit.
 - * Recently a Maharashtra Act was struck down by the Supreme Court on grounds of breaching the 50% limit which said "to fulfill the objective of equality", and that to breach

the limit "is to have a society which is not founded on equality but on caste rule".

Important judgements by the Court

- M.A. Pai Foundation case, 2002 – The Supreme Court stated that private educational institutions have autonomy in their administration and management.
- P.A. Inamdar case, 2005 – S.C. said that reservation cannot be mandated on educational institutions that do not receive financial aid from the state, as that would affect the freedom of occupation.
- The Supreme Court, in 2002 – Said that preference given to applicants from a particular region of Rajasthan for appointment as government teachers was unconstitutional. Further added that reservations can be made for backward classes but this cannot be solely on account of residence or domicile.
- In 1995, Rules in Andhra Pradesh that gave preference to candidates who had studied in the Telugu medium were struck down on grounds that it was discriminatory against meritorious candidates.

Against Equality

- The Haryana Act is against the notion of equality of all citizens of India.
- The Haryana Act is about private sector employment and is questioned that any reservation requirement imposed on the private sector should not be higher than the limits on the public sector.
- The Constitution conceptualises India as one nation with all citizens having equal rights to live, travel and work anywhere in the country. These State laws go against this vision by restricting the right of out-of-State citizens to find employment in the State.
- The restrictions also affect the right to reside across India as finding employment becomes difficult.

Conclusion

- The act is against the ideal enshrined in the Constitution and will have social as well as adverse economic implications on society. The courts along with looking at the fundamental rights perspective, should also look at whether these Acts breach the basic structure of the Constitution that views India as one nation which is a union of States.

Nut Graf

In recent years, three States have enacted laws that limit employment for citizens from outside the State. Apart from violating the fundamental rights enshrined in the Constitution, these laws challenge the conception of India as a nation, which deters the citizens to migrate from their State to other States to find work.

***Separation of Powers between various organs
Dispute Redressal Mechanisms and Institutions***

5. Wrong signal

- » Mains: Key concerns and criticism against the court's ruling in the MediaOne case.

Context:

- The Kerala High Court judgment in the Malayalam news channel MediaOne case.

How are TV channels regulated?

- Television content is regulated by Cable Television Networks (Regulation) Act 1995.
- Under this law, the Central government controls who gets the permission required to operate a television channel and even what kind of content it can broadcast.
- Every channel has to register with the government before it can go on air.
- The Ministry of Information and Broadcasting's Guidelines on Uplinking and Downlinking of Television Channels lays down the conditions for obtaining this registration. This includes having a company registered in India and minimum net worth requirements, among others.

Starting a channel

- To start a channel, the guidelines specify that an application has to be made to the Ministry of Information and Broadcasting.
- The ministry evaluates a channel's suitability for an Indian audience.
- It then forwards it to the Ministry of Home Affairs, which must give a security clearance to these channels.

Registration

- Registration is awarded for 10 years.
- The company is required to follow all the conditions laid down under the Cable Television Networks (Regulation) Act, which includes following a Programme Code that sets out what kind of broadcast content is permissible.

Cancellation

- The Centre also has the right to suspend the registration of a channel "for a specific period in public interest or in the interest of national security".
- The channel has to comply with such an order immediately. Additionally, in case of a "war, calamity or national security concerns" the government has the power to prohibit the reception or transmission or any channel.
- Every ten years, companies must apply to have their registrations renewed. The government has the power to refuse renewal if a company has violated the terms and conditions laid down in law.

Background

- The transmission of a Malayalam-language news channel, Mediaone TV, was barred by the Information and Broadcasting Ministry citing "security reasons".
- The I&B Ministry did not renew the channel's permission to uplink and downlink signals after the Union Home Ministry declined security clearance.
- The channel along with its employees challenged the action.
- The Kerala High Court upheld the Government's order of revoking the broadcasting permission given to the channel.

Concerns

- Questions have been raised about the court's stand that is in line with the Government's stand that it was a national security issue and, hence, there is no need to abide by the principles of natural justice.
- The Government has not disclosed the reasons for its stand. And the court has accepted the submission of documents in a sealed cover and has agreed with the authorities that there were intelligence inputs that warranted the denial of security clearance, without the petitioners being shown the contents.

- The court's ruling is against the clause that any restriction on fundamental rights must not only be reasonable, but also pass the test of proportionality.
 - * In this case, broadcasting involves the rights concerning media freedom, freedom to disseminate information and the freedom to consume information.
 - * These fall under the framework of freedom of speech and expression.
 - * The court seems to have accepted the restriction without examining its reasonableness.
- The ban on the channel not only violates the channel's right to broadcast but also its viewers' right to know.

Court's Ruling in Pegasus Case

- The Court said that national security cannot be used as an excuse to avoid judicial review of restrictions imposed by the state.
- Raising the issue of national security did not give a free pass to the Government, the court had noted.

Criticism against the latest judgement

- It is seen that the recent ruling is against the Pegasus judgement.
- The court is criticized for its claim that the case involved the broad aspect of 'right to privacy' that is not relevant in the MediaOne case.
- Further, the critics say it is unacceptable that the form of 'sealed cover' justice is being used as an aid to adjudication.
- If the practice of using confidential intelligence information to revoke the permission given to a channel is encouraged, freedom of the media will be in great peril.

Conclusion

- The Court needs to play a more proactive role in the circumspection against the misuse of national security that is being used to deny or curtail fundamental rights.

Nut Graf

In the recent ruling of the MediaOne case, the court took the executive's statements at face value when it had to examine it and find a balance between fundamental rights and national security. This lack of questioning by the court could have serious implications on the principle of checks and balances as the government could use this path to silence its critics.

Issues and challenges pertaining to the federal structure

6. The era of combative federalism

- » Mains: Threats to the federal principles of the Constitution in India.

Context:

- The proposed amendments to the Indian Administrative Service (Cadre) Rules of 1954 have brought the debate on cooperative federalism into the limelight.

Background

- The amendments proposed by the Department of Personnel and Training, are said to be against the federal structure of the constitution as they take away certain powers from the state governments.
- States like Tamil Nadu, Kerala, West Bengal, Jharkhand, Rajasthan, Chhattisgarh and Telangana have objected to the amendments.
- The proposed changes are said to be examples of the evolution of the combative nature of federalism in India.

Cooperative Federalism

- Cooperative Federalism in India reflects an ideology of a stable relationship between the centre and other units.
- Cooperative federalism means cooperation and interdependence between the Centre and the States to ensure smooth governance of the country.
- It guides all the governing bodies to come forward and cooperate to resolve common social, political, economic and civic problems.

Shift from Cooperative to Combative federalism

- The term 'combative federalism' was used by a former Uttarakhand Chief Minister after his government was dismissed under Article 356.
- The shift of Indian federalism from cooperative to combative has been one of the major changes in Indian polity recently.

Combative federalism – Instances of control by the Centre over states

Recently, the centre has often seen wielding its power over the states through,

• The office of Governor

- * In 2016, the Governor of Arunachal Pradesh decided to advance the Assembly elections, leading to political turmoil in the State and then President's Rule was sanctioned.
 - » The Supreme Court intervened and held that the Governor's discretion did not extend to the powers conferred under Article 174.

- In Goa, Karnataka and Maharashtra, the Governor acted beyond his constitutional directions by inviting parties that did not have the adequate majority to form the governments.
- In Rajasthan, the Governor refused to summon a session as desired by the Council of Ministers.
- Dispute between the centre and the Delhi government over who should have control of the National Capital Territory of Delhi.
- **All-India Services**
 - * The conflict was seen in West Bengal when the Chief Secretary was summoned to Delhi immediately after the Prime Minister's visit to West Bengal following Cyclone Yaas. West Bengal Chief Minister was reluctant to accede to the Centre's demand.
- **Deployment of central investigative agencies**
 - * The deployment of central investigative agencies has also caused trouble to the federal principles.
 - * The investigations by the Customs, the National Investigation Agency (NIA) and the Enforcement Directorate (ED) in issues arising from a gold-smuggling case in Kerala saw a major tussle between State and the Centre
 - * Registration of an FIR by the CBI for alleged infractions of the Foreign Contribution (Regulation) Act that said that the Kerala government had received foreign contributions from the United Arab Emirates for a housing project also resulted in a face-off between Centre and State.
 - * Recent events in West Bengal and Maharashtra also have impacted the federal structure.
 - * Various States have withdrawn the general consent for the functioning of the CBI in their respective jurisdictions.

Court's View

- The Supreme Court in Government of NCT of Delhi v. Union of India (2018) held that the idea behind the concept of collaborative federalism is negotiation and coordination so that differences that may arise between the Centre and the State can be resolved.
- The Court said that the Union and the State governments should attempt to address the common problems with the intention to arrive at a solution by showing statesmanship, combined action and sincere cooperation.
- The Supreme Court in Ajit Mohan v. Legislative Assembly, National Capital Territory of Delhi & Ors (2021) suggested that "for the system to work well, the Central Government and the State Government have to walk hand in hand or at least walk side by side for better governance."

Conclusion

- The framers of the Constitution incorporated federal principles to establish a sense of cooperation between the Central and the State governments. Encroachment by either of the units is strictly against the Constitution. Hence both the Centre and the States have to strive to work in coordination in the best interests of the people.

Nut Graf

Recent events suggest an evolution of the combative nature of federalism in India where the States and the Centre are in conflict. Both the Centre and State governments have to abide by the constitution, and the court's judgements and work together with cooperation to ensure better governance.

Constitution of India—features

7. Negative liberty

- » Mains: The concepts of Negative and Positive Liberties

Context:

- Isaiah Berlin, in his essay, "Two Concepts of Liberty", speaks of two senses of freedom.
 - * The first is "negative liberty" and the second is "positive liberty"

'Negative liberty'

- It seeks to define and defend an area in which the individual would be inviolable, in which he or she could 'do, be or become' whatever he or she wished to 'do, be or become'. This is an area in which no external authority can interfere. It is a minimum area that is sacred and in which whatever the individual does, is not to be interfered with.
- The existence of the 'minimum area of noninterference' is the recognition that human nature and human dignity need an area where the person can act unobstructed by others.
- How big should this area be, or what should it contain, are matters of discussion, and will continue to be matters of debate since the bigger the area of non-interference the more the freedom.

Positive liberty

- Positive liberty discussions have a long tradition that can be traced to Rousseau, Hegel, Marx, Gandhi, Aurobindo, and also to those who draw their inspiration from these thinkers.
- It is concerned with looking at the conditions and nature of the relationship between the individual and society and of improving these

conditions such that there are fewer constraints to the development of the individual personality

- Positive liberty recognises that one can be free only in society (not outside it) and hence tries to make that society such that it enables the development of the individual whereas negative liberty is only concerned with the inviolable area of non-interference and not with the conditions in society, outside this area, as such.

Negative Liberty	Positive Liberty
Negative liberty is the absence of obstacles, barriers or constraints.	Positive liberty is the possibility of acting — or the fact of acting — in such a way as to take control of one's life and realize one's fundamental purposes.
It is usually attributed to individual agents	It is sometimes attributed to collectivities, or to individuals considered primarily as members of given collectivities.
Political right and libertarians support negative liberty.	Political left has supported positive liberty

Issues with Negative liberty

- Negative freedom, could lead to social chaos because there would be no limit to what human beings may want. And if they are allowed to achieve anything they want, the strong suppress the weak.
- Negative liberty must be restricted for the sake of other values, such as equality and justice.

Issues with Positive Liberty

- Positive liberty has been abused by tyrannies, especially in the Soviet Union.
- The regime portrays its brutal governance as the empowerment of the people.
- The ideas of positive freedom have been exploited to justify atrocities, such as the Holocaust.

Conclusion

- Negative and positive liberty are not just seen as two kinds of liberty; they are often seen as rival and incompatible interpretations of the idea of liberty that can have major social and political implications.

Nut Graf

As everyone defends freedom: the freedom to speak, to move, to act, to eat, to practice religion, it is important to understand the concepts of positive and negative liberty for understanding how governments across the world use them to expand on or restrict freedoms.

State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.

8. Allow removal of Governors: Kerala govt.

- » Prelims: Governor: Summoning Power; Appointment; Removal
- » Mains: Controversies Related To Governor and constitutional need for the Governor's office

Context:

- The Kerala government questioned the constitutional need for the Governor's office

What are the arguments made by the Kerala government?

- The Kerala government has repeatedly demanded that national legislation should empower States to elect them via a representative electoral college.
- The Cabinet sought national legislation to introduce a resolution in the Assembly demanding the dismissal of an "erring" Governor from the post.
- The government suggested that the Center divest the Governor of statutory posts, including the chancellor.
- The Center should keep the State in the loop while appointing Governors.
- It should empower legislatures to impeach Governors if lawmakers find them wanting constitutionally.
- The Center should limit the discretionary powers of the Governor on legislative matters.

Different Controversies Related To Governor

- Appointment: The apparent politicization of the governor's appointment process has been extensively criticized. It is observed that ex-politicians with significant ties with the ruling party in the Center are generally appointed as the head of the states.
- Tenure: The Governor remains in office during the pleasure of the President who is bound to follow the aid and advice of the Council of Ministers headed by the Prime Minister. This effectively means that the tenure of Governor is at the mercy of the ruling party and can be removed if she refuses to act according to the wishes of the Center.
- Discretionary Powers: Article 163 of the Constitution of India recognises the discretionary powers of the Governor. This power has been widely misused by successive Union governments in India. The report of the Governor has been used to dismiss the popularly elected state governments in the states.

Supreme Court's Decisions Limiting Governor's Discretion

• P. Singhal v. Union of India 2010:

- * In this case, the Supreme Court ruled that the President can remove the Governor anytime she is pleased, without assigning any reason for the removal whatsoever.
- * However, this power should not be used arbitrarily without having any compelling reasons for removal.

• Nabam Rebia v. Dy. Speaker 2016:

- * In this case, the SC ruled that the Governor can not summon the House at his discretion unless the CM has lost the majority.
- * It held that the Governor's power under Article 174 is subject to the aid and the advice of the Cabinet.
- * The court also observed that Article 163(2) does not confer absolute discretionary power upon the Governor and in no way gives her the right to turn her office into an "all-pervading super constitutional authority."

Nut Graf

The Kerala government has demanded the Centre empower legislatures to remove Governors from their post if they failed to uphold constitutional values, discharge chancellors' duties, and thwart criminal prosecution measures.

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

9. Questioning the ban on online gaming platforms

- » Mains: Regulations of online gaming platforms; States resorting to banning online gaming

Context:

- The amendments brought to existing regulations on betting and gambling in Karnataka have been struck down by the State's High Court.

Background:

- Karnataka Police (Amendment) Act, 2021 was introduced by the Karnataka government to ban online gambling and skill-based gaming platforms like rummy, poker and fantasy sports that involve any wagering or risking of money.
- A division bench of the Karnataka High Court delivered a judgment striking down major portions of the Act.

Why are States resorting to banning online gaming?

- Many social activists, government officials and those in law enforcement believe that online

games like rummy and poker are addictive in nature.

- * It means when played with monetary stakes, they lead to depression, mounting debts and suicides.
- Reportedly, there have been a few instances where youngsters, faced with mounting debts due to losses in online games have committed other crimes like theft and murder.

On what grounds did the Karnataka High Court strike down the online gaming law?

- The Karnataka High Court struck down the amendments to the Karnataka Police Act on three major grounds:
 - * violation of fundamental rights of trade and commerce, liberty and privacy, speech and expression;
 - * the law being manifestly arbitrary and irrational insofar as it did not distinguish between two different categories of games, i.e. games of skill and chance;
 - * Lack of legislative competence of State legislatures to enact laws on online skill-based games.
- The court held that games, where substantial effort, knowledge and skill is required, are different from games of mere luck or chance.
- The judgment also noted that State governments have been granted powers under the Constitution to make laws for 'gambling and betting' but interpreted the word 'betting' for this purpose to mean betting on gambling games, i.e. betting on games of chance and not games of skill.

Related Judgements

- Chamarbaugwala cases 1957(The State of Bombay v. R.M.D. Chamarbaugwala and R.M.D. Chamarbaugwala v. The Union Of India)
 - * In this case the Supreme Court held that in any game, if the element of skill is dominant over the element of chance (a yardstick known as the preponderance test), it is a game of skill and cannot be construed as gambling.
 - * The Supreme Court and various High Courts have held several games including rummy, fantasy sports, bridge, chess and horse racing to be games of skill.
 - * This position is also reflected in the Gambling Acts of most State governments, which often state: 'Nothing in this act shall apply to any game of mere skill'.
- Madras High Court's judgment on gaming law:
 - * The HC held that as games based on a 'preponderance of skill' are protected under Article 19(1)(g) of the Constitution.

- * The restrictions imposed by the State on conducting or playing such games should satisfy the tests of reasonableness and proportionality.
- Kerala High Court Judgment on ban of Rummy:
 - * The Kerala High Court struck down the amendment to a government notification issued under Section 14A of the Kerala Gaming Act, 1960 aiming to ban online rummy in the state.
 - * The judgment noted that the notification was arbitrary and violative of the right to trade and commerce guaranteed under Article 19(1)(g) of the constitution.

Significance of the gaming Sector:

- Gaming industry is an important sunrise sector which has immense investment, revenue-generating potential, and creates employment.
- Gaming also has multiplier benefits to several sectors that have been identified as focus areas by the Government of India, including semiconductors, telecom, fintech and animation/graphics.
- Another positive economic dimension is that the sector has received massive foreign investment. In the last five years, the online gaming sector has received around \$1,700 million in venture capital and private equity.

Is regulation of online gaming a better solution?

- An outright ban may not entirely curtail the playing of such online games, with or without stakes.
- Shifting of users to grey or illegal offshore online gaming apps results in loss of tax revenue for the State and job opportunities for locals.
- It also results in users being unable to avail remedies for any unfair behaviour or refusal to pay out winnings.

Way Forward:

- Experts believe that instead of a complete ban, one could look at
 - * licensing and regulating the industry with various checks and balances such as diligent KYC and anti-money laundering processes
 - * barring minors from accessing real money games
 - * placing weekly or monthly limits on the money that can be staked or time that can be spent
 - * counselling for addictive players
 - * Allowing self-exclusion of such players, etc.
- Further, the judges also opined that regulation of online games may be a better and proportionate solution rather than an outright ban.

- The State government should come up with new legislation dealing with betting and gambling in accordance with the provisions of the Constitution.

Nut Graf

Even as concerns about the addictive nature of online games persist, an outright ban rather than regulation seems to go against individual freedom and the freedom of trade as enshrined in the Constitution.

Structure, organisation and functioning of the Judiciary

10. A Case for a more Federal Judiciary

- » Mains: Restoration of federal balance in the Judiciary

Context:

- The article examines the federal structure of the Indian Judiciary and discusses the necessity to strengthen it.

Background

- Nearly 150 years ago, A.V. Dicey, the foremost constitutional lawyer, wrote, "The essential characteristic of federalism is the distribution of limited executive, legislative and judicial authority among bodies which are coordinate with and independent of each other". Much has been written about the federal structure in relation to the legislature and the executive.
- India is a union of States. The Supreme Court of India has held that the federalist nature of our country is part and parcel of the basic structure of the Constitution.

It is now the right time to strengthen the federal nature of our judiciary.

Federalism

- Federalism is a midpoint between unitarism which has a supreme centre, to which the States are subordinate, and confederalism wherein the States are supreme, and are merely coordinated by a weak centre.
- The idea which lies at the bottom of federalism is that each of the separate States should have approximately equal political rights and thereby be able to maintain their non-dependent (for want of a better word) characteristics within the larger union.

The federal characteristics of Judiciary:

- A robust federal judicial system forms the integral requirement of a federal state.
- This system of judiciary includes the Supreme Court and High Court that are entrusted to adjudicate the rights of the federal and central units and between the citizens and these units.

- The integrated judicial system functions as a single entity providing remedies in all the cases originating under constitutional law, civil law and criminal law.
- The Supreme Court is superior to the High Court only in the appellate sense. This was reiterated by the Supreme Court on many occasions.

The emerging imbalances:

- Despite the fact that the high courts are not subordinate to the Supreme Court, there have been multiple events that reflected considerable inclination towards the central court. This imbalance started increasing after 1990.
- A prominent rise in centralisation has been observed in the judicial set-up with the gradual progress of time.

- This highlights that Supreme Court is interfering in matters which are clearly of local importance, having no constitutional ramifications.

Scenarios in other countries:

- According to a legal researcher in the United States, U.S. Supreme Court is far more likely to strike down a state statute as unconstitutional than a federal statute.
 - * This research leads to the conclusion that judicial review by a centralised judiciary tends toward unitarism (the opposite of federalism)
- In Nigeria which is also a federal country, it is seen that the Supreme Court supports the central government over the state units.
 - * Such centralising tendency has been exemplified through the recent event wherein there were litigations over mineral rights and subsoil rights where the Supreme Court favoured the central government.

Trends of imbalance in the judiciary:

- **Appointment of the judges and chief justices of High Court and Supreme Court by the Collegium (consisting of supreme court judges).The collegium has the power to transfer judges and chief justices from one court to another.**
- **Bypassing the High Courts with the creation of parallel judicial systems that provide direct appeal to the Supreme Court.**
- **Intervention by the Supreme Court on trivial matters.**



Supreme Court interfering in matters which are of local importance

- In 2018, some individuals from Delhi directly filed a petition in the Supreme Court to curtail Deepavali celebrations.
 - * The Court promptly entertained the writ petition and issued directions
- In another example, the Supreme Court had spent days deciding the height of the dahi handi during Gokulashtami celebrations.

The Concluding Remark:

- The central units have a tendency to aggrandise power to themselves from the state units believing that this would ensure better discharge of duties. This notion has been weakening the entire body of the state which will ultimately lead to an irreversible decay of federalism.
- Therefore, there is an urgent need to empower the High Courts with significant acknowledgement towards its effective role in the judiciary.
- The Supreme Court, as the custodian of the Constitution, is expected to play an active role to enliven the spirit of federalism.

Nut Graf

Recognising the role of high courts and empowering them will add essence to the cause of restoring the federal balance in the Indian judiciary. This will serve the larger interest of the people of this country.

Indian Constitution Significant provisions**11. Essential Religious Practice**

- » Mains: Impact of religious practises on the secular framework of the country

Context:

- The Karnataka High Court is hearing a petition that claims wearing hijab to be an essential religious practice.
 - * The court released an interim order directing the students not to wear any attire which is associated with any particular religion.

The Essential Practice test

- The doctrine of essential practice originated in 1954 wherein the Supreme Court propounded it in the famous Sri Shirur Mutt case.
 - * The court demarcated a clear distinction between matters of religion and matters other than religion.
 - * In order to draw such distinction, the Supreme Court ascertained the constituent essential part of a religion with respect to the doctrines of the religion.
- As a consequence, some religious acts have been declared as "essential" to the practice of that religion and were constitutionally protected. Whereas, some acts were denied protection on the grounds that they were not essential to the religion.

Important case laws:

- In 1983, the Supreme Court disallowed tandava ritual dance at public places to be a part of essential religious practice.
- In Sardar Syedna Taher Saifuddin Saheb vs Bombay 1962, the apex court prohibited the head of the Dawoodi Bohra community from excommunicating members.
 - * This invited huge disagreement within the community. However, the then Chief Justice upheld the freedom of conscience of individual members as well as their civil rights.

Concerns

- Under the test, the court privileges certain religious practices over others, when it does not have the expertise to decide which practice/ritual of a religion is essential/non-essential. These are purely theological questions.
- The concept of providing constitutional protection only to those elements of religion, which courts consider "essential" is problematic. Such an approach assumes that one element or practice of religion is independent of the others; also that while some practices are central to a religion, others are merely incidental.

As a result, over the years, courts have been inconsistent on this question —

- In some cases they have relied on religious texts to determine essentiality
- In others on the empirical behaviour of followers
- In yet others, based on whether the practice existed at the time the religion originated.

Way Forward

- The application of principles of equality, dignity and civil rights to a particular practice is recommended as a better way to reach a just conclusion of the sensitive matters surrounding religious practises.

Positive Vs. Negative Secularism:

- **Positive Secularism:**
 - * A nation performs positive secularism when the constitution of that country has more power than religion.
 - * Positive secularism is where the state plays an enabler role in the exercise of fundamental rights and the religious freedoms of all communities.
- **Negative Secularism:**
 - * Under 'negative secularism', the state says that nobody can display their religious identity in public and the ban on hijab in public places was upheld by the constitutional courts.
 - * Turkey observes negative secularism.

Positive Secularism in India:

- The Indian Constitution offers 'positive secularism' which recognises all religions as true.
- The Indian interpretation of secularism stems from the Vedic precept of Sarva Dharma Sama Bhava.

- The SC has observed that 'Indian secularism' is susceptible to a positive meaning that is developing an understanding and respect towards different religions.

Nut Graf

Secularism, as practised in India, is different from the western concept of secularism. Contrary to the West, the Indian Constitution embodies positive secularism, i.e. protecting all religions equally and giving equal respect to all the religions.

Constitution of India – features, amendments, significant provisions and basic structure.

12. Interrogating the false merit-reservation binary

- » Mains: Supreme Court's Judgement on all India quota and its consequences

Context:

- The Supreme Court of India's ruling on an All India Quota (AIQ).

Background

- The case was laid before the Supreme Court to look into the issues around the implementation of Other Backward Classes (OBC) and economically weaker sections (EWS) quotas in the National Eligibility cum Entrance Test (NEET)-All India Quota (AIQ) admissions to medical colleges.
- All India Quota refers to a judicially created category where 15% of undergraduate seats and 50% of post-graduate seats are filled on a domicile-free, all-India basis.
- The Government recently decided to extend the existing SC and ST reservations within the AIQ category to provide for OBC reservations as well.
- Writ petitions were filed that challenged,
 - * The order on the grounds that the implementation of OBC reservation would impact professional merit and is discriminatory against general category candidates.
 - * The notification of EWS reservation as the hearings on the 103rd Constitutional Amendment Act were pending.
 - * To justify ₹8 lakh as the income limit for EWS reservations.

Supreme Court's View

- The Court, in view of the public health implications of the delay in medical admissions, upheld the admissions notice, and a hearing on the validity of the ₹8 lakh limit would be held in March 2022.
- The Court took this as an opportunity to address the issues of merit and reservations.
- Critics of affirmative action have argued that reservations violate merit. The defenders of reservation argue that affirmative actions serve goals of social representation.
- The Court's judgement takes a fresh stand in this regard. It builds on a long tradition of progressive jurisprudence, but takes it in a new direction.
- The Court reaffirmed the principle of substantive equality that underlies the constitutional promise of equality of opportunity, rather than formal equality.
- Relying on the debates in the Constituent Assembly, the Court reaffirms that the intent of the framers was to provide a remedy to the structural barriers that prevented the realisation of equality of opportunity.
- The Court gave the judgement based on previous landmark cases.

Landmark Cases and other views referred by the Supreme Court in the Judgement

- **Principle of substantive equality**
 - * State of Kerala vs N.M. Thomas, K.C. Vasanth Kumar (1985), and Indra Sawhney vs Union of India (1992)
 - » Reiterate that the provision of reservations in Article 16(4) of the Constitution is not an exception but an extension of the principle of equality enunciated in Article 16(1).
 - » Reservations are important to achieving the goal of equality of opportunity and status amongst all citizens.
 - * Based on the above judgement the court held that, "Reservation is one of the measures that is employed to overcome the barriers. The individual difference may be due to privilege, or circumstances but it cannot be used to negate the role of reservation in remedying the structural disadvantage that certain groups suffer."
- **The mechanisms through which social privileges work**
 - * K.C. Vasanth Kumar vs State of Karnataka (1985)
 - » The judge had criticised the purely

economic understanding of claims for reservation, by emphasising the rigid nature of the socio-cultural institution of caste.

- * Marc Galanter's insight – that the processes of resource accumulation impact the performance of candidates in examinations.
- * K.V. Shyamprasad's works – that recognised for the first time, the role of cultural capital.
- * Based on the above views the Court's order held that, "The cultural capital ensures that a child is trained unconsciously by the familial environment to take up higher education or high posts commensurate with their family's standing. This works to the disadvantage of individuals who are first-generation learners and come from communities whose traditional occupations do not result in the transmission of necessary skills required to perform well in open examination".

• Exposing social prejudices

- * B.K. Pavitra vs State of Karnataka (2019)
 - » Court held that, "the benchmark for the efficiency of administration is not some disembodied, abstract ideal measured by the performance of a qualified open category candidate. The efficiency of administration in the affairs of the Union or of a State must be defined in an inclusive sense, where diverse segments of society find representation as a true aspiration of governance by and for the people".
- * Relying on the judgement the Court recognises that there is a need to rectify prejudicial stereotypes about the skills of persons belonging to weaker sections.

• Examinations as a measure of merit

- * Satish Deshpande's research
 - » Shows that "what examinations measure have an indirect link to the tasks the candidate is supposed to perform".
 - » He argues that the prestige of competitive entrance examinations and the unimpeachability of its evaluator standards are a manufactured construct.

» He calls these examinations 'traumatic bloodbaths' that are administered to guard the social prestige of the professional class.

» He concludes that if the examinations were to be less ruthless, their main social function of persuading 'the vast majority of aspirants to consent to their exclusion' would be prevented.

- * The judgment opines that exams can "only reflect the current competence of an individual but not the gamut of their potential, capabilities or excellence".
- * The judgement focuses on the importance of individual character, experiences, and training.

Consequences of the Judgement

- The judgment has far-reaching consequences for judicial orders, public policy, and public discourse.
- The claims of reverse discrimination by candidates from the general or unreserved category would have to be justified under the ideals of substantive equality.
 - * This implies that a disparity in cut-off marks would not be interpreted in isolation of the structural inequalities that are continued by competitive examinations.
- The judgement invites for a judicial review of the constitutionality of EWS reservations since it overlooks the role of cultural capital for general category EWS candidates and fixes the same income limits for 'creamy layer' OBC and EWS.
- In the policy domain, the judgment opens the way for designing examinations that are free of linguistic, class, school boards, and regional bias.
- The recognition of social privileges behind merit supports the demand for a caste census.

Nut Graf

The debate of merit versus reservation has a long-standing history in India and the recent judgement by the Supreme Court has the potential to settle this long, fractious and futile debate in the country by advancing an interpretation that is consistent with the constitutional ideals of equality and social justice.

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ECONOMY

Issues of buffer stocks and food security

1. ICRISAT

- » Prelims: About ICRISAT
- » Mains: Interventions of government and international agencies to tackle climate change

Context:

- The Prime Minister addressed the 50th anniversary of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Patancheru, Hyderabad along with the inauguration of ICRISAT's Climate Change research facility on Plant Protection and Rapid Generation Advancement Facility.

About the Institute:

- ICRISAT is an international organisation that conducts agricultural research for the development in Asia & sub-Saharan Africa.
- It was founded in 1972 by a consortium of organisations convened by the Ford and Rockefeller foundations.
- Its charter was signed by the FAO and the UNDP.
- It is managed by a full-term Director-General functioning under the overall guidance of an international governing board.
- It assists farmers in the improvement of crop varieties and hybrids.
- This institute also provides guidance to the farmers to fight the implications of climate change through various research projects and the upcoming plans to establish facilities to help the farmers adopt a climate-resilient ecosystem.
- It is headquartered in Patancheru in Hyderabad with several regional centres at Bamako, Nairobi, Niamey, Kano, Addis Ababa.
- Ever since its inception, India has granted the institute a special status as a UN Organisation operating in the Indian subcontinent with immunities and tax privileges.

Infrastructure: Ports, Roads, Airports, Railways etc.

2. India's first water taxi service

- » Prelims: Water taxi service

Context:

- India's first water taxi service was inaugurated in Maharashtra.

Details

- The ₹8.37-crore project has shared expenditures from the State and Centre and will currently operate in three routes.

- The three routes include
 - * Belapur to Ferry Wharf (the domestic cruise terminal)
 - * Belapur to Elephanta Caves
 - * Belapur to JNPT
- Seven speed boats, each with a capacity of 10 to 30 passengers and one catamaran with a passenger capacity of 50 to 60 will run on these routes.

Agriculture

3. National Agriculture Disaster Management Scheme

- » Prelims: About the National Agriculture Disaster Management Scheme
- » Mains: Government Interventions to protect the interests of the farmers

Context:

- The Indian Council of Agricultural Research, the Ministry of Agriculture and Farmers' Welfare has launched a flagship network project called the National Innovations in Climate Resilient Agriculture (NICRA) in line with the National Agriculture Disaster Management Scheme.

What is the aim?

- The scheme aims at strategic research on adaptation and mitigation of unusual climatic events.
- It also aims at spreading awareness among the farmers about climate-resilient practices of agriculture along with technology dissemination.

Provisions of the National Agriculture Disaster Management Scheme:

- The scheme will tackle the issues of sudden climate change that impact agriculture incurring huge losses for the farmers.
- Every ministry and department is mandated to have a disaster management plan in accordance with the Disaster Management Act, 2005. On similar lines, the Department of Agriculture has also prepared a National Agriculture Disaster Management Plan to achieve the developmental goals related to the agriculture sector.
- Under the scheme, the government will make an attempt to introduce climate-smart technologies involving farmers in risk assessment and adaptation techniques in several clusters covering many villages.
- About 65 location-specific climate-resilient technologies have been developed.

- So far, 8 climate-resilient varieties have been identified in rice, green gram, maize and lentil.

Issues relating to mobilisation of resources, growth, development and employment

4. PM-DevINE

- » Prelims: About PM Gati Shakti, PM- DevINE
- Prime Minister's Development Initiative for North-East
- PM-DevINE will be implemented through the North-Eastern Council.
- It will fund infrastructure, in the spirit of PM GatiShakti, and social development projects based on felt needs of the North-East.
- This will enable livelihood activities for youth and women, filling the gaps in various sectors, the Minister.
- However, it will not be a substitute for existing central or state Schemes. While the central ministries may also pose their candidate projects, priority will be given to those posed by the states.

Major crops- cropping patterns in various parts of the country

5. Saffron Bowl Project

Saffron

- It a perennial herb belongs to Iris family Iridaceae and is the most expensive spice in the world known for its aroma and colour and used for flavouring and colouring and in medicinal, pharmaceutical industries.
- Saffron belongs to the family of "Iridaceae" and commercial part of saffron is "Stigma".

Conditions for Saffron Cultivation

- One of the most important aspects of saffron growing is the soil. It thrives on loamy, sandy, and calcareous soils. A gravelly soil is also excellent for saffron farming, however a heavy, clayey soil is not.
- Saffron grows best on acidic soil. It thrives well when pH of soil is around 5.5 to 8.5.

- Saffron is grown primarily in sunken and dry places with elevations ranging from 1500 to 2500 metres above sea level.
- Saffron requires less water than other spices. The soil should be slightly damp but not completely dry.

Saffron Cultivation in India

- Saffron is mostly cultivated in temperate climate regions. However, the farmer can also do Saffron cultivation in tropical climate conditions
- In India, Saffron is mainly cultivated in Jammu & Kashmir and Himachal Pradesh.
- Pampore region, in India, commonly known as Saffron bowl of Kashmir, is the main contributor to saffron production, followed by Budgam, Srinagar, and Kishtwar districts
 - * Pampore Saffron Heritage of Kashmir is one of the Globally Important Agricultural Heritage systems (GIAHS) recognised sites in India.

Uses and Benefits

- It rejuvenates health and is used for medicinal purposes.
- It has been associated with traditional Kashmiri cuisine
- Saffron is used commercially in perfumes and cosmetics.

A look at numbers

- As per Council of Scientific and Industrial Research (CSIR)-Institute of Himalayan Bioresource Technology (IHBT), the annual demand of the saffron in India is 100 tonnes per year, but its average production is about 6-7 tonnes per year.
- To meet this demand, saffron is imported from countries like Iran and Afghanistan.
- To meet the growing demand of saffron the Ministry of Science and Technology, through the Department of Science & Technology (DST), is now looking at extending its cultivation to some states in the Northeast

Context

- A few locations in Arunachal Pradesh and Meghalaya have been identified for saffron cultivation under the saffron bowl project by the North East Centre for Technology Application and Reach (NECTAR).
 - * NECTAR is an autonomous body under the Department of Science & Technology (DST)

Saffron Bowl of India

- The regions in which saffron is grown in India, together forms the Saffron bowl of India.

Details

There is a huge similarity of climate and geographical conditions between Kashmir and few regions of Northeast.

- In Arunachal Pradesh, there is a good growth of organic saffron with flowers.
- In Meghalaya, sample plantations were grown at Cherrapunji, Mawsmai and Lalingtop sites.
- It will also diversify agriculture and provide new opportunities to the farmers in the North-East.

Indian Economy and issues relating to planning, growth, development**6. Towns of Export Excellence**

- » Prelims: DGFT, Towns of Export Excellence

Context:

- 39 towns have been recognized as Towns of Export Excellence under the foreign trade policy towns of export excellence to avail the benefits under the policy.

Towns of Export Excellence: Benefits

- Towns producing goods of Rs 750 crore or more can be recognised as Towns of Export Excellence based on the potential for growth in exports.

Under the foreign trade policy, these towns can benefit in the following manner:

- Recognised associations of units in towns of export excellence can avail financial assistance under the Market Access Initiative Scheme, on a priority basis.
- The assistance will be provided for export promotion projects for marketing, capacity building and technical services.
- The common service providers in the towns of export excellence are entitled for authorization under the Export Promotion Capital Goods Scheme.
- Tripur, Ludhiana, Panipat, Kanoor and Karur are some of the towns under this category.

Transport and marketing of agricultural produce**7. Centre to form FPOs with small farmers**

- » Prelims: Farmers Producer Organization (FPO)
- » Mains: Significance of FPOs in achieving the target of Doubling Farmers' Income

Context:

- The Union government is resolved to mobilise small farmers into farmer producer organizations (FPOs) to improve their incomes by developing the agriculture value chain.

What is a "Farmers Producer Organization" (FPO)?

- It is one type of Producer Organization (PO) where the members are farmers.
- Small Farmers' Agribusiness Consortium (SFAC) is providing support for the promotion of FPOs.
- PO is a generic name for an organization of producers of any produce, e.g., agricultural, non-farm products, artisan products, etc.

What are the Essential Features of a PO?

- It is formed by a group of producers for either farm or non-farm activities.
- It is a registered body and a legal entity.
- Producers are shareholders in the organization.
- It deals with business activities related to the primary product.
- It works for the benefit of the member producers.
- A part of the profit is shared amongst the producers.
- The rest of the surplus is added to its own funds for business expansion.

How can FPOs help achieve the target of "Doubling Farmers' Income"?

- One of the key strategies identified to help meet the goal of doubling farm incomes is to build robust FPOs.
- FPOs have the potential to act as a catalyst of change in the economic system of our country.
- Using this FPO model, farmers are in a position to fix the price of their production.
- Well-organized FPOs engage in providing a range of assistance to farmers like imparting better farm practices, collectivisation of input purchases, transportation, linkage with markets, and better price realization as they do away with the intermediaries.

Recommendations to Enhance Efficiency of FPOs:

- Regular capacity building of FPO board members and other key appointments on Management Practices
- To come out with a standardized scoring method of FPO; including financial, management, social and environmental score
- Converging rural, agriculture and farmer development policies with FPOs
- Improvement of risk management systems in FPO

- Suggest capital structure of FPO in different phases, and support it in financial linkages
- Intra FPO learning and development platform to be started
- Increase the role of FPO in social development activities
- Integrating role of FPOs in strengthening the rural entrepreneurial ecosystem
- Link FPO with nearby agriculture university and management institute

Nut Graf

With small and marginal farmers forming about 80% of the farmer community in India, initiatives like expanding the FPOs and bringing more farmers under their ambit would go a long way in helping double the farmers' incomes and also combat challenges in agriculture including those posed by climate change.

Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment

8. RBI's digital currency plans

- » Prelims: Features of CBDCs; Blockchain technology application; Global adoption of CBDCs
- » Mains: Significance and concern associated with the adoption of CBDCs.

Context:

- In the 2022-23 Budget, the Finance Minister has announced the introduction of India's Central Bank Digital Currency (CBDC).

Central Bank Digital Currency:

- Central bank digital currency (CBDC) refers to the virtual form of a fiat currency. A CBDC is an electronic record or digital token of a country's official currency. Hence CBDC is no different from physical cash, except that it would exist in a digital form.
- CBDC would be issued and regulated by the nation's central bank – the Reserve Bank of India.
- The CBDC will be held in a digital wallet.
- The digital rupee will not directly replace demand deposits held in banks. Physical cash will continue to be used by banks, and people who wish to withdraw cash from banks can still do so. But they can also opt to convert their bank deposits into the new digital rupee.
- Technologies such as blockchain would be used to issue the digital currency.

Significance of CBDCs:

- Meet the increasing demand for digital currencies: The digital rupee could help meet the increasing demand for digital currencies as is evident from the rise of private digital currencies such as bitcoin and the increasing use of digital payments.
- More reliable compared to private digital currencies: Notably, central bank digital currencies could be a reliable, sovereign-backed alternative to private currencies which are mostly volatile and unregulated.
- Low/negligible cost of issuing digital currency: Digital rupee almost eliminates the cost of printing and distributing physical cash as the creation and the distribution of the digital rupee will happen electronically.
- Increased control over monetary and fiscal policy: Given that unlike physical cash, which is hard to trace, a digital currency that is monitored by the RBI can be more easily tracked and controlled by the central bank, CBDCs can simplify the implementation of monetary and fiscal policy.
- Promote financial inclusion: The CBDCs can also help promote financial inclusion in the economy by bringing the unbanked into the financial system.
- Boost to Digital Economy: The digital rupee would give a 'big boost' to the digital economy in India and help India reap the benefits of such a system.

Concerns/challenges associated with CBDCs:

- Impact on credit creation: Some economists have pointed out some risks in the transition to a new monetary system based on CBDCs. People may begin withdrawing money from their bank accounts with the increasing popularity of digital currencies. The large flight of capital from bank accounts to digital currencies can affect the number of loans created by the banks.
 - * This may not be an immediate concern for banks in India that offer interest on deposits to account holders.
- Privacy concerns: The centralized form and traceability of digital currencies have led to serious concerns regarding the privacy of the digital currency holder and this could slow down the adoption.
- Inability to replace private digital currencies: The demand for private currencies comes primarily from people who have lost faith in fiat currencies issued by central banks. The mere digital version of a national currency like the rupee is unlikely to affect the demand for private currencies. The need for privacy is one of the primary reasons for the popularity of private digital currencies. The lack of privacy could impact the popularity of central bank-issued digital currencies.

Recommendations:

- The following measures could be taken to address the possible negative impacts of the introduction of central bank-issued digital currencies.
 - * The central banks could cap the amount of money that an individual can hold in the form of CBDCs. This would help prevent the mass withdrawal of deposits from banks.
 - * Central banks may also have to inject fresh money into banks to ensure that the ability of banks to create loans is not affected by depositors' rush to digital currencies.

Global developments with respect to CBDC:

- CBDCs are in various stages of development around the world.
 - * In 2020, the Bahamas launched the world's first CBDC.
 - * Several countries, including the United States, those in the European Union and China, have been working towards issuing their own Central Bank Digital Currency (CBDC) in recent years.
 - * Notably, a few countries, including Finland and Denmark have cancelled efforts to introduce a digital currency owing to doubts over the efficacy of central bank digital currency.

Nut Graf

The recent announcement of India's Central Bank Digital Currency (CBDC) is in line with global developments which would not only help curtail the rise of private digital currencies and the associated concerns but will also help provide a boost to the digital economy and bring in associated benefits.

Issues related to Agriculture**9. Step up agri-spending, boost farm incomes**

- » Prelims: Agriculture Orientation Index (AOI)
- » Mains: India's position on agriculture spending and concerns associated with it

Context:

This article talks about the agriculture spending in India in the context of India's position in the Agriculture Orientation Index (AOI).

Agri-spending in India:

- The overall budgetary allocation towards the agricultural sector has marginally increased by 4.4% in the Union Budget 2022-23.

- The Food and Agriculture Organization (FAO) report for 2001 to 2019 states that
 - * Globally, India is among the top 10 countries in terms of government spending on agriculture.
 - * India spends around 7.3% of its total government expenditure.

What is the Agriculture Orientation Index (AOI)?

- Agriculture Orientation Index (AOI) is an index that was developed as part of Goal 2 (Zero Hunger) of the 2030 Agenda for Sustainable Development in 2015.
- The AOI is calculated by dividing the agriculture share of government expenditure by the agriculture value-added share of GDP.
- It measures the ratio between government spending towards the agricultural sector and the sector's contribution to GDP.

Agriculture Orientation Index (AOI) of India:

- India's index is one of the lowest, reflecting that the spending towards the agricultural sector is not commensurate with the sector's contribution towards GDP.
- Although the AOI has shown an improvement since the mid-2000s, India's AOI is one of the lowest in Asia.
- India holds only the 38th rank in the world, despite being an agrarian economy wherein a huge population is dependent on the agricultural sector for its livelihood.

India's Comparison with Other Spending:

- Asia as a whole performs much better, with relatively higher performance by Eastern Asian countries.
- Even lower-income African countries such as Zambia, have commendable spending in the agricultural sector despite being a landlocked country.
- The enormous spending on the agricultural sector by East Asian countries is also reflected in their higher crop yield.
- Within the Asian region, Eastern Asia has the highest cereal yield.
- In China, the performance of the sector in terms of crop yield is much higher than in India.

What are the Concerns with Agri-spending in India?

- The agricultural sector shows that there has been a drastic slashing of funds toward important schemes such as crop insurance and minimum support price (MSP).
- Even with an overall increase in budgetary outlays, the allocation towards Market Intervention Scheme and Price Support Scheme (MIS-PSS) was low.

- The Pradhan Mantri Annadata Aay Sanrakshana Abhiyan (PM-AASHA) experienced a significant reduction in 2021-22.
- The distribution of pulses to States for welfare schemes has also been reduced in the year 2021-22.
- Additionally, there is an overall reduction in total central schemes/projects, which may have serious implications for the performance of the sector.

Way Forward:

- The focus on the development of irrigation facilities, urban infrastructure and development of national highways must be complemented with the development of rural infrastructure and rural transportation facilities, along with an increase in the number of markets.
- These measures will play a crucial role in enhancing farmers' access to markets and integrating small and marginal farmers into the agricultural supply chain to a greater extent.

Nut Graf

A separate Budget for the sector at the Centre and State levels and intensification in government spending towards the agricultural sector is the key to attaining the sustainable development goals of higher agricultural growth and farm income.

Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

10. It's time to take a relook at privatisation

- » Mains: Critical analysis of privatisation policy as a solution to India's economic crisis.

Background

- India's fiscal deficit for FY22 is said to be 6.8% of the GDP or ₹15.06 lakh crore. It accounts for about 12.7% of the GDP if debts of the States are included.
- Privatisation is being put forward as an option to generate sufficient revenues for the government to close down the fiscal deficit. Also in the recent past, there has been a broad consensus that privatisation is the solution for the revival of the economy post-pandemic as the policymakers suggest that the private sector has more ability to grow faster.

Privatisation

- Privatisation means the transfer of ownership, management, and control of the public sector enterprises to the private sector.

Objectives:

- * To minimise the public sector's role and create new investment space for the private sector, and to infuse private capital, technology and management practices that will contribute to growth and new jobs.
- * The proceeds from the sale of the public firms would help finance various government-run social sector and developmental programmes.

Privatisation in India

- The Disinvestment Commission, under the Ministry of Industries, was set up in 1996 to provide inputs on which firms to privatise over a five-10-year period.
- A separate Department of Disinvestment was set up under the Ministry of Finance and later upgraded to a full-fledged Ministry in 2001. It was downgraded back to a department in 2004.
- Despite strong institutional backing, privatisation as a policy has failed to raise significant funds. The actual receipts from disinvestment have fallen short of targets.
- In FY11, ₹22,846 crores were raised against a target of ₹40,000 crores.
- In FY20, ₹50,304 crores were raised against a target of ₹1 lakh crores.
- Between FY11 and FY21, about ₹5 lakh crores were raised, which is about 33% of FY22's projected fiscal deficit.

Evidence against privatisation

- Studies indicate that the gap in growth between public sector undertakings (PSUs) with autonomy and private firms is not very significant.
- A study highlighted that the famed British privatisation initiative of British Airways, British Gas, and the Railways led to no systemic difference in performance.
- Evidence on performance after privatisation is more mixed in developing countries.
- Growth post-privatisation is linked to factors like better funding by the private firms compared to the government budget and a better business model.
- Privatisation as a revenue source has also offered meagre returns.

Challenges with privatisation

- Valuation – 65% of 300 national highway projects have been recording significant toll collection growth. Valuations of such assets should ensure to capture potential growth in toll revenue.
- Employment – PSUs have been significant

generators of employment, with about 10.3 lakh employees in Central Public Sector Enterprises (in 2019). A push for privatisation is said to be a push for mass layoffs, in a period of low job creation.

- Concentration of public assets in select private hands – In India, about 70% of profits generated in the corporate sector in FY20 were from just 20 firms.
- Concerns of Monopoly –
 - * Cigarettes are dominated by a single player, with a 77% market share in FY21
 - * Paints has one entity with 40% in FY21
 - * Telecom has just three players left
- Loss of strategic control – Privatization decreases the government control on strategic sectors.

Conclusion

An alternative method of selective PSU reform could be considered which has been a success in other countries like:

- In China, growth has been led by corporatised PSUs that are held under a holding company, which promotes better governance, appoints leadership and executes mergers and acquisitions.
- In Singapore, the Ministry of Finance focuses on policymaking, while Temasek Holdings (a private firm) is focused on corporatising and expanding its PSUs.

A PSU with greater autonomy, with the government retaining control and subject to the right incentives, the Indian PSUs could aspire to be as large and efficient as that of China's.

Nut Graf

Considering the social and institutional constraints, India's ability to privatise firms is expected to continue to be slow in the future. At this rate, it is unlikely to raise significant revenue. Hence other options such as reforming the PSU sector need to be considered.

Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

11. A dipping graph in occupational safety and health

» Mains: Occupational safety and health in India

Context:

- The recently released CRUSHED Report 2021 by Safe in India (SII).

Details

- The CRUSHED Report 2021 suggests a dismal

performance concerning occupational safety and health in the auto sector.

- Occupational safety and health (OSH) being one of essential human and labour rights, has not received due attention from law-makers and trade unions in India.

Primary requirements to ensure safe workplaces

- Stringent monitoring and inspection of work places.
- Comprehensive database to frame corrective actions and policies.

Shortcomings in data compilation

- Statistics regarding industrial accidents are compiled by the Labour Bureau.
- The bureau publishes data on industrial injuries relating only to a few sectors like factories, mines, railways, docks and ports.
- The bureau has not considered expanding the scope of statistics on injuries by adding sectors such as plantations, construction, the service sector, etc.
- The data it produces does not represent the situation in India as several major States default in the provision of data to the Labour Bureau.
 - * Example: in 2013-14, major States such as Delhi, Gujarat, Kerala, Tamil Nadu, Uttar Pradesh and West Bengal defaulted.
- The number of non-fatal injuries declined from an average of 21,370 during 2010-2015 to 5,811 during 2016-2019.

Challenges in ensuring Occupational safety and health

- **Problem of Under-reporting**
 - * The States' data are grossly underreported. It is well-known that under-reporting is more likely to be in case of non-fatal injuries than fatal ones.
 - * The SSI's report, among others, shows massive under-reporting of industrial injuries occurring in Haryana.
 - » Its report of the auto sector in Gurugram and Faridabad showed that since 2017, on average 500 workers have received nonfatal injuries.
 - * The under-reporting of industrial injuries, unlike strikes and lockouts, cause more serious issues and is of grave concern.
- **Shortage of inspectors**
 - * According to the Directorate General, Factory Advice and Labour Institutes (DGFLAI)'s Standard Reference Note for 2020 in 2019, the proportion of working in sanctioned posts for factory inspectors (the employment rate) for India was 70.60%.
 - » The major states such as Maharashtra

(38.93%), Gujarat (57.52%), Tamil Nadu (58.33%), and Bihar (47.62%) had poor employment rates of inspectors.

- * In 2019, there was an inspector for every 487 registered factories, this shows the heavy workload of inspectors.
- * The inspector per 1,000 workers employed in factories is a little 0.04 i.e. there is an inspector for every 25,415 workers.
- **Low inspection rates**
 - * The proportion of registered factories inspected for all-India declined from 36.23% during 2008-11 to 34.65% during 2012-2015.
- **Low conviction rates**
 - * For all India, the percentage of convictions in total cases decided between 2015-2019 was 61.39% and the average fine per conviction was meagre ₹12,231.
 - * The efficiency of the penal system is low as the percentage of decided cases out of total pending cases is a poor 15.74% during 2015-19.

Main reasons for the above challenges

- Liberalisation of the inspection system – this would not promote sound labour market governance.
- Simplification of the annual returns and self-certification systems – this further weakened the poorly placed labour statistical system especially w.r.t. industrial injuries.

Conclusion

- The defects in monitoring the Occupational safety and health (OSH) in India violate the International Labour Organization (ILO) conventions, the Labour Inspection Convention, 1947 and Labour Statistics Convention, 1985 that have been ratified by India. Hence, the labour codes, especially the OSH Code, the inspection and the labour statistical systems should be reviewed as a part of the Government's process of framing the Vision@2047 document for the Labour Ministry.

Nut Graf

The shortcomings in the compilation of data and gross under-reporting of incidents along with other challenges, pose a serious threat to the labour rights in the country, which demand a comprehensive review of labour inspection and the labour statistical system in India.

Indian Economy and issues relating to planning, growth and development

12. On an equal footing

- » Mains: Interstate disparities, the role and solutions for the power sector in addressing interstate disparities.

Background

- India has a population of about 135 crore people.
- India is the sixth-largest economy in the world with high growth potential.
- The growth potential cannot be achieved without giving equal opportunity to every State.

Disparity between States

- The low-income States (LIS) have low accessibility to credit, investments, power availability, and high energy costs.
- The high-income States (HIS), on the other hand, have a big share in industry and commerce.
- The six HIS (Maharashtra, Tamil Nadu, Gujarat, Karnataka, Andhra Pradesh and Telangana) with only 32.3% share in population account for,
 - * 4% of factories and 54.3% of the net value added to the country.
 - * This is because they have higher credit and financial accessibility i.e. 55% of total institutional credit and 56% of total industrial credit.
- The six LIS (Bihar, Jharkhand, U.P., M.P., Odisha, and Rajasthan) with a share of 43%, access only 15% of total institutional credit and 5% of total industrial credit.
- The maximum benefit of the Atma Nirbhar package of ₹20 lakh crore also went to the HIS as they have a higher share in the industry.

The role of Power in interstate disparities

- The availability of adequate and quality power at low prices attracts investments.
- Power is an important factor to start electricity-intensive industrial production.
- Of the total consumption of electricity, Industry and commerce account for about 50%.
- According to the Energy India Outlook 2021, the prices of Electricity differ not just among end-users, but also between states due to different tax and subsidy regimes.
- There is a direct link between income and electricity consumption. According to the Central Electricity Authority, in 2020-21,
 - * The six HIS with only 32% of the total population consumed 50% of the total installed capacity of power.

- * The six LIS got only 25% of the power, despite their 43% share in the population.

Solutions for the power sector to attain higher economic growth

- **One Nation, One Grid, One Frequency, One Price**
 - * The power-producing States especially States with hydel power have the advantage of power being available at lower prices.
 - * The problem can be addressed by synchronising all the regional grids.
 - * Further, this will pave the way for establishing a vibrant electricity market and facilitate the trading of power across regions through the adoption of the 'one tariff' policy.
 - * Hence the idea is 'One Nation, One Grid, One Frequency, One Price,' will help eliminate price discrimination in the power sector.
- **Inclusion of electricity duty under the GST Regime**
 - * The power sector needs uniformity in electricity duty in different States.
 - * The substantial proportion of the power cost incurred in HIS is also borne by the LIS which buys those industrial products, as the input cost of power has already been included in the product's price.
 - * Thus, the electricity duty should be redistributed among the States under the ambit of GST equally shared by the CGST and SGST.
 - * 100% CGST should be devolved among the States without being shared with the Centre (as electricity duty is a State subject).

Nut Graf

To achieve high economic growth, the States should bat for uniform energy tariff and inclusion of electricity duty under the ambit of GST as this will benefit the whole nation through rational tax devolution and hence, provide the opportunity to attain higher growth.

Marketing of agricultural produce

13. Lifting of "Export Prohibition" on Bamboo Charcoal

- » Mains: Issues in the Indian Bamboo Industry and need for lifting "export prohibition" on Bamboo Charcoal.

Context:

- Khadi and Village Industries Commission (KVIC) urged the Government to lift the "export prohibition" on bamboo charcoal for optimum utilization of raw bamboo and higher profitability in the bamboo industry.

Indian Bamboo Industry

- In India, bamboo is mainly used in manufacturing of Agarbatti where, about 16%, i.e. the upper layers of the bamboo, is used for manufacturing bamboo sticks while the remaining 84% of bamboo is of complete waste.
- The Bamboo waste generated in Agarbatti and bamboo craft industries is not being utilized commercially, as a result, the Bamboo input cost for Bamboo Sticks is very high compared to the average Bamboo cost.
- The Bamboo price in China is very low compared to the input cost owing to 100% waste utilization.

Bamboo Charcoal

- The bamboo wastes can be best used for making "Bamboo Charcoal" which has a huge demand in the international market.
- The demand for import of bamboo charcoal has been in the range of \$1.5 to 2 billion and has been growing at a high rate.
- Rising import demand is seen in countries like the USA, Japan, Korea, Belgium, Germany, Italy, France and the UK.
- It is also used as a soil nutrient and raw material for manufacturing Activated Charcoal.
- However, the Indian bamboo industry is not able to tap the opportunity due to its "export prohibition".
- The exports of Bamboo Charcoal, Bamboo Pulp and unprocessed shoots are kept under the prohibited category in India.

Infrastructure: Energy

14. Green Hydrogen/Green Ammonia Policy

- » Prelims: National Hydrogen Mission
- » Mains: India's future towards sustainability by promoting renewable sources of energy.

Context:

- The Ministry of Power notified the Green Hydrogen/Green Ammonia Policy to step closer to the major objective of shifting towards renewable energy sources.

Background:

- Hydrogen and Ammonia are going to be the potential future fuels replacing fossil fuels.
- Production of these fuels is considered to be green because they ensure environmentally sustainable energy security of the country.
- The Government of India has been effective in introducing policy measures to boost Green Hydrogen/Green Ammonia.
- The National Hydrogen Mission was launched in 2021 by the government to meet the targets of making India a green hydrogen hub with a capacity to produce 5 million tonnes of green hydrogen by 2030.

The Policy: Essential Provisions

- Green Hydrogen and Ammonia manufacturers will be allowed to purchase renewable power from the power exchange or can set up a renewable energy capacity themselves or through any developer.
- Open access will be provided within 15 days of receipt of the application.
- The manufacturers can bank the unconsumed renewable power for 30 days with distribution companies and take it back at the time of requirement.
- Waiver of Inter-state transmission charges will be offered for 25 years for the manufacturers whose projects commenced before 30th June 2025.
- Connectivity to the grid will be given on the basis of priority to avoid delays of tedious procedures.
- The cost of procurement, wheeling charges and a small margin determined by the state commission will be accompanied by concessional prices for the distribution licensees to procure and supply renewable energy to the manufacturers in their states.
- Incentives will be granted to the manufacturers and distribution licensees under the Renewable Purchase Obligation (RPO) for the consumption of renewable power.

e-technology in the aid of farmers.**15. PM Narendra Modi flags off 100 'kisan drones'**

- » Mains: Use of Drones in Indian Agriculture

Context:

- The Prime Minister flagged off 100 "kisan drones" in different parts of the country for spraying pesticides and other farm materials.

Use of Drones in Indian Agriculture**Significance of Drone Technology**

- Drone technology helps to enhance productivity and efficiency in the sector to reach the highest potential.
- Agriculture drones efficiently study external factors like weather, soil conditions, and temperature and empowers the farmer to make mindful choices accordingly.
- The gained data helps regulate crop health, crop treatment, crop scouting, irrigation, and carry out field soil analysis and crop damage assessments.
- The drone survey helps boost crop yields and minimize time and expenses.

Applications of Drone in Agriculture

- Locusts Attacks: The drones can be used for spraying of insecticides in the areas affected by locusts. Recently, the Maharashtra government decided to use drones to spray insecticides on swarms of locusts.
- Mapping/Surveying: The process of using a drone to map or survey crops is a relatively efficient way to gather exact information in a precise manner.
- Crop Dusting/Spraying: Use of drones in spraying and dusting crops helps reduce costs and potential pesticide exposure to workers who would have needed to spray those crops manually.
- Irrigation Monitoring: Drone survey helps improve water efficiency and disclose potential pooling/leaks in irrigation by providing Irrigation monitoring yields.
- Crop Health Monitoring and Surveillance: Agriculture drones can see which plants reflect different amounts of green light and Near-infrared spectroscopy (NIRS) light. This data helps produce multispectral images to track crop health.
- Field Soil Analysis: The drone survey allows seizing soil data, field soil analysis, irrigation, and nitrogen-level management which permits farmers to analyze their soil conditions thoroughly.

Challenges:

- Knowledge and Skill: An average farmer cannot analyze drone functioning as it requires specialized skills and knowledge to translate it to any useful information.
- Flight Time and Range: Due to relatively higher payloads, the flight duration of drones used in agriculture is short which results in limited coverage of land.

- **High Cost:** Mostly, agricultural drones are costlier as it includes the cost of imaging sensors, software, hardware and tools.
- **National Laws:** Multiple laws governing drone use in India creates ambiguity besides affecting the production and use of drones.
 - * The requirement of obtaining an unmanned aircraft operator's permit (UAOP) for piloting drones, Permission for each flight through Online Digital Sky platform for No Permission No Take off (NPNT) compliance limits use of drones in agriculture.
- **Connectivity:** Farmers intending to use drones have to invest in connectivity or buy a drone with local data storing capability in a format that can be transferred and processed later.
- **Weather Dependent:** Drones are weather dependent. Under windy or rainy conditions, flying drones is not easy, unlike traditional aircrafts.

Recommendations

- Encourage Start-ups to establish local drone manufacturing/assembling units for agriculture use.
- Develop a comprehensive legal and policy framework in the form of Civil Aviation Requirements (CAR 3.0) to encourage applications of drones in agriculture.
- Expedite Digital sky platform with its revision for pragmatic and practical implementation for enhanced drone usage.
- Capacity development for flying drones is required as it is a skill-based operation.
- Develop an enabling ecosystem with a single-window concept for entrepreneurs.
- Encourage Research in drone applications to study various operating parameters in agriculture.

Nut Graf

Agricultural drone technology is undoubtedly the future of the Indian agrarian community. It can transform traditional farming methods in uncountable ways. Drones will prove to be a milestone in the development of the drone sector and also open infinite possibilities leading to Smart and Sustainable Agriculture.

Infrastructure: Roads

16. India has still to get a good grip on road safety

- » Mains: Initiatives of the government to reduce the number of road accidents and fatalities.

Context:

- The urgency to ensure the safety of the roads in the country and the required joint efforts of the central and the state governments to make the roads accident resilient have been discussed in the article.

An Overview of the Situation:

- Road accidents and fatalities have been a major concern across the globe including India.
- There is an emerging need to develop road infrastructure and introduce policies to reduce the number of deaths that occur due to road accidents.
- It is estimated that globally 3500 people die on roads every day which accounts for preventable deaths and injuries involving children and young people worldwide.
- The United Nations General Assembly (UNGA) had expressed its responsiveness towards the alarming scenario with respect to unsafe roads and its implications by adopting the Global Action Plan for the Decade of Action for Road Safety in 2010.
 - * In August 2020, the UNGA adopted a resolution for the betterment of global road safety and declared 2021-2030 as the Decade of Action for Road Safety.
 - * This sets an ambitious target of reducing 50% of road traffic deaths and injuries by 2030 achieving SDG-6.
- The Ministry of Road, Transport and Highways, the Government of India, in alignment with the targets and objectives of the global action plan, declared to reduce 50% of the road accidents by 2025 and bring down the number of deaths due to road accidents to zero by 2030.
 - * The data put forth by the Ministry of Road, Transport and Highways and National Crime Records Bureau (NCRB) show that there is a reduction of road accidents in 2020.
 - * The number of deaths per 100 accidents reported an increase from 26.9 in 2001 to 28.63 in 2011 followed by an increase to 37.54 in 2020.



Image Source: WHO

Concerns:

- Despite a number of interventions, awareness campaigns regarding road safety and setting up targets to reduce road accidents, there is a significant challenge to mitigate the fatality rate which has been increasing with time.
- The Motor Vehicles (Amendment) act 2019 that incorporated provisions of penalty for violation of traffic rules, has not been implemented uniformly in all states. The proper implementation of the act is necessary to achieve the target of a 50% reduction of road accidents.
- Insufficient manpower to enforce the traffic rules in many parts of the country adds to the increased volume of traffic.
- There is an inadequacy of funds to rectify the black spots on the road that are prone to accidents and to undertake traffic calming measures.

Way towards safer and sustainable roads:

- The government has been actively involved in adopting measures to enhance the safety of roads.
- However, better enforcement of traffic laws is a need of essence to curb the deaths emerging from road accidents.

- The State and the Centre are recommended to work in collaboration and coordination in order to strengthen the road infrastructure, smooth allocation of funds to rectify the black spots and step towards the ambitious targets of road safety in a pragmatic way.

Nut Graf

In order to achieve the targets of bringing down road accidents and ensure road safety, the state and the central governments must work in cooperation and offer joint efforts. This will pave a way for safer connectivity to the people of this country.

Issues relating to Economic Planning and Economic Development

17. A red pen moment for corporate governance

- » Prelims: SEBI, NSE
- » Mains: Effectiveness of the regulatory framework in India.

SEBI

- The Securities and Exchange Board of India (SEBI) is the regulatory authority established under the SEBI Act 1992 and is the principal regulator for Stock Exchanges in India.
- SEBI's primary functions include protecting investor interests, promoting and regulating the Indian securities markets.
- All financial intermediaries permitted by their respective regulators to participate in the Indian securities markets are governed by SEBI regulations, whether domestic or foreign

National Stock Exchange (NSE)

- It is the largest financial exchange in the Indian market.
- The National Stock Exchange of India Limited offers a platform to companies for raising capital. Investors can access equities, currencies, debt, and mutual fund units on the platform.
 - * The NSE also offers clearing and settlement services.
- NSE has Nifty (Nifty 50) as its benchmark index.
 - * The top 50 most traded stocks on the NSE forms Nifty 50.

Role of SEBI

- SEBI governs exchanges through the Stock Exchanges Clearing Corporation (SECC) Regulations
- SEBI has the power under the law to regulate the market. They can issue regulations, and the regulated entity has to obey.

Context:

- The Securities and Exchange Board of India (SEBI) has alleged that the former chief of the National Stock Exchange, Chitra Ramkrishna used to communicate confidential information about the stock exchange with an 'unknown person'. The article discusses the managerial wrongdoings, structural issues, other aspects of the matter.

Background:

- The Securities and Exchange Board of India (Sebi) has alleged that Chitra Ramkrishna, one of the founding members of NSE and a former MD & CEO of the National Stock Exchange (NSE) used to share confidential information about the stock exchange with an 'unknown person', a yogi who lived in the Himalayas.
- Sebi alleged that Ramkrishna had leaked confidential information such as NSE's five-year financial projections, dividend payout ratio, the exchange's business plans, and agenda of NSE's board meeting with the yogi.

- It has shaken the capital market of India and also caused reputational damage to the NSE.

Issues with Appointment

- The incident also throws light on regulator's tardiness in adjudicating a sensitive matter involving the manner of appointment of a top-level NSE official
 - * Chitra Ramakrishna had appointed Anand Subramanian as Chief Strategic Adviser. There were several irregularities pertaining to his appointment including
 - » lack of relevant experience
 - » Ramkrishna alone had interviewed him.
 - » Subramanian was given an exorbitantly higher compensation/salary package, despite him having relevant experience in the position in which he was appointed.

Structural Issues:**Managerial misconduct:**

- The issue occurred due to the managerial malfunctioning at the NSE. Managerial misconduct is a global phenomenon and that is the reason an effective check on management is necessary.

Ineffective Boards:

- The NSE brought a revolution in the stock market of India. Such kind of mismanagement at this level is very unacceptable.
- The Board members are selected by the top management or by the promoter who is top management itself in India. Hence, there should be a focus on how the board members are selected.
- As long as the top management selects the board members or influence the selection process, there is little hope of any active challenge to management.

Lack of Penalties:

- There is a lack of penalty if the members failed to meet up the expectations or for any kind of error.

Accountability:

- There were five Public interest Directors at NSE who were required to inform SEBI about any kind of mishappenings. But, they failed to do so.
- It should be the responsibility of the directors to be accountable for any kind of lapses.

Measures to be taken:**Selection of Board Members:**

- The top management must be allowed to choose not more than 50% of the independent directors. The rest will be selected by the other stakeholders such as financial institutions, banks, small shareholders, employers, etc.
- This will bring a change in the dynamics of the boardroom, will diversify the selection of board members, and also open up the possibility of directors challenging the top management.

Penalties:

- Regulators must penalize the directors through a variety of instruments such as strictures, financial penalties, removal from the board, and a permanent ban from board membership.

Accountability of the regulators:

- The regulators must be accountable for any misconduct. There should be periodic audits of all regulators by a panel of eminent persons.
- The panel must review the performances of the regulators with respect to their objectives.
- The internal processes and governance mechanisms of regulators must be subjected to the glare of public scrutiny. It is vital to guard the guardians.

Nut Graf

The recent revelations regarding the leakage of confidential information of NSE to an unknown person have shaken the financial market of India. There are various reasons behind this matter such as managerial misconduct, lack of transparency and penalties, etc. This matter should be taken seriously and appropriate measures should be adopted so that this kind of issue will not occur in the future.

Indian Economy and issues relating to planning and mobilization of resources.**18. Role of MIs**

- » Mains: Significance of Market Infrastructure Institutions and the need for regulation of MIs

Context:

- Recently SEBI noted that the National Stock Exchange (NSE) is a systemically important market infrastructure institution (MII).

Market infrastructure institution (MII)

- Stock exchanges, depositories and clearing houses are together called Market Infrastructure Institutions and play a key role in the country's economic infrastructure.
- The Bimal Jalan Committee in its 2010 report said,

- * The term "infrastructure" means the basic, underlying framework or features of a system.
- * The term "market infrastructure" denotes such fundamental facilities and systems serving the market.
- * The primary purpose of the securities /capital market is to enable allocation of capital/ financial resources.

Institutions in India that qualify as MIIs

- Among stock exchanges, the SEBI lists seven, including the BSE, the NSE, the Multi Commodity Exchange of India and the Metropolitan Stock Exchange of India.
- There are two depositories (charged with the safekeeping of securities and enabling their trading and transfer) that are tagged MIIs; they are the Central Depository Services Ltd. and the National Securities Depository Ltd.
- The regulator lists seven clearing houses (help validate and finalise securities trades and ensure that both buyers and sellers honour their obligations) including the Multi Commodity Exchange Clearing Corporation.

Significance of MII

- Well-functioning MIIs form the core of the capital allocation system and are crucial for economic growth as they have a net positive effect on society like any other infrastructure institution.
- MIIs are systemically important in India as they have seen extraordinary growth in terms of market capitalisation, capital raised and the number of investor accounts.
- As the number of stock exchanges, depositories and clearing corporations in an economy is limited, any failure of such MIIs could lead to bigger collapses that may result in an overall economic downfall potentially extending beyond the boundaries of the securities market and the country.

The need for norms to regulate MIIs

- A technical glitch in the NSE in 2021 resulted in Investors not being able to trade for about four hours.
- The Finance Minister stated that the loss for the country was 'immense' due to the delay in the resumption of trading on the platform.
- Markets regulator SEBI set out norms stipulating timelines within which exchange has to take action if its technology fails, including rules for switchover to backup servers as part of the disaster recovery in an institution that enables transactions running into thousands of crores of rupees daily.

Nut Graf

Given the potential for a domino effect that a failure of an MII could have on the wider market and economy, governance and oversight are critical and need to be at the highest standard.

Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment

19. Survey pegs growth at 8-8.5% in '22-23

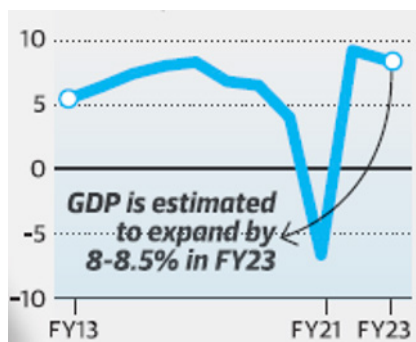
- » Mains: Economic survey findings – Growth projections; Challenges/concerns for Indian economy

Context:

- Economic Survey for 2021-22 tabled by Union Finance Minister in Parliament.

Details:

- India's GDP is expected to grow by 9.2% in 2021-22 and 8% to 8.5% in 2022-23.
- The 9.2% growth estimate for 2021-22 suggests a recovery above the pre-pandemic level of 2019-20 by 1.3%.



- The recovery is most significant in exports followed by government consumption and gross fixed capital formation.
 - * India's investment to GDP ratio has hit 29.6% in 2021-22, the highest level in seven years.
 - * The Economic Survey attributes the increased capital formation in the economy to the government's policy thrust on increased capex and infrastructure spending.
- Despite an overall recovery in the economy, private consumption and segments such as travel, trade and hotels are yet to fully recover.
 - * Private consumption accounts for a large proportion of the GDP.
- The Economic Survey notes India's macro-economic stability indicators on the external

front, fiscal front as well as financial sector health as being well-placed.

- * India has recorded a modest current account deficit of 0.2% in the first half of the current fiscal year and there have been robust capital inflows in the form of foreign investment.
- * The relatively good position of the financial system would help increase the private sector investment which along with the government expenditure can play a critical role in the economic recovery process.
- * The survey estimates that the double-digit wholesale price inflation in recent months will 'even out'.

Assumptions:

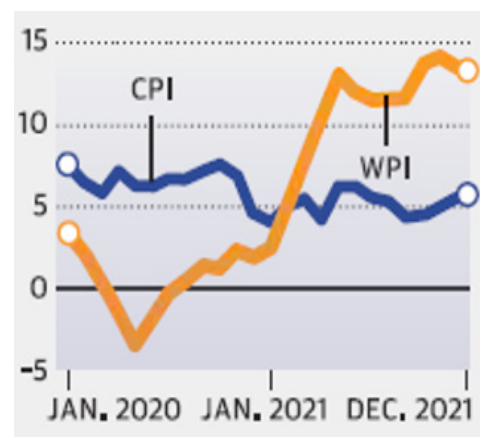
- The Economic Survey while making the advance estimates for the GDP mentions the following caveats for its estimates to hold.
 - * No more pandemic related economic disruptions
 - * Normal monsoonal rainfall
 - * Oil prices will be in the range of \$70-\$75/barrel
 - * Global supply chain disruptions will ease out
 - * Orderly withdrawal of global liquidity by major central banks following the fiscal stimulus provided during the pandemic

Concerns:

- The Economic Survey raises concerns over the following aspects.

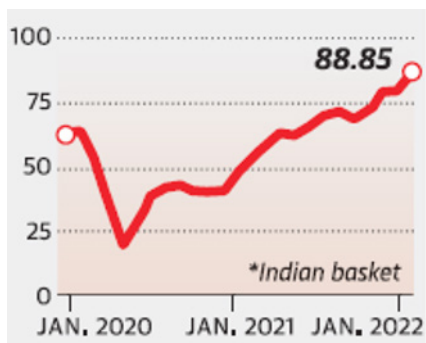
Inflation pressures:

- The wholesale inflation (WPI) remained above 10% for the ninth consecutive month in December 2021. Retail inflation (CPI) accelerated to a five-month high of 5.6%.



Energy prices:

- The price of crude oil is moving up. It is moving towards the \$90/barrel mark.
- The high excise duty has resulted in the retail price of fuel remaining high.

**Liquidity woes:**

- Expansionary macroeconomic policies were adopted worldwide in response to the crisis brought out by the pandemic. These policies were aimed at stabilising financial conditions and fostering economic recovery. The abundant global liquidity led to emerging economies like India experiencing large capital inflows.
- However, several central banks in both advanced and emerging market economies have begun unwinding from crisis-time policies as warranted by their own growth-inflation dynamics. There is considerable uncertainty at this moment on how the growth-inflation dynamics will pan out in the immediate months. The financial conditions are turning increasingly volatile as a consequence.
- The tightening of global liquidity poses a challenge to economic recovery in India given that it might result in large scale capital outflows.

CEA statement:

- The Chief Economic Adviser (CEA) noted that the sharp contraction after the national lockdown was followed by a sharp revival in the second half of 2020-21 which was followed by disruption again due to the second COVID wave in April 2021 followed by yet another economic recovery. This is being described as a sort of W shaped recovery.
- The CEA attributed the economic recovery post the disruptions to the policies pursued by the government of providing short-term support to vulnerable sectors while keeping in check the medium-term fiscal health and undertaking process as well as supply-side reforms.
- The CEA stated that the growth estimates for 2022-23 would be supported by widespread vaccine coverage, gains from supply-side reforms

and easing of regulations, robust export growth, and the availability of fiscal space to increase capital spending.

Nut Graf

The Economic Survey estimates for the Indian economy point towards economic recovery in India. However, the realization of these estimates would depend on challenges like future COVID-19 variants, inflation pressures, increasing energy prices and volatile global financial scenarios.

Government Budgeting**20. Union Budget 2022**

- » Prelims: Macroeconomic indicators – values and trends; new initiatives announced in the various sectors
- » Mains: Main pillars of the budget

Four priorities as per the budget speech:

- PM GatiShakti
- Inclusive Development
- Productivity Enhancement & Investment, Sunrise Opportunities, Energy Transition, and Climate Action
- Financing of Investments

Macroeconomic indicators:

Revenue and Expenditure:

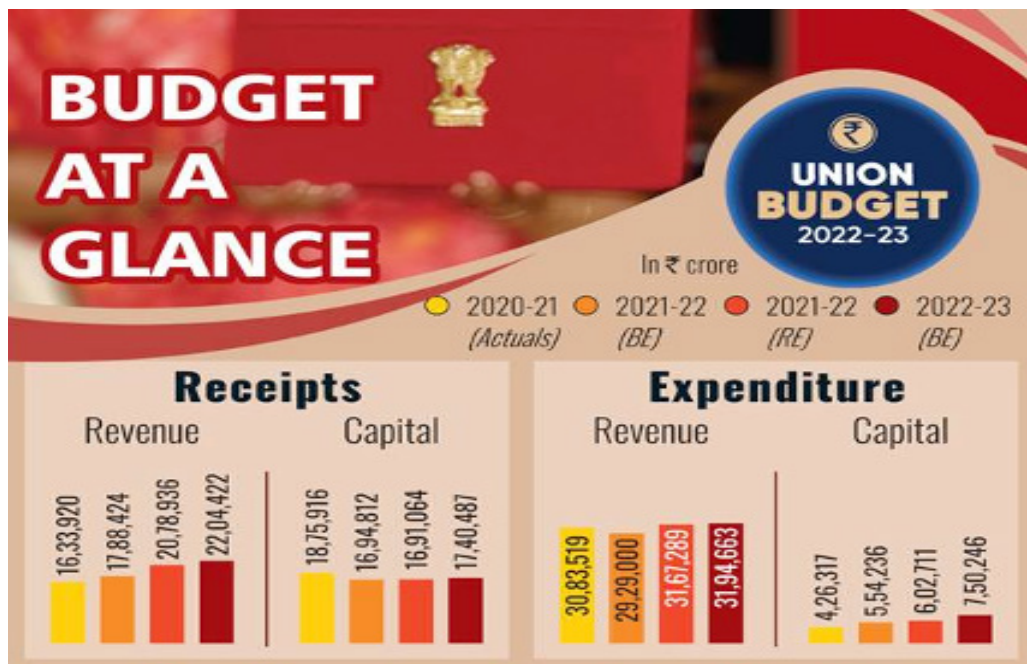


Image source: PIB

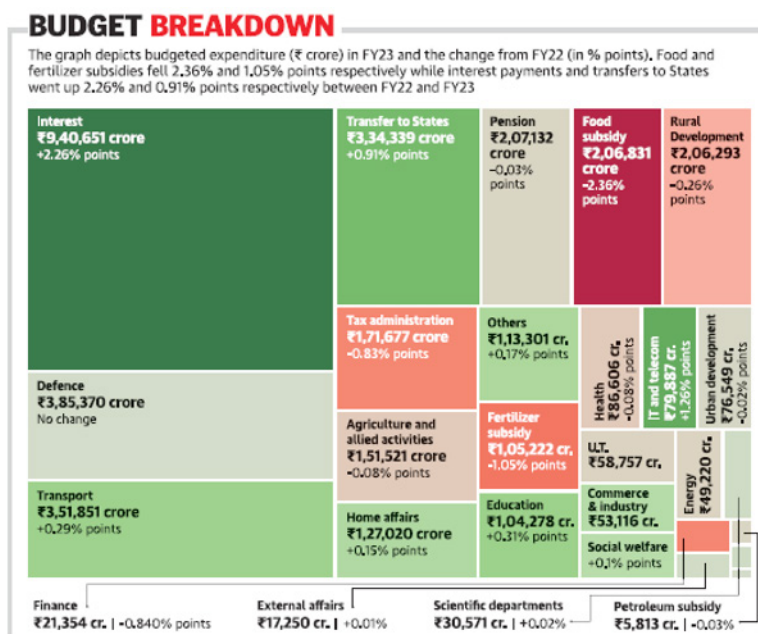


Image source: The Hindu

Growth estimates:

- India's economic growth in the current year is estimated to be 9.2 per cent, the highest among all large economies.

Capital expenditure:

- The outlay for capital expenditure has been stepped up sharply by 35.4 per cent from Rs 5.54 lakh crore in the current year to Rs 7.50 lakh crore in 2022-23. This investment taken together with the provision made for the creation of capital assets through Grants-in-Aid to States, the 'Effective Capital Expenditure' of the Central Government is estimated at Rs 10.68 lakh crore in 2022-23, which will be about 4.1 per cent of GDP.

Deficit:

- The revised Fiscal Deficit in the current year is estimated at 6.9 per cent of GDP.
- The Fiscal Deficit in 2022-23 is estimated at 6.4 per cent of GDP, which is consistent with the broad path of fiscal consolidation to reach a fiscal deficit level below 4.5 per cent by 2025-26

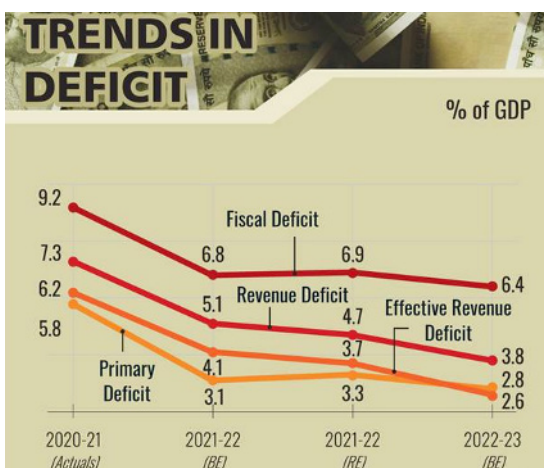


Image source: PIB

Infrastructure sector:

- The Budget acknowledged the importance of ramping up infrastructure in India for economic growth and sustainable development.
- The Budget identified the PM Gati Shakti programme — which envisages coordinated planning across Ministries and States for the development of infrastructure — as one of the four key pillars of the Budget.
- The focus will be on planning, financing including through innovative ways, use of technology, and speedier implementation. The touchstone of the Master Plan [under PM Gati Shakti] will be world-class modern infrastructure and logistics synergy among different modes of movement — both of people and goods — and location of projects. This will help raise productivity and accelerate economic growth and development.

Roadways:

- The allocation for the Ministry of Road Transport and Highways has seen a 68% increase in the Union Budget 2023.
- PM GatiShakti Master Plan for Expressways will be formulated in 2022-23 to facilitate faster movement of people and goods.
- The National Highways network will be expanded by 25,000 km in 2022-23 and Rs 20,000 crore will be mobilized through innovative ways of financing to complement the public resources.
- Of the 35 multi-modal logistics parks the government plans across the country, four will be awarded in the next fiscal.

Railways:

- The Union Budget has proposed a record budgetary allocation of ₹1.37 lakh crore for the Indian Railways, with a capital expenditure outlay of over ₹2.45 lakh crore for the upcoming financial year.
- 'One Station-One Product' concept will be popularized at Railway stations to help local businesses & supply chains.
- Around 2,000 km of railway network will be brought under Kavach, the indigenous world-class technology for safety and capacity augmentation in 2022-23.
- 400 new-generation Vande Bharat Trains with better energy efficiency and passenger riding experience will be developed and manufactured.
- 100 PM GatiShakti Cargo Terminals for multimodal logistics facilities will be set up during the next three years.

Urban planning and development:

- The Budget speech acknowledged a "business as usual" approach towards urban planning would not work and a paradigm shift was needed since half the population of the country would be living in urban areas by 2047, making orderly urban development critically important.
- A high-level panel to give recommendations on urban planning and development would be set up. The panel would comprise urban planners, urban economists and institutions who will make recommendations on policies, capacity-building, planning, implementation and governance.
- For developing India specific knowledge in urban planning and design, and to deliver certified training in these areas, up to five existing academic institutions in different regions will be designated as centres of excellence.
- The Budget also proposed the modernisation of building bye-laws, town planning schemes and transit-oriented development.

Telecommunications:

- Required spectrum auctions will be conducted in 2022 to facilitate the rollout of 5G mobile services within 2022- 23 by private telecom providers. This will go a long way in enabling growth and generating employment opportunities.
- A scheme for design-led manufacturing will be launched to build a strong ecosystem for 5G as part of the Production Linked Incentive Scheme.

National Ropeways Development plan:

- The National Ropeways Development Program, Parvatmala would be taken up on PPP mode. Contracts for 8 ropeway projects of 60 km length would be awarded in 2022-23.

Agriculture sector:**Budget allocation:**

- Budget allocations for agriculture and allied activities have remained almost flat. The sector's share in the overall Budget allocations fell from 3.92% in 2021-22 to 3.84%.

Chemical-free natural farming:

- Chemical-free Natural Farming will be promoted throughout the country, with a focus on farmers' lands in 5-km wide corridors along river Ganga, at the first stage.
- The government is also aiming at integrating the chemical-free approach into a long-term policy by including it in the agricultural education curriculum.
- The Centre has sanctioned support for converting four lakh additional hectares of farmland in eight States to use the method. These schemes were sanctioned for financial support under the Paramparagat Krishi Vikas Yojana scheme, meant to promote organic farming and soil health, Vedic farming, ZBNF and a host of other traditional methods.

Use of technology in agriculture:

- There has been an abundance of digital farming references in the Union Budget speech.
- Use of 'Kisan Drones' will be promoted for crop assessment, digitization of land records, spraying of insecticides, and nutrients. The expansion of technology focus from just tractors and agri-machinery to 'kisan drones' shows rising interest in the application of IOT in the sector.
- This will go a long way in helping Indian farmers reap the benefits of technological advancements.

Encouraging start-ups in the sector:

- The Budget proposed the launch of a fund to finance agricultural start-ups.
- The fund with blended capital, raised under the co-investment model, would be facilitated through NABARD. This would help finance start-ups for agriculture and rural enterprise.

- The government envisages the delivery of digital and hi-tech services to farmers with the involvement of public sector research and extension institutions along with private agri-tech players and stakeholders of the agri-value chain, in a PPP [public-private partnership] mode.

Mainstreaming millets:

- The government has announced support for post-harvest value addition, enhancing domestic consumption, and for branding millet products nationally and internationally.
 - * 2023 had been previously announced as the International Year of Millets.

Miscellaneous:

- To reduce dependence on the import of oilseeds, a rationalised and comprehensive scheme to increase domestic production of oilseeds will be implemented.

MSME sector:

- The Emergency Credit Line Guarantee Scheme (ECLGS) working towards providing much-needed credit to more than 130 lakh MSMEs to help them mitigate the adverse impact of the pandemic will be extended up to March 2023. The Guarantee cover on ECLGS will be extended to a total cover of Rs 5 lakh crore, with the additional amount of around 50,000 Crore being earmarked exclusively for the hospitality and related enterprises.
- The Credit Guarantee Trust for Micro and Small Enterprises (CGTMSE) scheme will have more infusion of funds. This will facilitate additional credit of Rs 2 lakh crore for Micro and Small Enterprises.
- Raising and Accelerating MSME Performance (RAMP) programme with an outlay of Rs 6,000 crore over 5 years will be rolled out to make the MSME sector more resilient, competitive and efficient.
- Udyam, e-Shram, NCS and ASEEM portals will be interlinked and their scope will be widened.

Education:

- Recognizing the impact of the COVID-19 pandemic on the educational sector, the government has announced a slew of measures to impart supplementary teaching and to build a resilient mechanism for education delivery.

Digital Education:

- The government aims to develop high-quality e-content in all spoken languages for delivery via the internet, mobile phones, TV and radio through digital teachers; and to create a mechanism to equip teachers with digital tools.
- 'One class-one TV channel' programme of PM eVIDYA will be expanded from 12 to 200 TV channels and this will enable all states to provide

supplementary education in regional languages for classes 1-12.

- A Digital University will be established to provide access to students across the country for world-class quality universal education with a personalised learning experience at their doorsteps. This will be made available in different Indian languages and ICT formats. The digital university will be built on a networked hub and spoke model, and will have collaborations with the best institutions in the country.

Skilling and vocational training:

- The Budget announced the launch of the DESH-stack E-portal. It is envisaged as a digital ecosystem for skilling and livelihood where citizens can skill, reskill or upskill through online training.
- 750 virtual labs in science and mathematics and 75 skilling E-labs for simulated learning environment to be set up.

Upgrading anganwadis:

- Two lakh anganwadis across the country will be upgraded. New-generation anganwadis with better infrastructure and audio-visual aids and providing an improved environment for early child development will be the focus.

Health:

- There has been a 16% hike in healthcare sector allocation. However, the ₹83,000-crore outlay is almost equal to last year's actual spend.
- The Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PMABHIM) has seen a substantial increase in budgetary allocation. A scheme to improve pandemic preparedness via research and development as well as strengthen "bio security" has received an increased allocation.

Digital health ecosystem:

- Under Ayushman Bharat Digital Mission, an open platform for the National Digital Health Ecosystem will be rolled out and it will consist of digital registries of health providers and health facilities, unique health identity, consent framework, and universal access to health facilities.

Tele-mental health programme:

- Recognizing the mental health problems accentuated by the pandemic, a 'National Tele Mental Health Programme' will be launched for better access to quality mental health counselling and care services. This will include a network of 23 tele-mental health centres of excellence.
- Given the shortage of mental health professionals, especially in rural areas, telemedicine would greatly enhance accessibility for patients requiring psychiatric help.

AYUSH mission:

- Cost-effective Ayush services under the National Ayush Mission (NAM) received a major boost in the Budget. The increased allocation for NAM will help to upgrade hospitals and dispensaries, support the cultivation of medicinal plants and in other areas, including an increase in the export of value-added items of medicinal plants.

Defence sector:

- The Government aims to reduce imports and promote AtmaNirbharta in defence equipment.
- 68 per cent of the capital procurement budget will be earmarked for the domestic industry in 2022-23, up from 58 per cent in 2021-22.
- Defence R&D will be opened up for industry, startups and academia with 25 per cent of the defence R&D budget earmarked.

North East development:

- Keeping in mind the special developmental needs of the Northeastern states of India, a new scheme, Prime Minister's Development Initiative for NorthEast, PM-DevINE, will be implemented through the North-Eastern Council to fund infrastructure and social development projects.
- An initial allocation of Rs 1500 crore will enable livelihood activities for youth and women and fill the gaps in various sectors.

Banking sector and digital economy:

- In 2022, 100 per cent of 5 lakh post offices will come on the core banking system enabling financial inclusion. This will be helpful, especially for farmers and senior citizens in rural areas, enabling interoperability and financial inclusion.
- The government has proposed to set up 75 Digital Banking Units (DBUs) in 75 districts of the country by Scheduled Commercial Banks to ensure that the benefits of digital banking reach every nook and corner of the country in a consumer-friendly manner.
- The Government proposed to introduce Digital Rupee, using blockchain and other technologies, to be issued by the Reserve Bank of India starting 2022-23 for a more efficient and cheaper currency management system. It will give a boost to the digital economy.

Transition to carbon-neutral economy:

- To facilitate domestic manufacturing for the ambitious goal of 280 GW of installed solar capacity by 2030, an additional allocation of Rs 19,500 crore for Production Linked Incentive for manufacture of high-efficiency modules, with priority to fully integrated manufacturing units from polysilicon to solar PV modules, will be made.
- The Budget emphasizes circular economy transition to increase productivity and opportunities in new businesses and jobs.

- The budget makes proposals to use 5 to 7% biomass pellets in thermal power plants. It also proposes four pilot projects for coal gasification and conversion of coal into other useful chemicals.
- Sovereign Green Bonds will be issued for mobilizing resources for green infrastructure. The proceeds will be deployed in public sector projects which help in reducing the carbon intensity of the economy.
- Battery swap policy will be formulated for electric vehicles. This can substantially decrease the turnaround time at EV charging stations.

Ease of doing business:

- Reforms in Customs Administration of Special Economic Zones will be undertaken, and it shall henceforth be fully IT-driven and function on the Customs National Portal with a focus on higher facilitation and with only risk-based checks.
- Necessary amendments in the Insolvency and Bankruptcy Code will be carried out to enhance the efficacy of the resolution process and facilitate cross border insolvency resolution.
- The centre for processing accelerated corporate exit (C-PACE) with process re-engineering will be established to facilitate and speed up the voluntary winding up of companies from the currently required 2 years to less than 6 months.
- Startups will be promoted to facilitate 'Drone Shakti' and for Drone-As-A-Service.

Ease of living:

- Issuance of chip-embedded e-passports.
- Border villages with a sparse population, limited connectivity and infrastructure on the northern border will be covered under the new vibrant villages programme. This will involve the construction of village infrastructure, housing, roads, renewable energy and support for livelihood generation.
- The budget emphasizes digitisation of manual processes and interventions, integration of central and state-level systems through IT bridges, a single point of access for all citizen-centric services and standardization and removal of overlapping compliances.

Tax policy:

- The Union Budget 2022-23, while continuing with the declared policy of a stable and predictable tax regime, intends to bring more reforms that will take ahead the vision to establish a trustworthy tax regime that can further simplify the tax system, promote voluntary compliance by taxpayers, and reduce litigation.

Direct Tax:

- On the Direct Tax side, the budget allows taxpayers to file updated income tax returns within 2 years for correcting errors. This will enable the assessee to declare the income that he/she may have missed out earlier while filing her return. It is an affirmative step in the direction of voluntary tax compliance.
- The budget provides tax relief to persons with disability.
- As an incentive for startups, the period of incorporation of eligible startups has been extended by one more year.
- Income from the transfer of virtual assets will be taxed at 30%.

Nut Graf

The Union Budget bets on public capital spending in infrastructure creation to boost job creations and capital formation for enhanced economic growth and development.

Infrastructure

21. Parvatmala

» Prelims: Parvatmala Scheme

Context:

- Union Budget for 2022-23 announced National Ropeways Development Programme – "Parvatmala".

Parvatmala:

- Parvatmala is also known as National Ropeways Development Programme.
- It has been announced for hilly states including Himachal Pradesh, Uttarakhand, Jammu and Kashmir and the North East region of the country.
- The project will be taken as a preferred ecologically sustainable alternative to conventional roads in difficult hilly areas.
- It will be taken up in PPP mode.
- Objectives:
 - * To improve connectivity and convenience for commuters
 - * To promote tourism
- This may also cover congested urban areas, where conventional mass transit systems are not feasible.

Issues relating to development and management of Social Sector

22. A betrayal of the social sector when it needs help

- » Mains: Government spending on the social sector; Concerns with Budget Allocation for Social Sector

Context:

- The pandemic over the last two years has had a severe impact on the health, education and food security of the poor and informal sector workers. It was expected that the current Budget would see an expansion in government spending on the social sector.

Social Sector Spending in India:

- The World Social Protection Report 2020-22 by the International Labour Organization shows that the spending on social protection (excluding health) in India is 1.4% of the GDP, while the average for low-middle income countries is 2.5%.
- Budgets on health and education have also been low, much below the desirable levels of 3% and 6% of the GDP.

Impact of Pandemic on Social Sector in India:

- India continues to rank poorly in various global indices that reflect the quality of life, human capital or human development in the country.
 - * Such as the Human Development Index (rank 131 out of 189 countries) and the Global Hunger Index (rank 101 out of 116 countries).
- Oxfam's 'Inequality Kills' report establishes that the recovery in economic growth in India is K-shaped, meaning that the incomes of the poorer sections of the society are decreasing, while those of the richer sections are increasing.
- As this trend has been exacerbated by the pandemic, the country has been experiencing increasing inequality over the last couple of decades.
- Further, the period after 2016 has also seen stagnant real wages and increasing unemployment.

Concerns with Budget Allocation for Social Sector

- Conservative View: The Budget seems to have prioritized meeting its fiscal deficit targets rather than using this opportunity to signal a path of employment-centred and inclusive growth.
- A Complete Disconnect: The government announced an expansion of the 'one class, one TV channel' scheme. This is a complete disconnect with the situation on the ground where school infrastructure needs upgrading and teacher vacancies need to be filled.
- Reduced Allocation for PM Poshan: After a grand announcement rechristening the school mid-day meal scheme as PM Poshan, the allocation for the scheme has been reduced this year.

- Less Increment in Health Budget: In the midst of a pandemic, the overall budget for the Department of Health and Family Welfare has only miserably risen.
- No expansion of Food subsidy under PMGKAY: The food subsidy (BE) for 2022-23 is only enough to cover the regular NFSA entitlements. The indication is that there is no plan to extend the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY).
- Less Focus on Social Welfare Schemes: Budgets for important schemes such as Saksham Anganwadi, maternity entitlements and social security pensions are around the same as the allocations for last year.

Conclusion:

- Greater spending on the social sector can contribute to improvements in human development outcomes, provide a cushion to people during the current economic crisis and also contribute to boosting private consumption demand which in turn can have a positive multiplier effect on the economy. This continued negligence does not bode well for inclusive development in India.

Nut Graf

The budget for 2022-23 shows that the resources allocated for crucial government schemes in the fields of health, education, nutrition, and social protection have remained stagnant or show only a negligent increase. This is not a good indication especially in light of the pandemic whose effect is still being felt across all sectors.

Infrastructure: Railways

23. When will new Vande Bharat trains be launched?

- » Mains: Role of Vande Bharat Trains in improving Railways in India.

Context:

- The Union Budget for 2022-2023 has proposed the development and manufacture of 400 new Vande Bharat trains in the next three years.

Vande Bharat Trains

- The Vande Bharat train is an indigenously designed and manufactured semi high speed, self-propelled train that is endorsed as the next major leap for the Indian Railways.
- The trains, that were called Train 18 during the development phase, operate without a locomotive and are based on a propulsion system called distributed traction power technology.

- The Vande Bharat coaches include on-board WiFi entertainment, GPS-based passenger information system, CCTVs, automatic doors, rotating chairs and bio-vacuum toilets.
- The first train was manufactured by the Integral Coach Factory (ICF), Chennai, in 18 months as part of the 'Make in India' programme, with a cost of about ₹100 crores.
- The train has a passenger-carrying capacity of more than 1,100 people.
- Currently, two Vande Bharat Expresses are operational; one between New Delhi and Varanasi and the other from New Delhi to Katra.

The significance of Vande Bharat Trains

- It can achieve a maximum speed of 160 km/h due to faster acceleration and deceleration, reducing journey time by 25% to 45%.
- It has an intelligent braking system with power regeneration for better energy efficiency thereby making it cost, energy and environment efficient.
- The Vande Bharat is India's first attempt at train set technology. The train set configuration, though complex, is faster, easier to maintain, consumes less energy, and has greater flexibility in train operation, according to the Indian Railways.

Performance of Vande Bharat Trains

- Occupancy and earnings trends of Vande Bharat trains in the pre-pandemic years suggest good revenue potential.
- According to experts, 400 trains would cover about 60-70% of the railways.
- The new semi-high speed trains with greater comfort will help get back passengers that are lost to roadways and low-cost airlines.

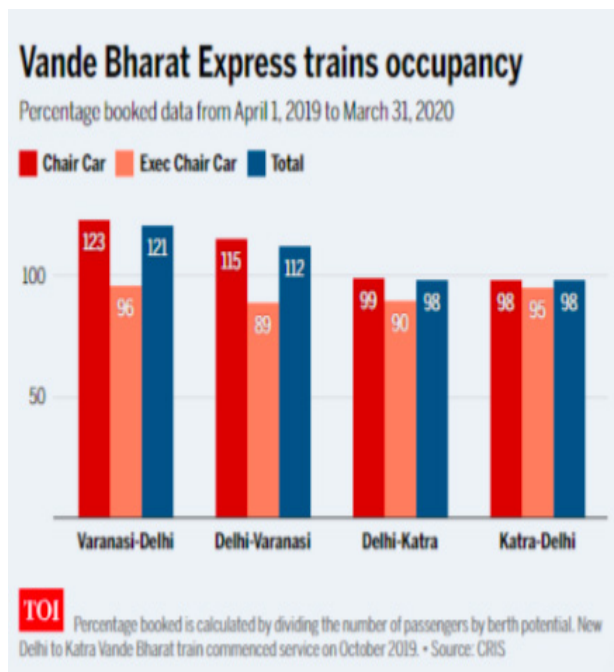


Image source: The Times of India

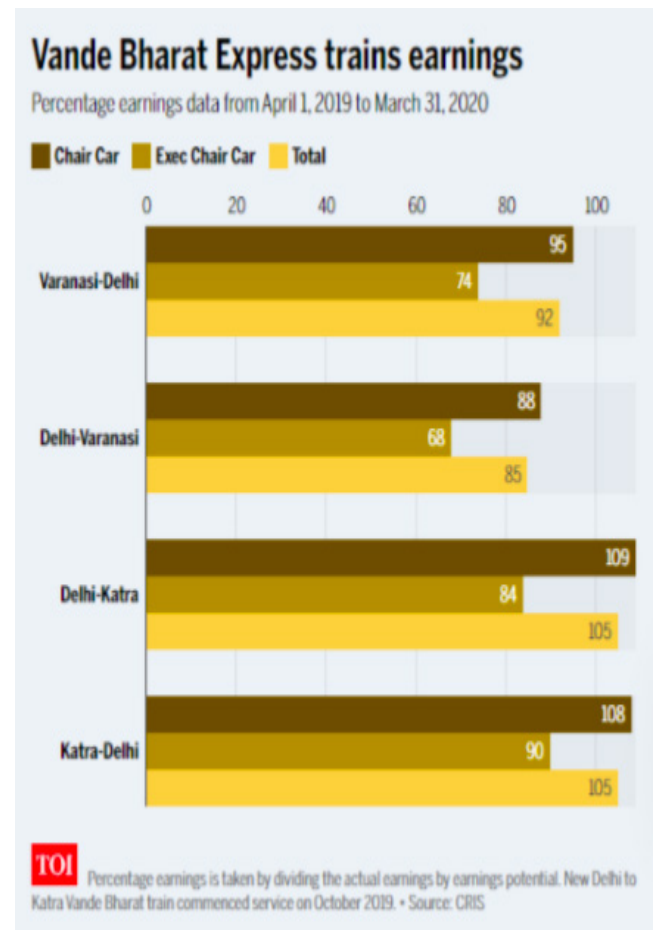


Image source: The Times of India

Current status of Vande Bharat Trains

- In August 2020, Hyderabad-based Medha Servo Drives Ltd. won the contract for designing and manufacturing the propulsion, control and other equipment needed to make the 44 train sets.
- The rakes or train sets would be manufactured at three production units; 24 rakes at ICF, Chennai and 10 rakes each at the RCF Kapurthala and the Modern Coach Factory, Raebareli.
- The Railways Minister said that designing for version 2.0 of these trains has been completed and that testing was expected to commence from April 2022.
- The design updates in the upcoming trains would focus on the safety and comfort of the passengers, including reduced noise and vibration levels.
- The Railways is also said to be considering the use of aluminium instead of steel in the construction of the coaches as this would help make the trains much lighter thereby improving energy efficiency, and also making the trains faster.

Nut Graf

The plan of introducing 400 semi-high speed, next-generation Vande Bharat trains in the next three years is expected to achieve the objectives of the Railways to improve railway finances, operational efficiency along with ensuring better energy efficiency and passenger experience.

Government Budgeting**24. A disjointed response**

- » Mains: Taxation on virtual digital assets and the way forward.

Context:

- Introduction of a tax regime for virtual digital assets in the Union Budget 2022-23.

Tax on digital assets

- The Budget 2022-23 proposes the introduction of a taxation regime for virtual digital assets that include, evolving manifestations of cryptocurrencies, codes and non-fungible tokens.
- The Budget proposed to tax all profits from transactions from such assets at 30% along with the applicable surcharge and cess, and a 1% tax to be deducted by buyers while trading in any virtual digital asset beyond a threshold.
- The tax on profits will start from April 1, 2022, and the TDS provisions aimed at creating a transaction trail for the tax authorities will start from July 1.
- The trading profits will be taxed according to crypto industry players, no deductions will be allowed on account of setting off losses from such trading or from any other capital losses.
 - * The only deduction permitted would be the cost of acquiring the asset.

Inclusion of digital assets in I-T Act

- The term 'property' under the I-T Act is being expanded to include virtual digital assets such that the assets received as a gift shall be taxable except when received from kin.
- The taxation regime by itself does not grant legitimacy to the trade in these currently unregulated assets.
- A consultation process is underway, to determine the legal position of such assets.

Relief for investors

- The move is expected to bring in relief for the growing number of crypto investors.
- Though the Government has not yet legitimised the assets, the tax regime indicates that the hard option of an outright ban on crypto is off the table.

- The proposed legislation of the crypto law that had suggested an outright ban on cryptocurrencies now seems to be dropped from the agenda.

Crypto industries' view

- All major players in the ecosystem have welcomed the move.
- It is said to be a move that provides clarity and mainstream to the industry.
- The industry plans to discuss with the Government to bring down the tax rate on par with other assets.

Does taxation guarantee legalization of cryptocurrencies?

- Statements by the government and bureaucrats post the Budget suggest that the legality of cryptocurrencies in the country is still uncertain.
- In the judgment of Commissioner of Income Tax, Gujarat v/s SC Kothari case, the court had observed that "if the business is illegal, neither the profits earned nor the losses incurred would be enforceable in law. But, that does not take the profits out of the taxing statute."
- The Finance Secretary said, "It's not illegal to buy and sell crypto, but the government has put in a taxation framework that treats crypto assets in the same way it treats winnings from horse races, or bets and other speculative transactions."
- The Finance Minister also seemed to divorce the taxability issue from the legitimacy issue.
 - * She said that there is nothing that can stop a sovereign Government from taxing an activity. Banning or not banning will be decided when the consultations give inputs. Legitimate or not legitimate is a different question, taxing is completely within her powers.

Way forward

- There is a need for the introduction of norms to control advertisements that the government is worried about, luring India's youth by the Crypto players.
- There is a need for a regulatory watchdog for monitoring virtual digital assets.
- The government has to undertake speedy and proactive actions as the delay in decision making prevents the Indian start-ups and innovators from developing products and ideas that can be scaled up globally.
- In November 2021, the Government had indicated a forward-looking approach to the crypto market.
 - * It is time to bring in a clear regulatory framework soon instead of ambiguous measures.

Nut Graf

Though the taxation regime on virtual digital assets has been a welcome sign, there is a need for recognition and regulation of such assets that help unlock new avenues of wealth creation.

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INTERNATIONAL RELATIONS

India and its neighbourhood–relations.

1. Exercise Eastern Bridge

- » Prelims: About the exercise
- It is a biennial bilateral air exercise between the Indian Air Force (IAF) and the Royal Air Force of Oman (RAFO)

Aim

- To provide an opportunity to enhance operational capability and interoperability between the two Air Forces.

Other joint exercises

- Naseem Al Bahr
 - * Naval exercise between the Indian Navy and the Royal Navy of Oman (RNO)
- Al Nagah
 - * Joint military training exercise between Indian Army and Royal Oman Army

Significance

- It will promote professional interaction, exchange of experiences and enhancement of operational knowledge, besides strengthening bilateral relations between the two countries
- Oman is one of India's strongest defence partners in the Gulf region, and all three services have bilateral exchanges and exercises with Oman's services.
- Additionally, Oman also provides operational support to the Indian Navy in the Arabian Sea, and India has access to the Duqm port, which has strengthened India's capability and maritime strategy in the Indian Ocean Region, especially against China's aggressive advance in the region.

Context

- Sixth edition of the exercise between India and Oman.

India and its neighbourhood–relations.

2. India's diplomatic boycott of Olympics applauded in U.S.

- » Mains: What is a diplomatic boycott? Consequences of the diplomatic boycott

Winter Olympics

- Winter Olympics is the premier competition for sports that are played on ice or snow.
- It is held every four years and features participants from across the world.

- Ice skating, ice hockey, skiing and figure skating are some of the popular sports that are played at the Winter Games.
- The first Winter Olympics were held in 1924 in Chamonix, France

India

- India has participated in several winter Olympic Games since 1964

Context

- The 2022 edition of the Winter Olympic Games was held in Beijing. India announced a diplomatic boycott of the Beijing Winter Olympics

Background

- In December 2021, the United States had announced a diplomatic boycott of the event.
- The United Kingdom, Australia, New Zealand, Canada, Japan, New Zealand and the Netherlands, among others, followed the US's lead and made a similar decision.

What is a diplomatic boycott?

- It simply means these countries will not send official government delegations to the country where the game is hosted, in this case it was China.
 - * Generally the high-ranking officials from a country's government travel to the Olympics. These officials are often labeled as the 'VIP visitors'.
- Complete boycott had been avoided given the athletes' investments into the games.

Examples of boycott

- Spain, the Netherlands and Switzerland, did not participate in the 1956 Summer Games in Melbourne in protest against the invasion of Hungary by Warsaw Pact troops.
- Following Russia's occupation of Afghanistan at the end of 1979, 42 countries boycotted the 1980 Games in Moscow.
- Russia and 19 other countries stayed away from the Los Angeles Games.

Did it impact the participation of Athletes?

- No. Athletes participated in the Winter Olympics

Reasons for diplomatic boycott

- In India's case, the boycott was announced after a Chinese soldier involved in the Galwan incident was made an Olympic torchbearer.

- The U.S., the U.K., Canada and Australia had announced a diplomatic boycott of the games to protest Beijing's human rights record in the Uighur Muslim majority province of Xinjiang.
- The U.S. had voiced its concerns of "Beijing's pattern of ongoing attempts to intimidate its neighbours."

Support to Peng Shuai

- Peng Shuai is a Chinese professional tennis player. She had accused a high-ranking communist party member, of sexually assaulting her.
- After Peng Shuai made her allegations on Chinese social media, the posts were taken down and she disappeared from public view for days, sparking concerns about her safety.
- US also announced a 'diplomatic boycott' of the Winter Olympics because of the disappearance of Chinese tennis star Peng Shuai

How has China reacted to this?

- China said it is "not bothered at all" by the boycotts.

Will these boycotts have any impact going ahead?

Positive

- The human rights organization world over have requested the foreign governments to highlight the dramatic human rights situation and demand accountability from China.

Negative

- There are fears that the move led by the US could provoke China to do the same.
 - * The US and Australia are the hosts of the Summer Olympics in 2028 (Los Angeles) and 2032 (Brisbane), respectively.

Nut Graf

Diplomatic boycotts of the Olympics aim to snub host nations while keeping athletes free to compete. Refusing to participate in the Olympics would raise awareness of the violations that China stands accused of.

Effect of politics and politics of developed and developing countries

3. Munich Security Conference

- » Prelims: Facts about Munich Security Conference

Historical background

- During the time of the Cold War in 1962, the U.S. placed the Jupiter missiles in Italy and Turkey, which bordered the Soviet Union as part of nuclear muscle flexing.
 - * Jupiter Missile: is a medium range ballistic missile (MRBM) with a range of 2,400 km. It was aimed at key Russian cities.

- This coincided with the Bay of Pigs fiasco when the U.S. government attempted to overthrow the Fidel Castro-led communist government of Cuba.
- Angered by the direct intimidation through missiles and humiliation of Castro, the Soviets placed SS-4 missiles in Cuba.
- The U.S. government discovered the MRBMs in Cuban defense facilities through high altitude photography.
- The world was brought close to nuclear annihilation because of the standoff.
- After the dramatic event, there was a need to foster a culture of close consultation and dialogue within the Western countries.
- Ewald Heinrich von Kleist, in this backdrop began an annual conference to discuss international politics which would go on to become the Munich Security Conference.

Munich Security Conference

- Ewald Heinrich von Kleist, an anti-Nazi who actively took part in the Second World War, is the founder of the Munich Security Conference (MSC).
- Objective: To build trust and to contribute to the peaceful resolution of conflicts by sustaining a continuous, curated and informal dialogue within the international security community.

Significance of MSC

- With over sixty years of existence, the MSC has addressed the threats like terrorism, religious fanaticism, cyber warfare, electronic intelligence and has emerged as the leading platform for policy makers to exchange ideas in a friendly atmosphere.
- The MSC provides a platform for world leaders, decision-makers, and personalities from international and non-governmental organisations, industry, media, academia and civil society to engage and discuss various issues that have implications on peace and stability in the World.
- It provides a platform for official and non-official diplomatic initiatives, bringing together leaders and security experts from across the world and their ideas to address the world's most pressing security concerns.
- It publishes the Munich Security Report, an annual digest of relevant figures, maps, and research on crucial security challenges.

Nut Graf

The security conference set up by an anti-Hitler German has come a long way over the last sixty years and provides a platform for world leaders to discuss and brainstorm on threats to World peace.

India and its Neighbourhood–Relations**4. Renewing Indo-Lanka relations after a period of strain**

- » Prelims: Currency swap agreement
- » Mains: Renewing India-Sri Lanka ties; Causes of tensions between the two neighbours

Context:

- Sri Lanka's Foreign Minister is on an official visit as part of the ongoing high-level, and increasingly frequent, bilateral engagement between India and Sri Lanka.
- Acknowledging India's recent economic assistance to Sri Lanka, he noted the "fresh energy" in Indo-Lanka ties after a year marked by strain and a trust deficit between the neighbours.

Renewing of ties between India and Sri Lanka:**Finalization of the Trincomalee oil tank project:**

- India and Sri Lanka inked the Trincomalee oil tank farm deal, marking a major milestone in the long-dragging project.

India's economic aid to Sri Lanka:

- India has been providing crucial economic support to Sri Lanka amid its ongoing economic crisis.
 - * Sri Lanka is facing a severe foreign exchange crisis which experts have pointed out might lead to a sovereign default, and a severe shortage of essentials in the import-reliant economy.
- The relief extended by India since January 2022 totals over \$1.4 billion —a \$400 million currency swap, a \$500 million loan deferment and a \$500 million Line of Credit for fuel imports.

Causes of tension between the two neighbours:

- The main sources of tension between India and Sri Lanka include the sudden cancellation of the 2019 agreement to jointly develop the East Container Terminal in Colombo along with Japan as well as the Palk Bay fisheries conflict and the Tamil question.

East Container Terminal:

- The bilateral relationship between the two neighbours took a downturn following Colombo's sudden decision to unilaterally cancel a 2019 agreement to jointly develop a strategic

port (East Container) terminal in Colombo with India and Japan.

Palk Bay issue:

- The Palk Bay fisheries conflict, involving fishermen of Tamil Nadu and their counterparts in northern Sri Lanka has escalated in the recent past, following mid-sea clashes between fishermen from both sides. The death of two fishermen from Sri Lanka's northern Jaffna district has triggered massive protests.
- Sri Lankan fishermen protest the use of the bottom-trawling fishing method along their coast by Indian fishermen.
- Bilateral talks between governments and fisher leaders have proved unsuccessful so far.

Tamil question:

- The pending political solution to Sri Lanka's Tamil question remains another cause of concern in the bilateral relationship.

Nut Graf

Given the strategic location of Sri Lanka and its importance in India's neighbourhood first policy, the renewing of ties between India and Sri Lanka is a welcome development for India.

Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.**5. Troubled waters**

- » Mains: Resolving the fishing issue between Indian and Sri Lanka

Context:

- Sri Lankan Navy has arrested Indian fishermen

Complaints raised by Sri Lanka

- It has been accusing Indian fishermen of poaching in its waters.
- Indian trawlers violate the IMBL (international maritime boundary line) and fish in Lankan waters, depriving its own boats of catch.
- Trawlers used by the Indian fishermen damage the fragile ecosystem of the sea. They allege that heavy nets used by the Indian fishermen badly affect the region's marine life impacting fish production and marine biodiversity

Impact

- Its navy has been arresting Indian fishermen and capturing Indian vessels on charges of trespassing
- As per an estimate, Sri Lankan authorities have impounded 84 boats.

What is Bottom trawling?

- Bottom trawling is a method of fishing that involves dragging heavy weighted nets across the sea floor, in an effort to catch fish.
- It's a favoured method by commercial fishing companies because of two reasons
 - * They can catch large quantities of product in one go.
 - * Helps in catching deep water species.

Implications

- When dragging the large, weighted nets across the seafloor, everything that happens to be in the way gets swept up in the net too.
- This has an impact on the biodiversity of the ocean, and also means many species are being fished to the brink simply as a consequence of commercial activities, not as the target of them.

Issue

Indian fishermen use mechanised boats with highly exploitative fishing nets unlike most of the poor fishermen in Sri Lankan coast who use traditional fishing methods.

Why do the Indian fishermen venture into Sri Lanka waters?

- Depletion of fisheries on the Indian side
- It is driven by livelihood concerns

Joint Working Group on Fisheries (JWG) (2016)

- The JWG included
 - * Expediting the transition towards ending the practice of bottom trawling at the earliest
 - * Framing procedures for returning fishermen arrested by both sides, and
 - * The possibility of joint patrolling.
- They had agreed to set up a hotline between their Coast Guards to address the long-standing issue of fishermen

Way forward

- The governments of the two countries should call an early meeting of the Joint Working Group as it was last held in 2020

- The Centre should speak to Sri Lanka and secure the release of Indian fishermen.
- It also needs to sit with the Tamil Nadu government and work out a solution to the crisis brewing in the waters between the Tamil Nadu coast and Sri Lanka.
- The Central and the State Government should consider providing additional incentives and concessions to fishermen
- The Indian government can also propose assistance for the fishermen of the Northern Province as a gesture of goodwill.

Nut Graf

India and Sri Lanka must bring all the stakeholders together, activate the Joint Working Group on Fisheries and secure the livelihoods of their respective population

Effect of policies and politics on India's interests**6. India needs a refugee and asylum law**

- » Mains: The need and significance of a refugee and asylum law in India

Context

A private member's bill in the Lok Sabha proposing the enactment of a Refugee and Asylum law was introduced.

Details

- The Bill lays down comprehensive criteria for recognising asylum seekers and refugees and prescribes specific rights and duties accruing from such status.
- It was proposed as a part of the international principle of non-refoulement which states that no country should send a person to a place where he/she may face persecution.
- The bill also upholds India's age-old traditions of asylum and hospitality to strangers.

Who are refugees?

- According to the internationally accepted definition, refugees are people who have fled their home countries and crossed an international border because of a well-founded fear of persecution in their home countries, on grounds of race, religion, nationality, membership of a particular social group, or political opinion.
- The people who cross borders in quest of economic betterment, or because they are fleeing poverty, anarchy or environmental disaster, do not qualify as refugees, as well as those who flee from their home country to another because of war, conflict or fear of persecution.

The need for a Refugee and Asylum Act

• Recent acts of refoulement

- * Recently the Government expelled two batches of Rohingya refugees to Myanmar in the face of a grave risk of persecution in their country.
- * Currently, many Afghan students are stranded in India due to the Taliban takeover and have not had their visas renewed, and could face similar troubles.

• No domestic refugee framework

- * Though India has been and continues to be generous towards several persecuted communities, it is neither a signatory to the 1951 UN Refugee Convention, nor does it have a domestic asylum framework.

• Absence of Uniform law

- * In the absence of a comprehensive law to deal with refugees, India lacks a clear vision or policy on refugee management.
- * Currently, we have laws such as the Foreigners Act, 1946, the Registration of Foreigners Act, 1939, the Passports Act (1967), the Extradition Act, 1962, the Citizenship Act, 1955 and the Foreigners Order, 1948. All of which club all foreign individuals together as "aliens".
- * The problems of refugees are dealt with in an ad hoc manner, and like other foreigners, they always face the possibility of being deported.

• Problem of Human trafficking

- * Without access to basic services, jobs, livelihood opportunities along with the absence of a legal framework will make the refugees vulnerable to exploitation, especially human trafficking.

Significance of the bill

- The Bill would act as a check on arbitrary action by the authorities.
- The right to seek asylum in India would be extended to all foreigners irrespective of their nationality, race, religion, or ethnicity.
- The National Commission for Asylum would be set up to receive and decide all the matters related to refugees and their problems
- The principle of non-refoulement would be upheld, with no exceptions (though there are provisions for exclusion, expulsion, and revocation of refugee status)
- The Bill, if enacted, will put India at the forefront of asylum management in the world.

- It will recognise India's long-standing and continuing commitment to humanitarian and democratic values while dealing with refugees.

Court's View

- In 1996, the Supreme Court of India held that the state has to protect all humans living in India, irrespective of nationality since the rights guaranteed by Articles 14, 20 and 21 of the Constitution extend to all and are not just to Indian citizens.
- In NHRC vs State of Arunachal Pradesh case 1995, the Supreme Court stopped the forcible eviction of Chakma refugees who had entered Arunachal Pradesh.
- The Court also said that an application for asylum must be duly processed and the state cannot forcibly evict an asylum seeker until a decision is made on grant of asylum.

Conclusion

- India, as a significant player in the emerging multipolar world, must build on the Supreme Court's vision and constitute a refugee law that would help uphold our traditional values and high standards of democracy.

Nut Graf

The problems of refugees worldwide demand global solidarity and international cooperation. India ought to be a leader in upholding refugee rights and formulate a National Asylum Law that will help achieve the government's aspiration of becoming a "Vishwaguru".

Bilateral agreements involving India

7. India, UAE sign major trade pact

- » Prelims: CEPA
- » Mains: Impact of the Comprehensive Economic Partnership between India and UAE on India's trade policy.

Context:

- In a historic move, India and UAE signed the futuristic Comprehensive Economic Partnership (CEPA) during a virtual summit.

What is CEPA?

- The CEPA is a bilateral trade agreement that includes trade in goods and services, investments, competitions and Intellectual Property Rights.

About Free Trade Agreement:

- A free trade agreement is a pact between two or more countries to reduce trade barriers facilitating imports and exports.
- The goods and services can be brought within the purview of free trade policy.

- It involves trade across international borders with little or no government tariffs, quotas, subsidies or any inhibition in the exchange of goods and services.
- It is implemented by a formal and mutual agreement between the participating nations.

The India- UAE trade agreement:

- The free trade agreement aims to boost the trade relations between the two countries to US\$ 100 billion in the next five years.
- This act has been iconic in strengthening the bond between the two friends of history.
- The joint vision statement emphasised on enhanced maritime cooperation, collaborative efforts to fight terrorism and measures to boost trade and investments.
- The signing of CEPA will result in several benefits like promoting businesses, enhancing market access and reduced tariffs.
- Two MoUs have been signed including a MoU between APEDA and DP World and Al Dahra has been signed to set up a food security corridor and MoU between India's Gift city and Abu Dhabi Global Market on cooperation in financial projects and services. This will be a welcoming move to enhance resilience and reliability of food supply chains.
- The two countries also agreed to work together on logistics and services, pharmaceuticals, medical devices, agriculture, agri-tech and steel and aluminium.
- According to CEPA, an extension of zero duty will be given to several sectors comprising 9% of India's exports within five to ten years.
- The trade agreement will also facilitate the automatic registration and marketing authorisation of Indian generic medicines in 90 days. UAE plans to become a global regional distribution hub for pharmaceuticals by 2030 which will be of immense benefit to India.

India-UAE Trade:

- Indian Exports: India's major exports to the UAE include petroleum products, precious metals, stones, gems and jewellery, minerals, food items such as cereals, sugar, fruits and vegetables, tea, meat, and seafood, textiles, engineering and machinery products, and chemicals.
- Indian Imports: India's top imports from the UAE include petroleum and petroleum products, precious metals, stones, gems and jewellery, minerals, chemicals and wood and wood products.
- UAE investments in India: UAE's investments in India are concentrated mainly in five sectors: Services Sector (15.78%), Sea Transport (8.80%),

Power (8.34%), Construction (Infrastructure) Activities (7.15%) and Construction Development: (7.08%). UAE is also investing in a post-Article 370 Jammu and Kashmir, thereby helping to strengthen India's position on Kashmir.

Way Ahead:

- Despite the existence of a number of positives arising from the new FTA, the complicated tariff structure of UAE which is in compliance with the GCC norms, needs to be addressed and negotiated in order to assist the Indian exporters.
- Therefore, it is suggested that the FTA agreement must try to introduce more transparency and predictability in terms of Non-Tariff Barriers to ensure a less cumbersome compliance procedure.

Nut Graf

Transparency and Predictability in UAE's Non-Tariff Barriers (NBT) are required and should be specified by the FTA for a less cumbersome compliance procedure that will facilitate the exporters of India.

Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

8. China, Pak. ink new CPEC agreement

- » Prelims: About the CPEC agreement
- » Mains: Impact of such an agreement on India

Context:

- China and Pakistan signed a new agreement on industrial cooperation as part of the China Pakistan Economic Corridor (CPEC).

What is the Agreement signed by China and Pakistan?

- The first phase primarily involved Chinese investments in energy projects as well as road infrastructure.
 - * Most CPEC funds, have gone to building new coal-fired power plants to help Pakistan overcome its crippling power shortages.
 - * Other prominent projects included a \$7 billion upgrade to the railway from Peshawar to Karachi, a metro system in Lahore and Huawei fiber-optic cables running from China to Pakistan.
- The industrial cooperation agreement is a key part of what is being called "phase two" of CPEC.
 - * It aims to attract Foreign Direct Investment (FDI), promote industrialisation and development of economic zones, and initiate, plan, execute and monitor projects, both in public as well as private sector

India and its neighbourhood-relations.

9. Indus Waters Treaty

- » Prelims: Facts about Indus Water Treaty
- » Mains: Key provisions of the treaty and the past objections raised under the treaty.

Context

- Delegation from India is scheduled to visit Pakistan, to attend the 117th meeting of the Permanent Indus Commission.

The Indus Water Treaty

- The Indus river basin consists of six rivers namely, Indus, Jhelum, Chenab, Ravi, Beas and Sutlej.
- In 1947, the line of partition, for delineating geographical boundaries for India and Pakistan, cut the Indus river system into two.
- Since both the countries were dependent on water from the river basin there was a need for equitable distribution of water.
- On the recommendations of the UN, the World Bank came up with the agreement in 1954 that was eventually signed in 1960.

Key Provisions

- According to the treaty,
 - * India got control over the three eastern rivers, namely:
 - » Ravi
 - » Beas
 - » Sutlej
 - * Pakistan got control over the three western rivers, namely:
 - » Indus
 - » Chenab
 - » Jhelum
 - * It also required both the countries to establish a Permanent Indus Commission constituted by permanent commissioners on both sides. The functions of the commission include,
 - » Serving as a forum for exchange of information on the rivers, for continued cooperation
 - » Act as the first stop for the resolution of conflicts.
 - * The treaty provides a three-step dispute resolution mechanism, under which
 - » Issues can first be resolved at the commission level.
 - » If the above step fails, either side can approach the World Bank to appoint a Neutral Expert (NE).

- » Finally, if either party is still not satisfied, matters can be referred to a Court of Arbitration.

Past objections raised under the treaty

- Pakistan's objections to India's Kishanganga Hydro Electricity Project (KHEP)
 - * Kishanganga is a tributary of the Jhelum River.
 - * The works started in 2007, to build a dam on the Kishanganga, for diverting its water for a 330 MW hydropower plant in Kashmir's Bandipora.
 - * Pakistan raised objections regarding the height of the dam, fearing it would mean increased water storage for India.
 - * India agreed to lower its height from 97 metres to 37 metres.
 - * In 2010, Pakistan took the matter to the International Court of Arbitration, objecting to the diversion of water from Kishanganga.
 - * The Court gave its final ruling in December 2013, giving India a green signal for the project, subject to conditions.
 - * Pakistan again approached the World Bank in 2016 and in 2018, objecting to the design. Pakistan also tried to stop the construction of the dam in 2016 by firing shells near the dam site.
 - * The project was inaugurated in 2018, despite continued protests from Pakistan.
- Pakistan had objected to the Salal dam project in 1970 over design concerns, negotiations for which ended in 1978.
- Pakistan also opposed the Baglihar Hydropower project in the 2000s, which involved the construction of a 150m tall dam on Chenab.
 - * The matter was eventually referred to a Neutral Expert who upheld some of Pakistan's objections while denying others.

Recent developments

- Post the attack on Uri army camp in 2016, PM Modi had said, "Blood and water cannot flow simultaneously;" after which, the Permanent Indus Commission talks were suspended for the year by India.
- In 2019, when the suicide attack was carried out in Pulwama, India had threatened to cut off water supply to Pakistan from the Indus River System, which would essentially mean walking out of the treaty.

Conclusion

- In recent years, the Treaty has been brought up during geo-political tensions between India and Pakistan, threatening its suspension. However, the treaty does not have a unilateral exit provision and will remain in force unless both countries ratify a mutual agreement pact.

Nut Graf

Although the Indus Water treaty has been internationally regarded as a successful diplomatic effort that managed to withstand three wars and multiple military impasses, the recent geopolitical tensions between the two countries have threatened the existence and functioning of the treaty.

Bilateral, Regional and Global Groupings and Agreements involving India**10. At the Centre**

- » Mains: Importance of Central Asia in India's foreign policy.

Context:

- India hosted the first-ever India-Central Asia summit, with the attendance of Presidents from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

Details

- The joint statement at the end of the India-Central Asia virtual summit noted that,
 - * The ties between India and the countries in the region have been historically close.
 - * The ties are strengthened by civilisational, cultural, trade and people-to-people linkages.
 - * The lack of access to land routes, and the situation in Afghanistan are the biggest challenges currently in the ties.

The problems of routing trade

- A mere \$2 billion has been spent on Kazakhstan's energy exports to India as compared to China's figures of \$41 billion apart from the billions of dollars invested in the Belt and Road Initiative.
- With Pakistan denying India transit trade, India's other option is to smoothen the route through Iran's Chabahar port.
 - * This required greater investment in rail and road routes to Iran's northern boundaries with the Central Asian Countries, which India is hesitant to do in the face of U.S. sanctions.

- Another option is to use the Russia-Iran International North-South Transport Corridor via Bandar Abbas port, but this is not fully operational and two Central Asian countries namely Uzbekistan and Turkmenistan are not members.
- India has also been reluctant over the Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline project, due to the tensions with Pakistan.

The Afghanistan problem

- Afghanistan has been the link between Central Asia and South Asia.
- The Taliban takeover and presence of no official government, along with the rising humanitarian crisis, poses challenges of terrorism and radicalism spilling over the boundaries.
- This has serious ramifications on the regional stability and ties between the bordering countries.

Way forward

- The summit has recognised both the above problems as areas to work upon.
- There is a need for more structured engagement, including the creation of joint working groups, on Afghanistan and Chabahar.
- Steps need to be taken on creating more educational and cultural opportunities.
- With countries like Russia, China and Pakistan having been taking up outreach measures in Central Asia, India must try to increase the institutional exchanges, trade, investment and development partnerships with the Central Asian countries.

Conclusion

- India must use its deep ties of the distant past with the Central Asian countries and act swiftly to ensure it stays a step ahead in the race to reap rich dividends in the domain of security, energy, economic opportunities, and geopolitics.

Nut Graf

It is important for India to stay in step with the changes in the Central Asian region to avail the potential benefits that the relationship offers.

Bilateral agreements involving India and/or affecting India's interests.**11. Ink India-Britain free trade, unlock new opportunity**

- » Mains: Significance of Free Trade Agreement between India and U.K.

Context:

- Prime Ministers Narendra Modi and Boris Johnson announced their common motto of transforming the India-United Kingdom partnership in the next decade.

Background:

- As part of the transformation, the leaders declared their vision to double the bilateral trade by 2030, which was over £23 billion in 2019.
- The leaders have directed their governments to take rapid steps to reduce barriers to trade, and to complete the groundwork necessary to begin work on a Free Trade Agreement (FTA).
- Both governments have taken measures in this regard.
 - * Example:
 - » Unlocking the export of British apples to India
 - » Enabling a greater number of Indian fisheries to export shrimp to the U.K.
- Small but significant steps have been taken up, which have shown that concrete measures can be undertaken to stimulate growth.

Business relationship between India and UK

- Investment by the UK in India
 - * There are about 600 U.K. companies working in India which employ more than 3,20,000 people.
 - * Barclays has its biggest office outside of London in Pune.
 - * JCB's products manufactured in India are exported to over 110 countries across the globe.
 - * Hindustan Unilever headquartered in Mumbai also exports its consumer goods to the international market.
- Investment by India in UK
 - * India is one of the big investors in the U.K. in dynamic sectors like fintech, electric vehicles and batteries.
 - * In 2020-21, India was the U.K.'s second-largest source of investment in terms of the number of projects.
 - * Recently, Essar Group and Ola Electric announced investments into the U.K.

Free Trade Agreement (FTA)

- FTA is an arrangement between two or more countries to reduce trade barriers in imports and exports among them.
- With FTA, goods and services can be exchanged across international borders with limited or no government tariffs, quotas, or subsidies.

- In the current world, free trade policy is often implemented by means of a formal and mutual agreement of the nations involved. However, a free-trade policy may simply be the absence of any trade restrictions.
- Based on the level of openness in the trade between the countries free trade policies can be categorized as,
 - * Preferential trade agreement
 - * Free trade agreement
 - * Comprehensive Economic Partnership Agreement
 - * Comprehensive Economic Cooperation Agreement
 - * Customs Union
 - * Common Market
 - * Economic Union

FTA between India and UK

- Considering the size of the two economies the trade relationship, in particular, has underperformed. FTA is regarded as one of the solutions to better trade relationships.
- Having left the European Union's common trade bloc after 47 years, the UK thrives on FTAs.
- In this regard, FTA negotiations were launched in January 2022 in New Delhi.
- India's Commerce Minister and the U.K.'s International Trade Secretary announced their shared ambition to finish negotiations on a comprehensive and balanced FTA by the end of 2022.
- This is a big step in building a network of like-minded democracies committed to free trade.
- The Indian government is showing its determination to agree to a new set of trade deals.

Significance of FTA between India and the U.K.

- India has an opportunity to transform its economy and society in the next 30 years.
 - * Free trade with the U.K. will help through greater access to a highly open and competitive market, offering valuable opportunities for India's booming companies.
- A U.K.-India trade agreement will stimulate growth and employment in both countries.
- U.K. government reports suggest that, depending on the depth of the deal, an FTA would add around £14.8 billion to the GDP of India and the U.K. collectively by 2035.
- A trade deal helps diversify supply chains by making it easier and cheaper for more businesses to do business across borders.

- Reducing the trade barriers along with regulatory certainty will help small and medium-sized enterprises in the export of their goods and services.
- An agreement would help consumers from both countries see improvements in the variety and affordability of products.
- The two dynamic democracies such as India and the U.K. need to work closely together to promote open economies.

Conclusion

- Acknowledging the past of the two countries and with an intent to build for the future, an FTA would provide a framework within which the two countries can grow and flourish together, which helps in marking a new way of working between the U.K. and India.

Nut Graf:

The economic and strategic opportunities that a Free Trade Agreement provides will help address the challenges of complexities in trade negotiations between India and the U.K. that are countries of different sizes and at different stages of their development.

India and its neighbourhood - relations.

12. Why are India's imports from China rising?

- » Mains: Trends in India-China Trade Relations

Context:

- Trade figures released recently suggested that the imports from China have continued to increase after a fall in trade in 2020 due to the pandemic.

Trade with China in 2021

- According to China's General Administration of Customs (GAC), India's trade with China in 2021 reached \$125.6 billion, crossing the \$100 billion mark for the first time.
- India's imports from China accounted for \$97.5 billion, while exports reached \$28.1 billion.
- Compared to 2019 the trade declined substantially in 2020 because of the pandemic, this magnifies the year-on-year increase,
 - * Imports from China are up 30%.
 - * Exports to China, up by 56%.
 - * The trade deficit, a long-term source of concern for India, is up by 22% since 2019.

India's Imports from China

- India's imports from China include,
 - * Electrical and mechanical machinery

- * Range of chemicals that are intermediate imports used by industries
- * Active pharmaceutical ingredients (APIs)
- * Auto components
- * Medical supplies

- According to India's Ministry of Commerce, all the above key imports continued to rise in 2021.
- The total value of the top 100 import categories, each of which accounts for more than \$100 million in imports, increased by \$16 billion in the last year, reaching \$45 billion.
- The top items include
 - * Finished goods like,
 - » Integrated circuits (up by 147%)
 - » Laptops and computers (up by 77%)
 - » Oxygen concentrators (up by four times)
 - * Intermediate products like Chemicals (acetic acid up by eight times)

Analysis

- Experts feel that India's growing dependence on China for finished goods is a cause for concern.
- The rise in intermediate imports is, however, less of a concern as it is a sign of industrial recovery and greater demand for inputs.
- Indian exports to China have increased by more than 50% in the last two years. However, they are mostly raw materials such as ores, cotton and seafood, and not finished products.
- The five-year trend shows the trade deficit has continued to widen in favour of China.
 - * The deficit has grown from \$51.8 billion in 2017 to \$69.4 billion in 2021.

Implications on India-China Relations

- In the wake of the LAC crisis in April 2020, the Indian government said that business cannot be as usual, when there are tensions along the border.
- Investments from China in 2021 have dipped amid strict curbs.
- In the tech sector, the rapidly increasing Chinese investments in start-ups from tech giants such as Alibaba and Tencent has come to an abrupt halt as more than 200 apps remain banned.
- In the telecom sector, Chinese firms have been kept out of 5G trials in India.
- India has tightened scrutiny on Chinese firms in India, as it recently conducted tax investigations into companies like Xiaomi.
- China's Ministry of Commerce called on India to "provide a fair, transparent and non-discriminatory environment for Chinese businesses".

- The trade pattern is unlikely to change drastically in the near future, even as India considers a long-term plan to reduce some of these import dependencies by accelerating plans to manufacture these critical goods in India or by sourcing them from other countries.

Conclusion

- While trade between the countries continues to boom, other aspects of economic relations have dramatically changed. The prospects of the rest of the India-China economic relationship still remain uncertain as talks continue to resolve the tensions along the border.

Nut Graf:

The rising trade despite the border crisis with China along the Line of Actual Control (LAC), does not suggest a return to normalcy in relations. Other areas, like investment, remain in a deep freeze amid the continuing tension in bilateral relations.

Effect of politics and politics of developed and developing countries on India's interests

13. Use international law, call out China's violations

- » Mains: India's bilateral relations with China

Context:

- China is continuously violating international rules and posing a threat to the whole world. The article discusses the various aspects of the Chinese expansionism policy and the measures to be taken by India to deal with the challenges.

Background:

- External Affairs Minister of India recently said that the tensions at the Line of Actual Control (LAC) have arisen due to China's disregard towards the written agreements.
- But, it is believed that the actions of China at the LAC are not because of the disregard but it implies the violation of international law as a part of the policy of Chinese expansionism.

Laws and Provisions:

- There are many bilateral agreements between India and China that guide the India-China LAC engagement.
- For example, a 1993 agreement between India and China states that no country shall use any means to threaten the other country. It also provides that any issue related to the boundary will be resolved by a friendly and peaceful conversation between the two countries.

- Similarly, according to Article I of the 1996 agreement on confidence-building measures, the use of military capability against the other side is strictly prohibited.
- The prohibition on the use of force is also enshrined in Article I and Article VIII of the 2005 and 2013 agreements, respectively.
- According to Article 2(4) of the United Nations Charter, states are not allowed to use force in international relations and it is the cardinal rule of international law.
- There are two exceptions to this rule:
 - * Self-defense under Article 51, and
 - * The UN Security Council authorization under Chapter VII of the Charter.

China Breaking the Laws:

- A military standoff between India and China in the Galwan Valley on 15th June 2020 led to the deaths of 20 Indian soldiers. This act of China clearly indicated the violation of not only the bilateral agreements between India and China but also the UN Charter.
- China did not stop there, it continued to breach the laws at LAC and make other developments such as implementing a new border law that renames several places in Arunachal Pradesh and aims to set up boundary markers on all its land borders.
- The new border law clearly violates the provision of Article IX of the 2005 agreement that states that both sides should strictly 'respect and observe LAC'.
- Besides these, China is also creating huge weaponry build-up that contains missiles in the Eastern Ladakh region.
- Article III of the 1996 agreement mandates that both countries should reduce or limit the armaments such as tanks, missiles, vehicles, mortars, etc. But, China has not complied with these agreements.

Weaponizing Global Law:

- In the view of China, a law is considered as an instrument or tool in the service of the state or more precisely the Chinese Communist Party (CCP). This is just the opposite to the rule of law theory in liberal democracies where the function of the law is to limit or constrain the unrestrained state powers.
- There are many instances in which China has proved the weaponization of law. For example:

China and Philippines on South-China Sea:

- In 2016, an independent arbitral tribunal established under the UN Convention on the Law of the Sea (UNCLOS) published a clear and binding ruling on China's claims vis-à-vis the Philippines in the South China Sea.

- The Chinese government and the Chinese people firmly opposed the ruling and said that they will neither acknowledge it nor accept it.

Not complying by the trade rules:

- Nearly 20 years after joining the World Trade Organization, China remains woefully short of meeting a broad range of commitments and responsibilities, to the detriment of both its trading partners and the international economic system.
- China has failed to meet numerous WTO commitments on issues such as industrial subsidization, protection of foreign intellectual property, forcing joint ventures and technology transfer, and providing market access to services industries.
- China has failed to meet numerous WTO commitments on issues such as industrial subsidization, protection of foreign intellectual property, providing illegal subsidies, manipulation of currency, forcing joint ventures and technology transfer, and providing market access to services industries.

Unethical Warfare:

- China secretly violates the nuclear non-proliferation obligations by providing nuclear weapons to its allies often through proxies.
- The aim of Chinese unethical warfare is to cripple the opponents without actually fighting a war.
- The weaponization of international law negatively affects the relationship between countries and creates a sense of distrust.

Measures to be taken by India:

- India should make its own strategy of international lawfare by taking all the international laws into account to respond to Chinese aggression.
- India should make a strong case by putting all the agreements including the UN Charter at the international platforms against China's illegal actions.
- A National Law aimed at imposing sanctions of various kinds (economic, trade, military) on countries with whom India shares the land borders, needs to be enacted.
- India should make an unequivocal proclamation that India reserves the right to act in Self-Defense under Article 51 of the UN Charter to counter any Chinese atrocity.
- The purpose of the lawfare of India should be to make the international communities aware of the fact that violations of international law by China are a threat to the whole world not just to India.

Nut Graf:

The Chinese expansionism policy is posing a threat in front of the world. The issues created at the LAC reflect the violation of various agreements between India and China. There are many examples of China weaponizing the global law such as denouncing the ruling of the UNCLOS on the issue of the South-China Sea with the Philippines. India should develop a strong lawfare and also raise the concerns at the international level so that international community is aware of the Chinese aggression.

Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

14. Amidst a wave of coups and a pandemic

- » Mains: Increasing military coups in Africa and its impact on India.

Context:

- Concerns are rising over the increasing frequency of military coups in the African continent.

What do you mean by a coup?

- Coup can be simply defined as an illegal and overt attempt by the military to unseat sitting leaders.

Recent Military Coups in Africa: –

- A study by US researchers has identified over 200 such attempts in Africa since the 1950s.
- In 2020, armed forces staged a mutiny and captured power from the President in Mali.
- In 2021, the Guinean coup d'état occurred when forces led by the military captured the President and announced the dissolution of the government and the Constitution.
- In 2022, the military takeover took place due to protests demanding the resignation of the President in Burkina Faso.

Countries in Africa with the highest number of coups since 1952



Source: Jonathan Powell, Uni of Central Florida and Clayton Thyne, Uni of Kentucky

BBC

Source: BBC

Reasons for increased Military coups: –

- Local Circumstances
 - * In Mali, it stemmed from frustration at the former president's weak leadership and resentment over his corruption and manipulation of parliamentary election results.
- Significant discontent has arisen amongst the people due to ways of implementing democracy according to the wishes of politicians and the ruling elite.
- The proliferation of insurgents and extremist violence coupled with weak democracies have provided fertile grounds for military intervention in civilian and political matters across Africa.

- In addition, the decadence of the socio-political and economic environment is the justification for coups in many cases.
- Poorly-funded and under-resourced militaries are another reason why coups have been a recurring event in Africa, especially in the Sahelian region.

Concerns Associated with Increasing Military Coups in Africa: –

- Failure of regional bodies:**
 - * All attempts by regional bodies like ECOWAS and the African Union were focused on punishing the militaries rather than attempting to help fix the underlying causes that led to civilian populations supporting their actions.

- * The influence of Economic Community of West African States (ECOWAS) has been hampered by eroding credibility and increasing sanctions.
- **Failure of Democratic Institutions:**
 - * The masses' lack of faith in the state of democratic politics in their countries has significant consequences not only for Mali, Burkina Faso and Guinea, but the wider region.
- **No long-Lasting Penalties:**
 - * The punitive measures against military coups usually are lifted quickly.
 - * This leniency has enabled coup leaders to make minimal concessions while preparing for longer stays in power.
- **Widespread civilian support for military coups:**
 - * Citizens appear to believe that the military may be a credible alternative to the band of corrupt and unrepentant political elites that have betrayed their confidence.
 - * This led to the legitimisation of attempts to reintegrate militaries into politics across the continent.
- **Continued Military Support from other countries:**
 - * Other countries, including France and European allies, have maintained a military presence in the region, and partner local armed forces to fight radical groups.
- **Futile Sanctions:**
 - * Sanctions have not been able to create the necessary political outcomes that the AU and ECOWAS desire.
 - * The sanctions on Mali and Guinea in 2021 have backfired and have driven popular support towards military leadership.

Implications on India: –

- The rise in military coups in the African continent is a cause of concern for India and Africa who have common positions and interests in global platforms.
- It will also hamper several areas of cooperation such as
 - * Techno-economic capacity building.
 - * Skill development featured prominently in all the India-Africa Forum Summits.
- India's model of development cooperation in Africa lacks a clear strategy and the consequences of military coup will worsen the developmental efforts.
- Besides, it will also erode the progress of 'Ten Guiding Principles for India-Africa Engagement'

which have defined India-Africa engagement.

- The military takeovers in Africa will reduce the pace of synchronization between different development instruments.
- India must chart out a roadmap for its development cooperation programme in Africa that outlines a long-term strategy and delineates how it will deploy state capacity to pursue common development goals.

Recommendations: –

- Bolstering the roles and capacities of regional bodies such as ECOWAS. Peer influence among any group of neighbouring nations will always be vital.
- Focus should be on strengthening civil society and democracy in each country.
- Support broad national dialogues to address the root causes of each country's instability.
- Strategic Measures must include groups that historically have been marginalized, such as ethnic minorities, women, youth and grassroots groups.

Nut Graf:

The rising wave of military coups in Africa has subverted the democratic progress. By offering the incentives to governments and civil societies the democratic governance can be reinstalled.

Effect of policies and politics of developed and developing countries

15. Normandy format

- It is a diplomatic grouping created in 2014 by French, German, Russian and Ukrainian diplomats
- The forum acted as a platform to resolve the issue of alleged Russia-backed separatism in eastern Ukraine and to find a peaceful resolution to the conflict
- The Normandy Format showed great promise as it facilitated the signing of the Minsk agreements in 2014 and 2015
- With time it was unable to resolve the deadlock, the grouping became largely defunct in 2019.

Effect of policies and politics of developed and developing countries

16. Russia-Ukraine conflict: what history shows?

- » Mains: The disintegration of the USSR, Russia's influence on the former soviet states and the start of Russia's tensions with Ukraine.

Background

- Addressing the nation, the Russian President

Vladimir Putin announced his decision to recognise the two breakaway republics of Ukraine Donetsk and Luhansk as independent states.

- In the speech, Putin blamed Soviet leaders, especially Lenin for the disintegration of "historical Russia".
- Putin said that Lenin's idea of building the country "on the principles of autonomisation" (right of self-determination, of secession) led to the fall of the Union of Soviet Socialist Republics (USSR).

The USSR's collapse

- The fall of the Soviet Union started in the late 1980s with protests in the Eastern Bloc and in Soviet republics along with the Soviet exit from Afghanistan.
- The Soviet Union sent troops to Afghanistan in 1979. After 10 years of fighting the Mujahideen, who were backed by the U.S., Pakistan and Saudi Arabia, the Soviets had to withdraw in 1989.
- Later, the Soviet-backed communist regimes in Eastern Europe started collapsing, practically bringing the Cold War to an end.
- It started in Poland, which hosted the headquarters of the Soviet-led Warsaw Pact

security alliance.

- * In June 1989, the anti-communist Solidarity movement, won elections in Poland, leading to the fall of communist rule.
- * Protests spread to Hungary, East Germany, Bulgaria, Czechoslovakia and Romania.
- * In November 1989, the Berlin Wall that had separated the capitalist West Berlin and the communist east, fell, leading to the German reunification.
- Domestically, the Soviet Union was going through an economic crisis,
 - * There was a fall in foreign trade.
 - * Lower oil prices led to a fall in state revenues and an explosion in debt.
 - * Although decentralisation and opening up of the economy for foreign trade were introduced that made the nationalists in the

The Fall of the USSR

Thirty one years ago, in 1991, the Soviet Union ceased to exist, but the chain of events, leading up to the collapse was set in motion six years earlier by the sweeping reforms of Mikhail Gorbachev



Sources: Encyclopaedia Britannica, BBC

Pictures: Getty Images, Newscom

© GRAPHIC NEWS

Image source: The Hindu

Soviet republics stronger, the reforms failed to revitalise the economy.

Soviet disintegration

- The fall of communist states in the Eastern Bloc and the economic crisis in the country had weakened Russia's hold over the Union.
- In 1988, Estonia became the first Soviet administrative unit to declare sovereignty inside the Union
- In 1990, Lithuania became the first to declare independence from the USSR.
- After the German reunification, the North Atlantic Treaty Organization (NATO) expanded to East Germany.
- The crisis spread across the Soviet republics as Russia planned to decentralise the central government's powers to the 15 republics through the New Union Treaty, which was also a bid to renegotiate the original treaty that established the USSR in 1922.
- In 1991, a group of communist leaders, including top military and civilian leaders, tried to take power in their hands by coup.
 - * Even as the coup failed, this further weakened Russia's power.
- In December 1991, leaders of three Soviet republics of Russia, Ukraine and Belarus signed the Belavezha Accords, announcing that the USSR ceased to exist.

Belavezha accords

- The Belavezha accords is the agreement that declared that the Union of Soviet Socialist Republics (USSR) had effectively ceased to exist.
- The agreement was signed in Belovezh (Belarus) in December 1991.
- Belavezha Accords also announced the establishment of the Commonwealth of Independent States (CIS) that would replace the USSR.
- The accord was signed by the leaders of three republics who had earlier signed the 1922 Treaty on the Creation of the USSR.

Russia's relations with the former Soviet States

- Russia retains huge influence on Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Uzbekistan and Turkmenistan.
- Russia has formed a security organisation named the Collective Security Treaty Organisation (CSTO), with former Soviet republics.
 - * Members of CSTO include Armenia, Belarus,

Kazakhstan, Kyrgyzstan and Tajikistan and Russia.

- Russia maintains a military presence in Transnistria, a breakaway republic from Moldova
- Russia has dispatched troops to the borders of Armenia and Azerbaijan in 2020, to end a conflict between the two countries over Nagorno Karabakh.
- Out of the 15 countries that became independent after the fall of the Soviet Union,
 - * The three Baltic countries Latvia, Lithuania and Estonia, all sharing borders with Russia, became members of NATO in 2004.
 - * Ukraine and Georgia were offered NATO membership in 2008.
- In 2008 Russia sent troops to Georgia to protect two breakaway republics South Ossetia and Abkhazia from Georgian troops.
- In 2014, Russia annexed the Crimean republic, a Black Sea Peninsula, from Ukraine.
- Russia also recently recognised Luhansk and Donetsk in the Donbas region of Ukraine as independent and sent troops.

Russia's tensions with Ukraine

- Post its independence in 1991, Ukraine adopted a neutral foreign policy.
- Ukraine was one of the founding members of the CIS, but did not join the CSTO.
- Though Ukraine stayed away from NATO, the offer of membership in 2008 started changing equations between Russia and Ukraine.
- Post the regime of pro-Russian Viktor Yanukovich in 2014, a pro-West government was established in Ukraine.
- Russia acted swiftly by annexing Crimea and by supporting separatist rebels in Donbass.
- Ukraine exited the CIS and added its desire to join NATO into its Constitution.
- These developments further escalated the tensions and eventually led to the Russia invading Ukraine.

Nut Graf:

Along with several economic, geographical, geopolitical and strategic reasons, the historical factors such as the disintegration of the USSR and the developments that took place after the disintegration have had a huge influence in escalating the tensions between Russia and Ukraine, which now have resulted in a full-blown war.

Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

17. Russian invasion of Ukraine

- » Mains: The impact of Russia's invasion of Ukraine and the response from the rest of the world.

Context:

Russia has launched an all-out attack on Ukraine through land, air and sea.

Details

- The attacks by Russia are considered as the biggest attack by one state against another in Europe since the Second World War.
- Russian missile attacks were reported in the Ukrainian cities, much to the shock of the international community.
- Ukraine reported the arrival of multiple troops across its borders in the Chernihiv, Kharkiv and Luhansk regions, and by sea at the cities of Odessa and Mariupol.



Image source: The Hindu

Russia's Stand

- Russia's President Mr. Putin declared that he has ordered "a special military operation" to protect people, including Russian citizens who had been subjected to "genocide" in Ukraine, "for this we will strive for the demilitarisation and denazification of Ukraine".

Why Russia chose war?

- Russia's intends to revise history and change the post-1989 European security order. It wants to restore the notion of empire and doesn't recognize the legitimacy of former Soviet

republics.

- Russia wanted to topple the pro-Western government of Ukraine and to make the country a vassal state like in neighboring Belarus.
- It is a signal to the world that any further expansion of NATO to the east will not be tolerated.

Violations of international laws by Russia

• The UN Charter

- * The principle of non-intervention is enshrined in article 2(4) of the UN Charter.
- * It demands the states to avoid using force or threat of using force against the territorial integrity or political independence of any state.
- * The Russian attack on Ukraine is violative of the principle and amounts to aggression under international law.

• The UN General Assembly Resolution 3314 (1974)

- * The resolution defines aggression as the use of armed force by a state against the sovereignty, territorial integrity or political independence of another state.
- * Also, allowing one's territory to be used by another state for aggression against a third state, would qualify as an act of aggression.
- * Hence, Belarus can also be held responsible for aggression as it has allowed its territory to be used by Russia for attacking Ukraine.

- Aggression is also considered an international crime under customary international law and the Rome statute establishing the International Criminal Court.

Ukraine's Response

- Ukraine's President said that Russia aims to destroy his state.
- The Ukrainian Foreign Minister said "This is a war of aggression and Ukraine will defend itself and will win. He also asked for the world to come together and stop Russia".

The principle of self-defence

- In wake of the use of force by Russia, Ukraine has the right to self-defence under international law.
- The UN Charter under article 51 authorises states to resort to individual or collective self-defence, until the Security Council takes steps to ensure international peace and security.
- As Russia is a permanent member and has veto powers, it looks impossible for the UNSC to arrive at a decision
- Hence, Ukraine has a right under international law to request assistance from other states in the form of military assistance, supply of weapons

etc.

Russia's claims of self-defence

- Russia has also claimed that it is acting in self-defence.
- Russia claims that Ukraine may acquire nuclear weapons with the help of western allies.
- However, the International Court of Justice (ICJ) in the Legality of Threat of Nuclear Weapons case held that mere possession of nuclear weapons does not constitute a threat.
- Even if Ukraine has, or were to acquire nuclear weapons in the future, it does not become a ground for invoking self-defence by Russia.
- Further, mere membership in a defence alliance such as NATO cannot necessarily be considered as a threat of aggression against Russia.
- Russia can also not invoke anticipatory self-defence according to the Caroline test.

CAROLINE TEST

- The Caroline test is a 19th-century customary international law, reaffirmed by the Nuremberg Tribunal post the Second World War.
- The law says that the necessity for preemptive self-defense must be "instant, overwhelming, and leaving no choice of means, and no moment for deliberation."

Response by UN

- The United Nations Secretary General at a Security Council meeting, asked Russia to stop the attack on Ukraine and to "give peace a chance."

Response by the West

- The U.S. – The President said that America and its allies would respond decisively and unitedly. He also said that the world will hold Russia accountable and will announce further consequences on Russia in the coming days.
- France – Said that the country strongly condemns the attacks and asked Russia to immediately put an end to its military operations.
- The U.K. – Said that Russia has chosen a path of bloodshed and destruction by launching the attack.
- Sanctions – the U.S. along with the NATO and European Commission leadership vowed to impose "severe sanctions" on Russia that will overlay prior economic penalties imposed on Russian entities.
 - * Sanctions are expected to include cutting off top Russian banks from the financial system, halting technology exports, and

directly targeting the Russian President.

Concerns

1. Lack of coordinated approach from the west
 - Russia has shown resolve and a single-minded sense of purpose to achieve its objectives in Ukraine, however, the west is not projecting a united front against the aggression
 - This is due to delay in response, lack of leadership and unable to reach a consensus among the NATO countries leading to a grave crisis.
 - * The ideological solidarity of NATO which aimed for a free world against communist expansion and an existential military threat has dissolved with the collapse of communism.
 - * America's leadership in many instances has increased differences among various regions but the growing ambitions of other countries have been posing difficulties in America's geopolitical interests.
2. The energy factor
 - Many European countries have not voiced opinion against Russia due to their excessive dependence for their energy needs
 - With the EU importing 39% of its total gas imports and 30% of oil from Russia, and with the Central and Eastern European countries being almost 100% dependent on Russian gas, the reasons for internal EU dissonance are not that difficult to fathom.
3. A strong Beijing
 - Conceding the defeat without even throwing up a fight has emboldened the Russia-China 'axis'
 - The power has tilted in favor of these two powers defining a new international order

Impact on India

- Indian diaspora – thousands of Indian students, especially medical students are stranded in Ukraine. The attack by Russia threatens their lives.
- Economy – following the attacks, India's benchmark S&P BSE Sensex dropped by about 2,700 points, the highest drop in two years.
- Rise in oil prices – Oil prices surged to over a seven-year high of \$103 a barrel. The Brent crude rose to \$103.78 a barrel, the highest since August 14, 2014. India relies on imports for 85% of its fuel requirements.
- Indian tea exports – Russia is a significant market for Indian tea. Russia imports about 40 million kg from India. Ukraine is also a major importer of Indian tea.
- Wheat exports – The Russia-Ukraine crisis might give India an opportunity to export more wheat in the global markets as about 25% of the world's

wheat export comes from Russia and Ukraine.

India's Response

- The Indian Prime Minister appealed for an immediate ceasefire and a return to dialogue in a telephonic conversation with the Russian President.
- The PMO said that the safe exit of Indian citizens from the region is India's highest priority.
- India's Foreign Minister met several European leaders who asked India to change its position (which has so far not criticised Russia's actions) and support the UNSC resolution to be brought by the NATO allies, affirming the territorial integrity of Ukraine.

Nut Graf:

Russia's incursion into Ukraine after weeks of military troop build-up on the borders has raised tensions drastically in the region with wider ripple effects across the world. In this regard, the pressure is mounting on India to change its stance on the issue, as only few countries in the world could influence Russia and India is one among them.

18. The anatomy of India's Ukraine dilemma

- » Mains: Analysing India's response, options and implications on its interests due to the crisis in Ukraine.

Context:

- India abstained from a United Nations Security Council (UNSC) resolution which called for condemning the Russian military action against Ukraine

Details

- The resolution was sponsored by the U.S. and Albania, and co-sponsored by about 80 countries that condemned Russian aggression and called for the withdrawal of the Russian military from Ukraine.
- Along with India, China and the UAE abstained from voting against Russia.
- However, the resolution was vetoed by Russia as it is one among the permanent members of the UNSC with veto powers.

India's Response

- India's response to the Russian aggression against Ukraine has been shaped by harsh geopolitical situations.
- Although India abstained from voting against Russia, India expressed strong uneasiness about the Russian actions.
- Prime Minister Narendra Modi, spoke to Russian President Putin and called for an "immediate

cessation of violence"

- India has so far ignored Ukraine's pleas that urge India to mediate with Russia to halt its military advances.

Options for India

- Condemn Russian aggression
 - * This option will set India against Russia.
- Support Russian aggression
 - * This option will set India against the U.S. and its allies.
- Remain silent on Russian aggression
 - * This option will be considered as pro-Russian tilt.
- Express displeasure (short of condemning) and call for diplomacy
 - * It is one of the best possible options for India as it is least harmful.

India's pro-Russian Tilt

- India has taken a subtle pro-Russian position on the Ukraine issue.
- This pro-Russia tilt is not just the stand of the government, but also of the Indian strategic community.
- India's Russia tilt is not just because of its friendship with Russia but instead it is a geopolitical necessity.

Reasons for India's pro-Russian tilt

- **Weakened US led global order**
 - * India is slowly recognising the weakening of the U.S. led global order and the rise of China as a major power.
 - * US withdrawal from the region and its decline as the chief system shaper has further complicated India's position in the region.
- **The China factor**
 - * China as the rising superpower and Russia as its strategic ally at a time when China has shown its aggressive intentions against India is an unprecedented challenge for India.
 - * Hence, having Russia for its support is crucial for India.
 - * Even though Russia may not be able to counter Chinese actions towards India directly, an India-Russia strategic partnership will certainly help India.
 - * The longer the standoff lasts in Ukraine, the closer China and Russia could become, this certainly is a problem for India.
- **Hostile neighbourhood**
 - * India is currently under immense pressure from China, Pakistan and Taliban-led Afghanistan in its neighbourhood. Here lies

the dilemma for India.

- * India needs Russia's help to manage its neighbourhood problems through defence supplies, working together at the Shanghai Cooperation Organization (SCO) or exploring opportunities for collaboration in Afghanistan.
- * Russia is India's only partner of consequence in the Continent.
- * If the U.S.-Russia rivalry becomes more severe, the focus on the Indo-Pacific and China would reduce.

Implication of India's interests

- Russian action in Ukraine ignoring the concerns of the rest of the world including the U.S. will strengthen China and its territorial ambitions.
- The new sanctions regime may have implications on India's defence deals with Russia.
- India's position also indicates that when it comes to geopolitics, India will prioritise its interests over its principles.
- If tensions between Russia and the West continue, balancing the two will be a complex task to Indian diplomacy.

Strategic autonomy

- In the recent past, India's strategic autonomy has been under a lot of stress.
- However, India's response to the Ukraine crisis, particularly its "explanation of vote" at the UNSC indicates a recourse to the principle of strategic autonomy.
- India made it clear that it will make statements and will not be pressured by either party.
- In this regard, India's subtle support to Russia is not due to Russian pressure but is to safeguard its own interests.

Nut Graf:

With the stalemate at the UNSC, India being friends with both the United States/West and Russia, and being constantly urged by Ukraine, is uniquely placed to undertake some much-needed mediation between the rival sides.

Operation Ganga

- India evacuated its stranded citizens from Ukraine via Romania and Hungary through "Operation Ganga".
- The risky evacuation is taking place in the middle of a war, where Indian professionals are currently stranded in an underground bunker in Ukraine's capital Kyiv.
- Indian citizens entered Hungary from the Ukrainian at the Zahony crossing and reached

Budapest for the Air India flight.

- A liaison unit was set up by the Indian Embassy, which is bringing stranded Indians in batches through the checkpoint at Zahony.
- Indians were advised not to use other checkpoints to enter Budapest as there were long queues and no embassy unit was present there to facilitate entry.

Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

19. Exclusion from SWIFT: what it entails

- » Prelims: SWIFT
- » Mains: SWIFT; it's functioning and significance

Context:

- The U.S., Europe and several other western nations are moving to exclude Russia from the Society for Worldwide Interbank Financial Telecommunication (SWIFT).

What is SWIFT?

- SWIFT stands for the Society for Worldwide Interbank Financial Telecommunication.
- SWIFT, first used in 1973, went live in 1977 with 518 institutions from 22 countries, its website states. SWIFT itself had replaced the much slower and far less dynamic Telex.
- SWIFT is a messaging network used by banks and financial institutions globally for quick and faultless exchange of information pertaining to financial transactions.

What happens if one is excluded from SWIFT?

- If a country is excluded from the most participatory financial facilitating platform, its foreign funding would take a hit, making it entirely reliant on domestic investors.
- This is particularly troublesome when institutional investors are constantly seeking new markets in newer territories.
- An alternative system would be cumbersome to build and even more difficult to integrate with an already expansive system.

How is the organization governed?

- SWIFT claims to be neutral.
- Its shareholders elect the 25-member board, which is responsible for oversight and management of the company.
- It is regulated by G-10 central banks of Belgium, Canada, France, Germany, Italy, Japan, The Netherlands, the United Kingdom, the United States, Switzerland, and Sweden, alongside the European Central Bank.

- Its lead overseer is the National Bank of Belgium.
- The SWIFT oversight forum was established in 2012.

Nut Graf:

The ongoing Russia-Ukraine war has brought the SWIFT payment system into the limelight, with the US and European nations threatening to cut off Russia from the financial world.

Optional Subject Coaching

for Political Science and International
Relations, and Sociology

**Video Lectures**

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ART AND CULTURE

Art Forms

1. Bhimsen Joshi

Context:

- 100th birth anniversary of Pandit Bhimsen Joshi.

Pandit Bhimsen Joshi:

- Bhimsen Joshi was one of the greatest Indian vocalists from Karnataka, in the Hindustani classical tradition.
- He is known for the Khayal form of singing and belongs to the Kirana Gharana tradition of Hindustani Classical Music.
- Pandit Bhimsen Joshi has been awarded the Sangeet Natak Akademi Fellowship. He also received the Bharat Ratna award in 2009.

Khyal or Khayal

- It is a major form of Hindustani classical music
- Its name comes from a Persian/Arabic word meaning "imagination".
- The origins of khayal are often associated with the famous musician Amir Khusrau.
- Khayal provides greater freedom for imaginative improvisations within the frame of a given raga and tala.

Kirana gharana

- It derives its name from the birthplace of Abdul Kharim Khan of Kirana near Kurukshetra.
- Founders - Abdul Karim Khan and Abdul Wahid Khan
- In the Kirana style of singing, the swara is used to create an emotional mood by means of elongation and use of Kana-s.

Miscellaneous

2. Chaitanya Mahaprabhu

- » Prelims: Facts about Chaitanya Mahaprabhu

Context:

- The President of India in a recent event said that Sri Chaitanya Mahaprabhu has a special place among those saints who promoted Bhakti-Marg.

Chaitanya Mahaprabhu

- Chaitanya Mahaprabhu is a 15th-century Indian Saint.
- He was born in Nabadwip (in present-day West Bengal) in 1486.
- His mode of worshiping lord Krishna with

ecstatic song and dance has a great influence on Vaishnavism in Bengal.

- He was the chief proponent of the Vedantic philosophy of Achintya Bheda Abheda Tattva.
- Mahaprabhu founded Gaudiya Vaishnavism (Brahma-Madhva-Gaudiya Sampradaya).
- The tradition of worshiping God with Bhakti-Bhav (devotion) has been significant in India and Sri Chaitanya is a saint who has practiced selfless worship, inspiring a large number of people to choose the path of Bhakti.
- He expounded Bhakti yoga and popularized the chanting of the Hare Krishna Maha-mantra.
- He has composed the Shikshashtakam (eight devotional prayers).

Salient aspects of architecture from ancient to modern times

3. Devayatanam

- » Prelims: Temple architecture of India

Context:

- Devayatanam is a unique conference on the temple architecture of India which was inaugurated at Hampi in Karnataka.

Aim of the Conference

- Devayatanam aims to highlight the richness of Indian culture that is reflected through the fascinating architecture of Indian temples.

About Devayatanam:

- It is an international conference which is organised by the Archaeological Survey of India, Ministry of Culture.
- The conference on Indian temples will echo the philosophical, religious, social, economic, technical and scientific significance of the temples.
- Various discussions on temple architecture and their importance will be held by the experts and eminent scholars.
- The focus of the discussion will be on:
 - * Temple- Formless to form
 - * Evolution of temple architecture
 - * Regional developmental forms
 - * Different Styles of architecture
 - * Temples as epicentre of art, culture, education, administration and economy

- * Temples as the protector of environment
- * Culture diffusion in Southeast Asia

Miscellaneous

4. Khwaja Moinuddin Chishti

- » Prelims: Facts about Khwaja Moinuddin Chishti

Context:

- The Union Minister for Minority Affairs offered "Chadar" on behalf of the Prime Minister at Ajmer Sharif Dargah in Rajasthan on the occasion of 810th Urs of Khwaja Moinuddin Chishti.

Khwaja Moinuddin Chishti

- Khwaja Moinuddin Chishti was born in Sijistan in Iran in 1141-42. He arrived in Delhi during the reign of the Iltutmish.
- He settled in the Indian subcontinent in the early 13th-century, where he promulgated the famous Chishtiyya order of Sunni mysticism.
- Later he moved to Ajmer, where he started living and preaching.
- Chishti was soon able to draw the local populace, poor people, peasants, and nobles from far and wide.

Chishtiyya order

- The Chishtiyya Order is a tariqa, (an order or school) within the mystic Sufi tradition of Sunni Islam.
- Khwaja Muinuddin Chishti introduced the Chishti Order to the Indian subcontinent in Ajmer.
- The order is known for its emphasis on love, tolerance, and openness.
- The four main Sufi orders practiced in India are: Chisti, Qadiriyya, Suhrawardiyya and Naqshbandi.

Ajmer Sharif Dargah

- The tomb of Chishti became a site of worship following the preacher's death in 1236.
- Rulers like Muhammad bin Tughluq and Akbar, have said to have made their famous visits to the tomb.
- In the present day, the dargah continues to be one of the most popular sites of religious visitation for Sunnis.
- The Dargah complex of Chishti was built in Indo-Islamic style of architecture.
- A golden crown offered by Nawab Haider Ali Khan of Rampur sits on top of it and a lotus adorns the dome.
- The materials used include marble, brick and sandstone.

5. Shri Guru Ravidas

- » Prelims: About Guru Ravidas

Context:

- The Prime Minister offered homage to the Bhakti saint Shri Guru Ravidas on the occasion of Ravidas Jayanti.

About Guru Ravidas:

- He was a saint of the Bhakti Movement during the 15th to 16th century and was a mystic poet.
- He propagated the Ravidassia religion that comprised his teachings directed against the prevalent evil practices of society.
- He was a contemporary to saint Kabir.
- He is venerated as a social reformer and a spiritual personality in many parts of India.
- His devotional verses were inserted in the Sikh scripture, Guru Granth Sahib.
- The Panchvani of Dadupanthis (Hindu warrior ascetic group) consists of the literary works of Ravidas.
- The songs of Ravidas expound Nirguna-Saguna themes and the ideas that are the cornerstones of the Nath Yoga philosophy of Hinduism.
- It is said that he opposed evil practices like casteism and untouchability.
- Every year, on his birth anniversary, Shabad Kirtan is performed in Ravidas Mandir which is located in Delhi.

Indian Heritage and Culture

6. Statue of Equality

- » Prelims: About saint Shri Ramanujacharya
- » Mains: Contributions of Indian philosophers and spiritual thinkers towards promoting equality and harmony

Context:

- In order to promote the doctrine of equality, the Prime Minister unveiled the 216 feet tall statue of Saint Shri Ramanujacharya in Hyderabad. This statue has been recognised as the Statue of Equality commemorating the venerable personality on his 1000th birth anniversary.

About the Statue of Equality:

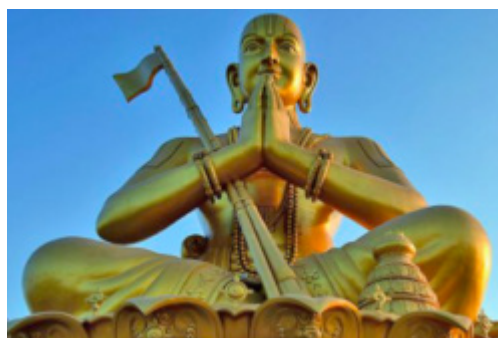


Image source: thehindubusinessline

- This statue is made of panchaloha which is a combination of five metals namely gold, silver, copper, brass and zinc.
- It is mounted on a 54 feet high base building named 'Bhadra Vedi'.
- The Bhadra Vedi has floors devoted to a Vedic digital library and research centre, ancient Indian texts, a theatre, an educational gallery detailing many works of Shri Ramanujacharya.
- The statue was installed in the ashram of Sri Tridandi Chinna Jeeyar Swamy.
- The statue has been conceptualised by Sri Chinna Jeeyar Swami of Sri Ramanujacharya ashram.
- The launch programme witnessed a 3D presentation mapping on the life journey and teaching of Shri Ramanujacharya.
- The statue is surrounded by Divya Desams which are ornately carved temples.

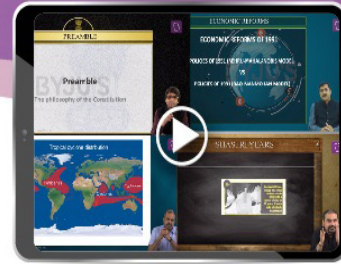
Shri Ramanujacharya:

- Shri Ramanujacharya, the 11th century Bhakti Saint, advocated the message of equality that was propagated across humanity.

- He put forth his composition for Sanskrit Granth and gave the Tamil language equal importance in Bhakti Marg.
- He preached the concept of equality among people irrespective of caste and creed which is also reflected in the Preamble of the Indian Constitution.
- Ramanujacharya aimed to promote the Vishishtadvaita philosophy which attempted to drive away from blind faith.
- Vishishtadvaita philosophy is the non-dualistic school of Vedanta philosophy.
- Bhakti which is a reverence towards the divine entity formed an integral part of his teachings.
- He fought for the entry of Dalits into the temples and propagated that for a human being, the character is important and not caste.
- Shri Ramanujacharya wrote nine scriptures called Navaratnas and composed numerous commentaries on Vedic scriptures.
- Several scholars followed his path and the works of many ancient poets like Annamacharya, Bhakta Ramdas, Thyagaraja, Kabir, and Meerabai were inspired by him.

IAS टेबलेट कार्यक्रम

सर्वोत्तम व्याख्यान की कहीं भी और कभी भी उपलब्धता



500 से अधिक घंटों का प्रारंभिक और मुख्य परीक्षा के पाठ्यक्रम को आवृत करता हुआ व्याख्यान



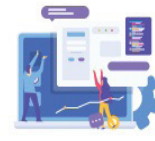
हमारे मार्गदर्शकों द्वारा प्रत्येक छात्र हेतु मार्गदर्शन और व्यक्तिगत प्रतिपुष्टि



मानक पुस्तकों सहित समग्र और अद्यतन अध्ययन सामग्री



पुनरीक्षण नोट्स के साथ चर्चित मुद्दों पर सप्ताह में दो बार लाइव वेबिनार व्याख्यान



साप्ताहिक वेबिनार, चर्चित मुद्दे, समसामयिकी पत्र/पत्रिका और प्रैक्टिस सेट का छात्र पोर्टल उपलब्ध

SCIENCE AND TECHNOLOGY

Awareness in the fields of Computers

1. Artificial Neural Networks (ANN)

- » Prelims: ANN and backpropagation
- » Mains: Potential/applications of ANN

Context

- Increasing popularity of Artificial Neural Networks (ANN)

Artificial Neural Networks:

- Artificial neural networks (ANNs), also called neural networks (NNs), are computing systems inspired by the biological neural networks that constitute animal brains. It is based on a collection of connected units or nodes called artificial neurons.
- The concept behind an Artificial Neural Network is to define inputs and outputs, feed pieces of inputs to computer programs that function as artificial neurons and make inferences or calculations, then forward those results to another layer of computer programs and so on, until a result is obtained.

Backpropagation:

- As part of artificial neural networks, a difference between intended output and input is computed at each layer and this difference is used to tune the parameters to each program. This method is called backpropagation and is an essential component to the Neural Network.

Potential/applications of ANN:

- The ANN frameworks can be used for both normal Machine Learning tasks like classification or clustering and for Deep Learning.
 - * Machine Learning, is the computer technology that uses data to detect patterns.
 - * ANN frameworks with its backpropagation can be used in hand-written digit recognition without the need for manual labelling of large amounts of sample data. This can avoid human involvement to label data and automate the process. The approach of using neural networks of many layers to automatically detect patterns and parameters is called Deep Learning.
- Through ANNs and the backpropagation method, artificial intelligence has become more powerful. This can enable a computer to perform tasks like a human brain does.
- ANN frameworks will be useful where there are tasks that cannot be done with good accuracy by normal Machine Learning and hence need

Deep Learning in tasks such as Automatic Image Recognition of rich images and Speech Recognition.

- A special type of ANN called Generative Adversarial Network can actually generate creative output like music or paintings.
- ANNs are also present in many smartphone applications, like voice to type, Siri and Alexa.

Developments aiding the development of ANNs:

- A few key developments in the past two decades have helped ANNs mature.
 - * The advent of Graphic Processing Units (GPU) which are good at performing massive parallel tasks have helped improve computing power.
 - * Availability of a few free ANN frameworks that can be used for both normal Machine Learning tasks as well as Deep Learning tasks.
 - * The advent of cloud computing has provided enormous computing resources that are needed for ANNs to “work through” massive volumes of data.
 - * The software for neural networks have matured and backpropagation techniques have become robust.

Nut Graf

The advent of ANNs and the backpropagation method offers immense scope for the development of artificial intelligence technology.

Science and Technology- developments and their applications and effects in everyday life.

2. Metamaterial

- » Prelims: Metamaterials

Context:

- Researchers from Indian Institute of Technology Madras have developed Origami metamaterials
 - * It combines the Japanese art of paper folding (origami) and the existing material of choice and fold it to obtain desired properties.

Metamaterial

- A metamaterial is any material that was engineered so that a property not found in naturally occurring materials could be exploited.
- Designed right, metamaterials can affect sound waves, electromagnetic radiation, light, and even earthquakes in ways that bulk materials cannot.

Potential applications for metamaterials

- It includes optical filtering, medical devices, remote aerospace operations, sensor detectors, solar power management, crowd control, radomes, antenna lenses, and even earthquake protection.

Science and Technology – Indigenization of technology**3. Ramalingaswami Re-entry Fellowship**

- » Prelims: Facts about Ramalingaswami Re-entry Fellowship programme

Context:

- Union Minister of State of Science & Technology said that India is currently witnessing a sort of reverse brain drain with several Indian origin Scientists abroad keen to return home.

Ramalingaswami Re-entry Fellowship programme

- It is a flagship scheme of the Department of Biotechnology, launched in 2006-07, with a view to bring back the Indian Scientists working in Modern Biology, Biotechnology, Life Sciences and other related areas abroad.
- The programme aims to improve the country's human resource capacity in the research field in terms of development, translation and diffusion by attracting scientists abroad.
- The fellowship programme is being managed by Regional Center for Biotechnology under its DBT-HRD Project & Management Unit (DBT-HRD PMU).
- Ramalingaswami Re-entry Fellows would be able to work in any of the scientific institutions in the country and shall be eligible for regular research grants through research schemes of various S&T agencies of the Government of India.

Achievements of Indians in science & technology; indigenization of technology**4. Vigyan Sarvatra Pujiyate**

- » Prelims: Facts about Vigyan Sarvatra Pujiyate

Context

- The Ministry of Culture will organize commemorative exhibitions at 75 locations portraying 75 years of India's achievements in science and technology as part of 'Vigyan Sarvatra Pujiyate'.

Vigyan Sarvatar Pujiyate:

- Vigyan Sarvatar Pujiyate is a week-long Festival of SCoPE (Science Communication Popularisation Extension) being celebrated during Azadi ka Amrit Mahotsav.

- The 'Vigyan Sarvatra Pujiyate' aims to attract students towards scientific knowledge of articles of daily use and propagating scientific theories.
- The National Council of Science Museums (NCSM) is an important partner in the Vigyan Sarvatar Pujiyate.
 - * NCSM is an autonomous society under the Ministry of Culture.
 - * NCSM forms the largest network of science centers and museums in the world under a single administrative umbrella.
- Agencies involved:
 - * Department of Science and Technology (DST), Department of Biotechnology, CSIR, DRDO and other ministries
 - * the Ministry of Culture.
 - * Vigyan Prasar, an autonomous organization of DST with a mandate to promote science communication in the country, is the coordinating agency.

Awareness in the fields of Space**5. An Observation from the Devasthal Observatory**

- » Prelims: Devasthal Observatory, About Pluto
- » Mains: India's progress in space exploration and research.

Context:

- An important observation pertaining to the atmospheric pressure at the surface of Pluto has been made by a team of Indian scientists from the Devasthal observatory along with their international counterparts.

About the observation:

- It was found that the atmospheric pressure on the surface of Pluto is 80,000 times less than the atmospheric pressure at mean sea level on Earth.
- The Devasthal optical telescope was used to provide data that helped in the calculation of the atmospheric pressure of Pluto. It was calculated by the observation of stellar occultation by Pluto on a particular day.
- In astronomy, occultation occurs when a celestial object gets hidden from the view of the observer due to another celestial object passing in between them.
- Such an event has been observed in a compilation of twelve stellar occultations by Pluto within a span of 1988 and 2016. It has been observed that there is a three-fold monotonic increase of atmospheric pressure of Pluto.
- An international team of scientists along with members from the Aryabhata Research Institute of Observational Sciences used signal to noise

ratio to determine the atmospheric pressure at the surface of Pluto.

- The team explained further that this occultation was particularly timely as it can assess the current models of the atmospheric evolution of Pluto.
- Pluto's atmosphere is in a plateau phase close to the peak and is in agreement with the model values calculated earlier by the Pluto volatile transport model in 2019.

Possible Inferences about Pluto:

- It is confirmed from the study that Pluto experiences intense seasonal episodes because of a large depression on Pluto known as Sputnik Planitia.
- Pluto's poles remain in permanent darkness or sunlight for decades which covers a 248 year long orbital period.
- This leads to strong effects on its Nitrogen atmosphere that is controlled by vapour pressure equilibrium.
- It is found to move away from the Galactic plane as seen from Earth, stellar occultations by the dwarf planet are becoming increasingly rare, making this event a decisive one.

Facts about Pluto:

- It is categorised as the dwarf planet in the Kuiper belt which is a donut-shaped region of icy bodies beyond the orbit of Neptune.
- It is 1400 miles wide and orbits the sun about 3.6 billion miles away on an average.
- A year of Pluto consists of 248 Earth years and a day on Pluto lasts 153 hours.
- Its atmosphere is thin and has nitrogen, methane and carbon monoxide.
- Pluto has 5 moons and the largest one is called Charon.
- It doesn't have any ring system.
- New Horizons of NASA was the only spacecraft to visit Pluto.

Devasthal Optical Telescope:

- It is 3.6 metre long clear aperture telescope which was built by Aryabhata Research Institute of Observational Sciences (ARIES) and is located at the Devasthal Observatory near Nainital, Uttarakhand.
- It has been built in collaboration with the Belgian firm Advanced Mechanical and Optical System.
- ARIES operates another 1.3 m telescope at the same location.
- This is presently the largest telescope in Asia.
- It features an optical spectrograph, a CCD imager and near-infrared spectrograph along with an active optics system having a wavefront sensor and pneumatic actuators which compensates for small distortions.

Science and Technology- developments and their applications and effects in everydaylife

6. Creating a sun in a lab

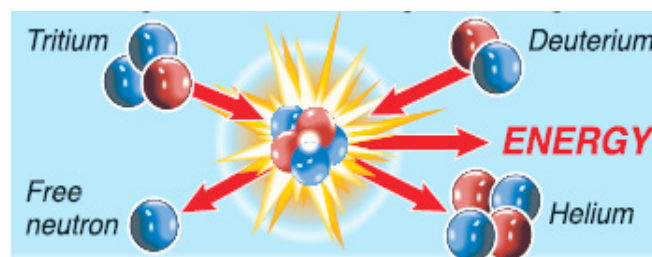
- » Prelims: Tokamak; ITER
- » Mains: Challenges in harnessing thermonuclear energy

Context

- Scientists at the Joint European Torus (JET) facility near Oxford in England have achieved a new milestone in producing nuclear fusion energy.
 - * The team generated 59 megajoules of sustained energy during an experiment, more than doubling the previous record.
 - * The energy was produced in a machine called a tokamak.

Thermonuclear fusion:

- In a thermonuclear fusion reaction, lighter atoms like those of hydrogen fuse to produce slightly heavier atoms like helium. The difference in masses is converted into pure energy by way of Einstein's formula $E=mc^2$. The heat is harnessed to produce steam which in turn runs a turbine to generate electricity.
- The main focus has been on the use of isotopes of hydrogen called deuterium and tritium for nuclear fusion.
 - * Deuterium, also called heavy hydrogen, has a neutron and a proton in its nucleus. Tritium, another isotope of hydrogen, has two neutrons and one proton.



Tokamak:

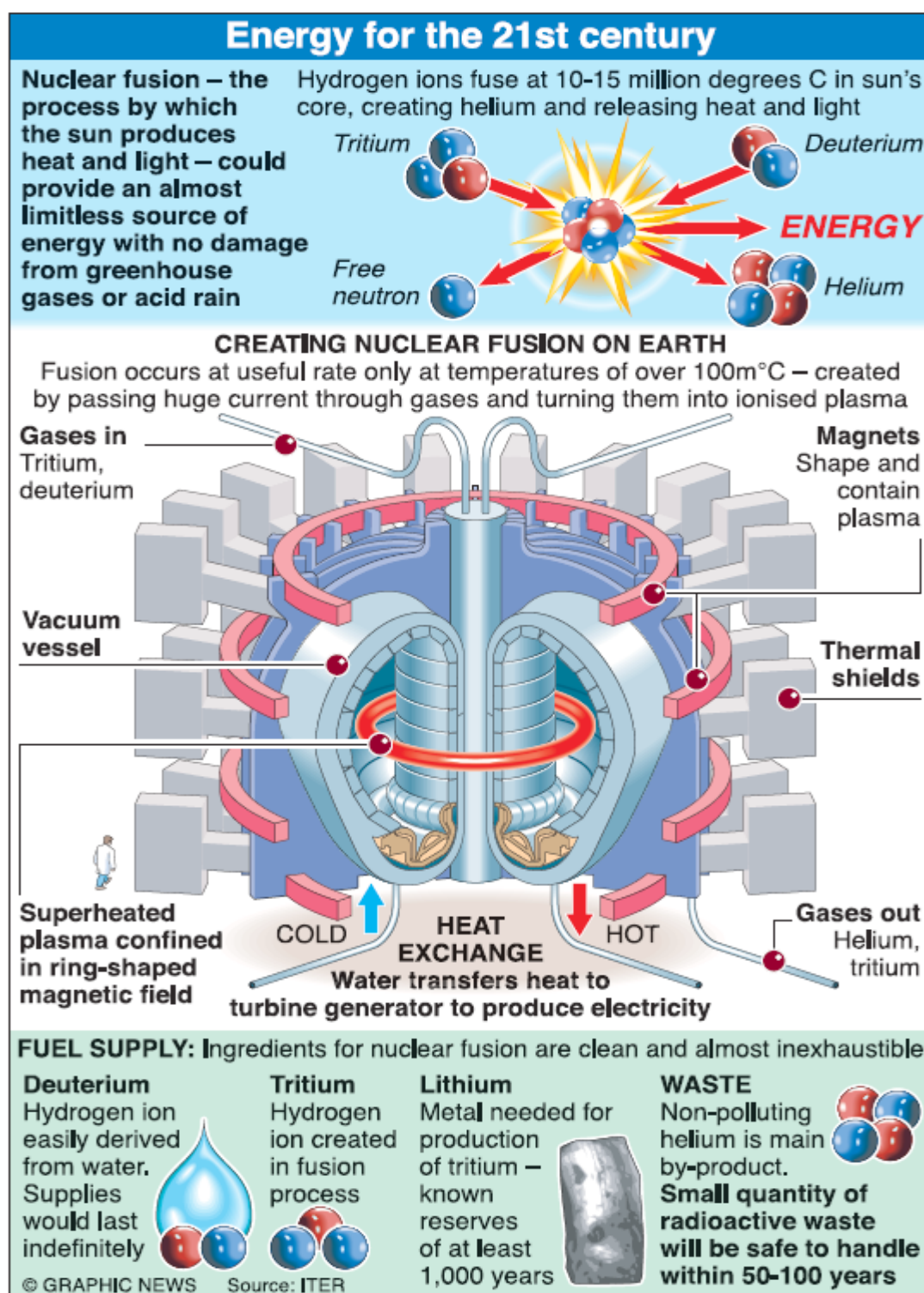
- A tokamak is a machine that confines a plasma using magnetic fields in a donut shape that scientists call a torus.
- The tokamak is one of several types of magnetic confinement devices being developed to produce controlled thermonuclear fusion power. As of 2021, it is the leading candidate for a practical fusion reactor.
- In a tokamak, magnetic field coils confine plasma particles to allow the plasma to achieve the conditions necessary for fusion.

Significance of Nuclear Fusion Energy:

- Unlike in nuclear fission, the fuel for nuclear fusion is abundantly available and almost inexhaustible.
 - * Deuterium hydrogen ions can be easily derived from water, while tritium hydrogen ions can be produced from lithium.
- Nuclear fusion is considered safer than nuclear fission. Nuclear fission power plants have the disadvantage of generating unstable nuclei; some of these are radioactive for millions of years. Fusion on the other hand does not create any long-lived radioactive nuclear waste. A fusion reactor produces helium, which is an inert gas.

Also, the small quantity of radioactive waste will be safe to handle for periods within 50-100 years.

- Also, fusion energy production is not based on a chain reaction, as is fission. Plasma must be kept at very high temperatures with the support of external heating systems and confined by an external magnetic field. Every shift or change of the working configuration in the reactor causes the cooling of plasma or the loss of its containment; in such a case, the reactor would automatically come to a halt within a few seconds, since the process of energy production is arrested, with no effects taking place on the outside. For this reason, fusion reactors are considered to be inherently safe.



Challenges in harnessing nuclear fusion energy:**Need for plasma state like condition to initiate nuclear fusion:**

- Ordinarily, the atoms cannot fuse. The like charges of the electron clouds surrounding the atoms would repulse and keep them from coming too close. As observed in stars, at very high temperatures, all the electrons are ripped away, forming what is known as plasma.
- For nuclear fusion to occur there is the need for very high temperatures and pressures. If fusion has to occur, the first step has to be the creation of hot plasma.

Sustaining plasma-like condition:

- While heating hydrogen to millions of degrees and generating plasma is not that hard given the advancements made in laser technologies, sustaining the plasma at high temperatures for a long time remains a big challenge if commercial energy has to be obtained.
- One of the critical challenges in the Tokamak is the sudden appearance of plasma instabilities.

Constraining the plasma to a defined space and ensuring beam collision:

- Keeping the plasma constrained in a defined space and without touching the container wall is another major challenge. Additionally, plasma must be made to swirl around and made to collide to initiate the fusion of atoms.
- The above two requirements are being sought to be addressed by the Tokamak that creates a magnetic field in the shape of a torus to contain the plasma. They are also being used to generate swirls and induce beam collisions.
- Although alternative designs such as z-pinch and stellarator have been designed and tested, tokamaks are more popular for this function.

Net energy output:

- Given the high energy input necessary to initiate plasma-like conditions and operation of Tokamak, experimental tokamaks worldwide thus far have not been able to demonstrate net energy production.
- In the experimental tokamaks, the input energy has been greater than the output energy.

Global efforts:

- Thirty-five countries, including India, Russia, the United States, the United Kingdom, China, European Union, are collaborating to jointly build the largest Tokamak as part of the International Thermonuclear Experimental Reactor (ITER) in southern France.
- Energy production is planned to be commenced from 2035.

Efforts in India:

- The Institute for Plasma Research (IPR) in Gandhinagar and the Hot Plasma Project at Saha Institute of Nuclear Physics (SINP), Kolkata are leading nuclear fusion research in India.

Nut Graf

The current breakthroughs achieved are significant steps forward towards mainstreaming the use of nuclear fusion energy and realizing the potential of virtually unlimited supplies of low-carbon, low-radiation energy.

Indigenization of technology**7. India's semiconductor dream**

- » Mains: Significance of semiconductor manufacturing, various government initiatives and the way forward.

Context

The pandemic has highlighted the vulnerabilities of the global supply chain of semiconductor manufacturing.

Reasons for disruption in the supply of semiconductors

- Supply-side constraints due to the COVID-19 pandemic
- Overdependence of the world on East Asia for fab manufacturing (semiconductor fabrication plant is commonly called as "fab")
- The rising prices of silicon
- The China-U.S. trade war

Global initiatives to resolve semiconductor shortage

- Various countries are trying to safeguard their interests by introducing packages to attract more chip manufacturing.
- The U.S. has announced a \$50 billion package to create factories
- Intel is adding two more foundries to its Arizona campus and is also developing its own foundry business to compete with chip-makers such as Taiwan Semiconductor Manufacturing Company (TSMC) and United Microelectronics Corporation (UMC).
- TSMC, which controls 24% of the semiconductor supply chain, is setting up a \$12 billion facility in Arizona.
- Japan and Germany have got TSMC to start specialty technology fabs in their countries.

Initiatives by India

- India has approved a \$10 billion package to incentivise the manufacturing of semiconductors in the country.

- The government has announced a list of incentives to attract leading international manufacturers to set up their manufacturing units in India.
- Production-linked incentive (PLI) scheme for semiconductor and display board production. The scheme has been allocated ₹76,000 crores.
- Chips to Startup (C2S) Programme – The Program aims to train 85,000 high-quality and qualified engineers in the area of Very-large-scale integration (VLSI) and Embedded System Design.
- Design Linked Incentive (DLI) Scheme – The scheme aims to nurture at least 20 domestic companies involved in semiconductor design and facilitate them to achieve a turnover of more than ₹1500 crores in the next 5 years(2022-27).

Way forward

- Fab manufacturing
 - * India has the largest number of chip designers outside of the U.S.
 - » Example: Karnataka has over 85 fabless chip design houses of various global companies.
 - * To create the ecosystem for fab manufacturing, it is important to lock in the demand for semiconductors produced within the country.
 - * The total demand for semiconductors stands at \$24 billion. This is expected to grow to \$80-90 billion by 2030.
 - * It would be ideal to enter into an agreement with the consumers of such semiconductors to ensure that the production is consumed within the country.
- Develop raw material supply capabilities
 - * The India Electronics and Semiconductor Association is exploring the opportunity to start supplying processed raw materials like minerals and gases to the fab industries.
 - * This will help the Indian gas, materials, and mines industry and also expand opportunities for semiconductor equipment, spares, and service industry.
- Fab clustering
 - * To ensure that semiconductor supply chains and related businesses are in one place to create linkages.
 - * Such sites should be chosen based on the ability of the location to act as a force multiplier for the development of an ecosystem.
 - * It needs to ensure high-quality infrastructure along with uninterrupted power availability and the availability of semiconductor grade Ultra Pure Water to the extent of 10 MLD per fab.

- Creating a conducive environment for women and night shifts with zero labour disputes.
- Focus on encouraging Indian manufacturers and start-ups to enter and master complex R&Ds
- Premier research institutions such as the Indian Institute of Science should be incentivised to work on R&D in chip designing and manufacturing.
- Further, the government must focus on emerging technologies like LiDAR and Phased Array in which incumbents do not have a disproportionate advantage and the entry barrier is low.

Nut Graf

Considering the current geopolitical dynamics and the fact that semiconductors are at the core of fourth industrial revolution technologies, India must continue its focus on the sector and work aggressively on new cutting-edge technologies that can help achieve Aatmanirbhar in the sector.

Science and Technology- developments and their applications and effects in everyday life.

8. Centre moots policy on synthetic biology

- » Prelims: Synthetic biology
- » Mains: Significance and challenges with the use of Synthetic biology in India

Context

- The Centre is working on a national policy on synthetic biology

What is synthetic biology?

- Synthetic biology is an emerging science that deals with engineering life forms for a wide range of applications from making designer medicines to foods.
- Some examples of what scientists are producing with synthetic biology are:
 - * Microorganisms harnessed for bioremediation to clean pollutants from our water, soil and air.
 - * Modified rice to produce beta-carotene, a nutrient usually associated with carrots, that prevents vitamin
 - * Yeast engineered to produce rose oil

Applications of synthetic biology:

- The potential benefits from synthetic biotechnology are seen in biofuels, bioremediation, biosensors, food and health.
- Use of gene editing systems such as CRISPR that allow defective genes in animals, plants and even people to be silenced, or changed, and control biological outcomes.

Government's Response so Far:

- As part of the 12th Five-Year Plan, India had set up a task force on systems biology and synthetic biology research in 2011.
 - * It made a strong case for a push for the technology and highlighted that India could be a world leader as a protector and supporter of "open source biological platforms".

What are the Challenges?

- Security Challenges: Biosafety and biosecurity issues emerging from research in synthetic biology.
- Lack of Research: India is lagging behind in this field of research and an urgent need arises to expand the research base if India wishes to accelerate the field of synthetic biology.

Awareness in the field of Space**9. NASA's plan to decommission the International Space Station**

- » Prelims: International Space Station
- » Mains: Decommissioning of International Space Station – the reasons, the process and challenges associated with it.

Context

- NASA plans to decommission the International Space Station (ISS) by 2031.

International Space Station (ISS)

- The ISS was launched in 1998 by five space agencies, namely, NASA (USA), Roscosmos (Russia), European Space Agency (ESA-Europe), JAXA (Japan) and the Canadian Space Agency (CSA-Canada).
- The ISS operates in low-earth orbit and is at an altitude between about 200 km and 400 km and weighs more than 400,000 kg.
- The ISS orbits the earth at about 5 miles per second and makes 15.5 orbits per day. It takes about 93 minutes to make one revolution around the earth.
- The National Aeronautics and Space Administration (NASA) has announced plans to retire and decommission the International Space Station (ISS) by 2031.

The Reasons for Decommissioning the ISS

- The ISS was initially built to operate for 15 years. The space station has surpassed the timeline and plans to serve till 2030.
- The ISS goes through 16 rotations of the earth per day, experiencing extreme temperature changes, causing intense expansion and contraction of the material.

- * The side facing the sun gets heated up to 121°C.
- * The temperature on the opposite, darker side falls upto –157°C.

- The orbital thermal cycling, along with dynamic loading, affects the longevity of the structure of the ISS.
- The technical lifetime of the space station is also limited, with parts like radiators, modules and truss structures tend to degrade over time.

Challenges with the decommissioning

- The ISS is a huge structure and it was not designed to be disassembled in space.
 - * The process of dismantling in space has posed huge logistical and financial challenges.
- The ISS cannot be decommissioned by boosting to a higher orbit because of its large mass and low operational altitude.
 - * The station also has a mass of over 4,30,000 kg.
 - * Existing propulsion systems cannot raise the station's altitude to a high target and escape low-earth orbit.
- The random re-entry method was discarded since it carries a huge risk for the human population on the ground.

The process of decommissioning

- NASA plans to remove the ISS from its orbit around the earth and eventually plunge it into the ocean at a point farthest from human settlements.
- NASA will use the dual method of natural orbit decay and a re-entry manoeuvre to decommission the ISS.
- The earth's atmospheric drag will be used to lower the altitude of the ISS while setting up the de-orbit.
- The space station operators provide the final push to lower the structure to the maximum possible height and ensure safe re-entry into the earth's atmosphere, leading it to Point Nemo over the South Pacific Oceanic Uninhabited Area (SPOUA).
- The exterior of the module is expected to melt when it re-enters the earth's atmosphere.
- The internal hardware is also expected to burn during the process.
- It is believed that denser components will survive the re-entry and fall into the SPOUA.
- NASA claims that the process will not cause any substantial long-term impact on the environment.

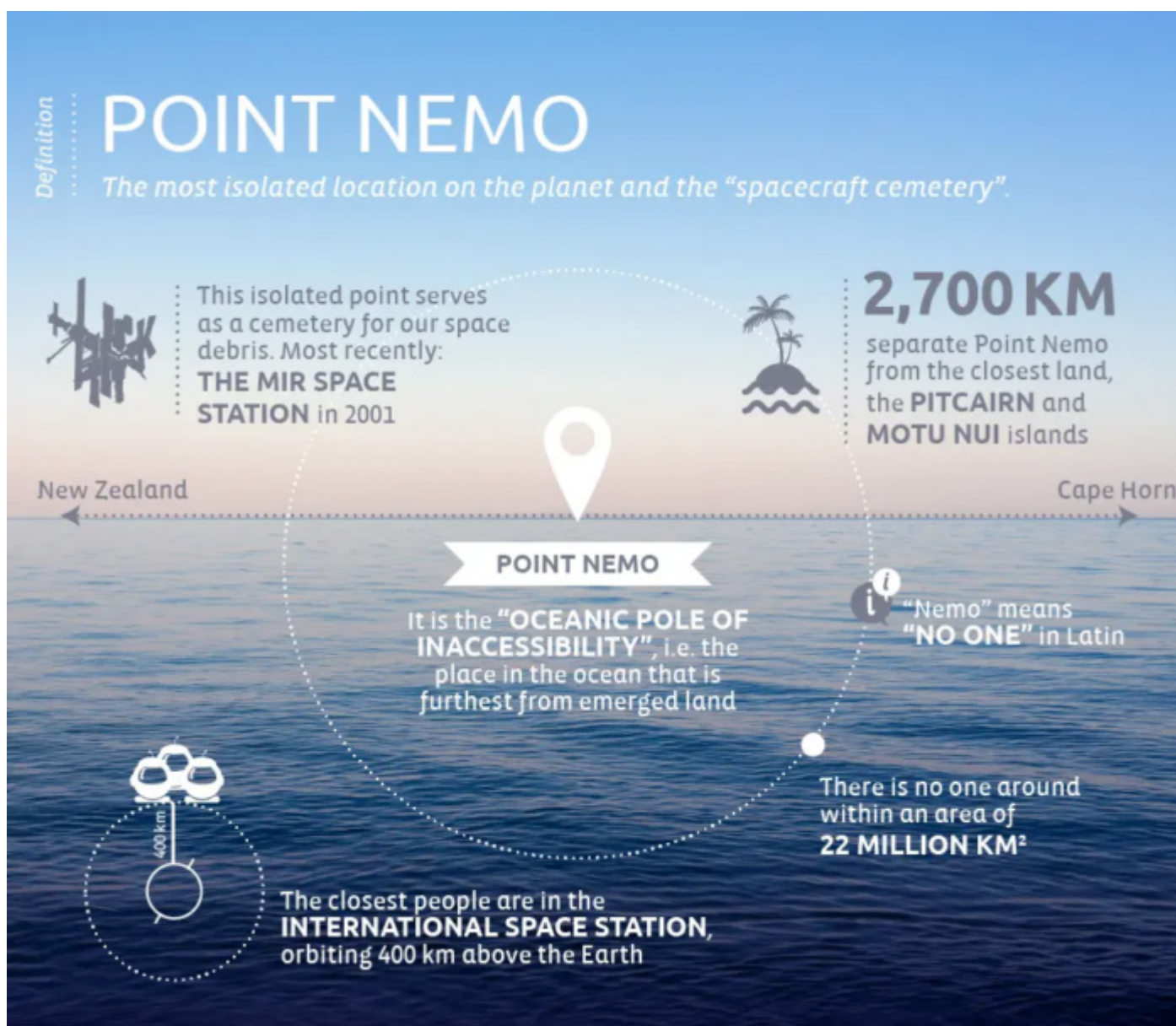


Image Source: escalas

Future space stations

- China announced that its space station will be ready for operations in 2022.
- Blue Origin, an aerospace company, has also announced its plans to build Orbital Reef, a commercially developed, owned, and operated space station in low-earth orbit.

Nut Graf

Acknowledging the fact that the International Space Station is facing limitations due to its long life-cycle, NASA plans to decommission its operations and is further planning to hand-over the operations in low-earth orbit to private players to focus on its missions to explore the moon and Mars.

Achievements of Indians in science & technology.

10. A day to embody the true spirit of science

- » Prelims: Vigyan Sarvatra Pujyate programme
- » Mains: Freeman Dayson's views about science and the need for transformation in the Indian scientific community.

Context

- The Government is organising a Science Week called 'Vigyan Sarvatra Pujyate'.

Vigyan Sarvatra Pujyate

- A programme titled Vigyan Sarvatra Pujyate is being held to celebrate the S & T achievements of India over the past 75 years as a prelude to National Science Day on February 28 that commemorates Sir C.V. Raman's discovery on light scattering.
- It is being held at 75 locations across the length and breadth of the country.

- The aim of the program is to inspire India's youth into building a progressive nation.

Freeman Dyson's views

- Freeman Dyson in his book, *The Scientist as Rebel*, argues about why dissent is the soul of science.
- He believes that science is universal, like music, dance or poetry.
- He considered evidence-based modern science as an intellectual rebellion or as a form of dissent against social constraints or the restrictions imposed by the locally prevailing culture.
- He also views that the Arabs, Indians, Japanese and Chinese have contributed highly to the development of modern science.

Indian context

- For Indian scientists in the past, science was a double rebellion,
 - * One against English domination.
 - * And another against the fatalistic ethos of religion.
- This rebellious spirit revived science in India in the pre-Independence era.
- Sir C.V. Raman's discovery should not be seen independent of the social reform movements of those days.
- With an ideological shift in recent times, academic freedom is now under greater pressure.
- For science to excel it needs to be promoted in a free spirit.
- As Dyson argues, "science is an inherently subversive act, a threat to establishment of all kinds, whether it upends a long-standing scientific idea, or it questions the received political wisdom or irrationality".

Need for transformation

- Cultural changes are difficult to achieve, especially in a society that is bound by traditions.
- A former Director-General of the CSIR, said that tradition-bound countries such as India need to free themselves from the cultural chains of the past to foster original thinking.
- It is the duty of scientists to promote a free and unrestricted intellectual environment by actively engaging in the transformation of values.
- A key challenge is to strengthen the social democratic norms within the institutes that represent Indian diversity.
- National Science Day should provide a platform where free discussions are organised, endorsing the true spirit of science, that help realise its huge transformative potential.

Nut Graf

The programme Vigyan Sarvatra Pujiyate is designed to make youth feel proud about India's scientific achievements. The event should be used to celebrate the true spirit of science that defies all types of intellectual restrictions, thus promoting critical thinking in academics.

Space Technology

11. Zooming in on the potential of India's geospatial sector

- » Mains: Impacts of deregulation of the geospatial sector for Indians and the challenges faced by the sector.

Context

- On 15th February 2021, the government decided to completely deregulate the geospatial sector for Indians. The article discusses the impact of this landmark decision and identifies the bottlenecks so that the geospatial sector works at its full potential.

Background:

- The geospatial ecosystem of India is very strong with the Survey of India (SoI), the Indian Space Research Organization (ISRO), Remote Sensing Application Centres (RSACs), the National Informatics Centre (NIC) in particular, and all ministries and departments, in general, using geospatial technology.
- However, the full benefits of the geospatial sector are yet to be passed on to the general public and the contribution of the geospatial sector to the GDP is not very noticeable.

Major events after the declaration of deregulation:

- The declaration of deregulation guidelines created a huge hubbub. Many of the media reports projected the growth of the geospatial market to be around Rs. 1 lakh crores by 2029 with a 13% Compound Annual Growth Rate (CAGR).
- The most remarkable event in 2021 was the oversubscription of the Initial Public Offering (IPO) of MapmyIndia.
- Another important event that took place after the declaration was the launching of a city mapping program by Genesys International in India.
- These kinds of energetic actions by investors for the geospatial sector were not experienced before the introduction of new guidelines. Hence, the new guidelines played an important role.
- The government has done its part and the industry is functioning positively. But, a question arises whether the geospatial sector is realizing its full potential or not?

Key Issues:

- Some of the major issues in the geospatial sector are as follows:

Lack of market:

- One of the biggest challenges is the lack of a market for geospatial services in India.
- This is because of the lack of awareness among the potential government as well as private users.

Lack of skilled manpower:

- The geospatial industry faces the challenge of the lack of skilled manpower.

Lack of data:

- Another hurdle in the way of the geospatial industry is the lack of foundational data, especially at a high resolution.
- There is a lack of clarity regarding data sharing and collaboration. This leads to the prevention of co-creation and maximization of assets.

No ready to use solution:

- There is no ready-to-use solution specifically created to resolve the problems of India.
- We can say that the restrictive data policies of the previous years were creating major issues but, even as we are celebrating the anniversary of the new guidelines, most people are unaware of them.
- There is a lot of confusion across government departments, and private industry. Hence, these issues should be addressed.

Measures to be taken:

- It is a well-known fact that these issues cannot be resolved overnight and formulation of guidelines alone will not solve the problems. But, India needs to take certain measures to address these issues aggressively:

Awareness among the users:

- There is a need to publish the entire policy document so that the government and private users are aware of the whole thing.

Availability of data:

- The data available with the government departments should be unlocked and emphasis should be laid on data sharing.
- An open data sharing protocol should be established so that data sharing can be encouraged and facilitated.
- A Geoportal should be established so that all the public-funded data will be made available as a service model with no or minimal charges.
- There is a need to generate foundation data across the country. This should include the Indian national digital elevation model (InDEM), data layers for cities, and data of natural resources.

Solution templates:

- Start-ups and solution developers should be engaged to build solution templates for various business processes across departments.
- Technology and solutions at the local level should be promoted and competition should be encouraged to achieve quality output.

Data storage:

- According to the guidelines, high accuracy data should not be stored in overseas clouds. Hence, there is a need to establish a geospatial data cloud locally.
- For example, the Ministry of Environment, Forest and Climate Change can provide a complete package of Geographic Information Systems (GIS) applications like the working plan, wildlife corridor mapping, social forestry, etc.
- National Organizations such as SOI and ISRO should be delegated with the responsibility of regulation and all the projects concerned with the scientific significance and security of the country.

No competition among entrepreneurs and National Organizations:

- There should be no competition between the national organizations and the business entrepreneurs as the latter remains in a disadvantaged position.

An Academic Program:

- India does not have strata of core professionals in geospatial technology although there are many persons who are trained in geospatial either through master's program or on-the-job training.
- There should be a bachelor's program in geospatial in the Indian Institutes of Technology and the National Institutes of Technology.
- Apart from that, there should be a separate university for geospatial courses.
- Such programs and courses will promote research and development in the country that are important for the development of technologies and solutions at the local level.

Way Forward:

- The geospatial sector in India is in the right position for investment. The discussion on issues and solutions are required to make the sector realize its true potential.
- It is expected that by the 10th anniversary of deregulation of the geospatial sector, India should have achieved the projected market size and the Indian entrepreneurs should be competing globally.

Nut Graf

Despite India having a robust ecosystem for geospatial technology, the full benefits of this are yet to fully percolate into the general populace. Unless the right policy framework and regulatory support are provided to remove the existing constraints, the Indian entrepreneurs in this domain will be at a disadvantage in the future when the geospatial technology would pervade various other fields along with other emerging technologies.

DEFENCE AND INTERNAL SECURITY

Defense: Military Exercise

1. Milan Exercise

- » Prelims: About the exercise

Context:

- The Indian Navy will host the largest multilateral exercise, Milan 2022.

Milan Exercise 2022:

- About Milan: 'Milan' is a biennial multilateral naval exercise hosted by the Indian Navy.
- Background:
 - * The Milan exercise has been held since 1995 at Andaman and Nicobar Command.
 - * For the first time, the exercise is being held in Visakhapatnam.
- Theme: The theme of the Milan exercise is 'Camaraderie–Cohesion–Collaboration'.
- Aims and Objective:
 - * To promote collective responsibilities of maritime security for ensuring safe and secure seas.
 - * To imbibe best practices and procedures and enable doctrinal learning in the maritime domain through professional interaction between friendly navies.

Various Security forces and agencies and their mandate.

2. Modernisation of Police Forces (MPF) Scheme

- » Prelims: Facts about MPF Scheme

Context:

- The Government has approved the continuation of Modernisation of Police Forces scheme.

Modernisation of Police Forces (MPF) Scheme

- Objective: To reduce the dependence of the State Governments on the Army and other Central forces to control internal security and law and order situations by equipping the State Police Forces adequately and strengthening their training infrastructure.

Key features of MPF Scheme

- Under the MPF scheme, provision has been made for internal security, law and order, adoption of modern technology by police, assisting states and UTs for narcotics control and "strengthening the criminal justice system by developing a robust forensic set-up in the country."

- A central outlay of Rs 18,839 crore has been earmarked for security-related expenditure in Jammu and Kashmir, insurgency affected northeastern states and Left Wing Extremism (LWE) affected areas.
- To develop operationally independent high-quality forensic sciences facilities in states and union territories for aiding scientific and timely investigation, Rs 2,080.50 crore will be given.
- For the raising of India Reserve Battalions or Specialised India Reserve Battalions, a central outlay of Rs 350 crore has been approved.

Various Security forces and agencies and their mandate

3. Vagir

- » Prelims: Salient features of Vagir; Scorpene class submarine; Project 75

Context:

- The sea trials for the fifth scorpene submarine of Project 75 commenced after which it will be named 'Vagir'.

About Vagir:

- Vagir is the fifth Scorpene (Kalvari) class submarine constructed by Mazagon Dock Shipbuilders Limited in collaboration with the Naval Group of France.
- This is one of the submarines under Project 75 with superior stealth features.
- It is equipped with advanced acoustic techniques.
- The submarine was named after INS Vagir which was a Russian Vela-class submarine that served in the Navy for a long time.
- This is capable of undertaking missions like anti-surface warfare, anti-submarine warfare, intelligence gathering, mine laying and area surveillance.

Project 75: Present status

- There are six submarines of the Scorpene class which are to be constructed at the Mazagon Dock Shipbuilders Limited.
- INS Kalvari and INS Khanderi are two submarines under the project which have been commissioned.
- The submarines are likely to get inducted every nine months and the last submarine will possibly be delivered by June 2022.

Defence Production

4. The BrahMos deal and India's defence exports

- » Prelims: BrahMos and Akash missile systems
- » Mains: Growth of defence exports from India; Significance of domestic defence manufacturing and defence exports; Measures being taken to boost defence exports

Context:

- Recently, the Philippines signed a deal with BrahMos Aerospace Pvt. Ltd. for the supply of the BrahMos supersonic cruise missile. This is the biggest defence export contract of India.
- * BrahMos is a joint venture between India's DRDO and Russia's NPO Mashinostroyeniya.

BrahMos missile:

- BrahMos is a medium-range ramjet supersonic cruise missile. It is notably one of the fastest supersonic cruise missiles in the world.
- Initially built as an anti-ship missile, several variants have since been developed and currently, BrahMos can be launched from land, sea, sub-sea and air against the surface and sea-based targets and has constantly been improved and upgraded.
- The range of the BrahMos was originally limited to 290 km as per obligations of the Missile Technology Control Regime (MTCR). Following India's entry into MTCR in June 2016, plans have been announced to extend the range of the missile first to 450 km and subsequently to 600 km.

Defence exports from India:

Philippines:

- The Philippines Army is looking to procure BrahMos missiles.
- The Philippines is also looking at several other military procurements from India. Hindustan Aeronautics Limited (HAL) has received interest from the Philippines Coast Guard for the procurement of seven Dhruv Advanced Light Helicopters and eight Dornier Do-228 aircraft.
- Indian based companies have supplied Bullet Proof Jackets (BPJ) to the Philippines in the past and are now in the race for bigger contracts for BPJs and helmets. Maritime domain and shipbuilding is another potential area for Indian defence companies in the Philippines.

South-East Asian nations:

- The South-East Asia region has emerged as a major focus area for India's defence exports. Negotiations for the BrahMos missile with Indonesia and Thailand are in advanced stages.

- In December 2020, the Cabinet Committee on Security (CCS) approved the export of indigenous Akash Surface to Air (SAM) missile systems with several countries in South East Asia.

West Asian nations:

- Several West Asian nations have envisaged interest in Akash and BrahMos missile systems.

Growth of the domestic defence manufacturing industry and exports:

- From 2016-17 to 2018-19, India's defence exports have registered a staggering 700% growth.
- The value of exports of defence items including major items in Financial Year 2020-21 was stood at ₹8,434.84 crore. The export target for the financial year 2021-22 was ₹10,000 crore.
- India has set itself an ambitious target to achieve a manufacturing turnover of \$25 billion or ₹1,75,000 crore including exports of ₹35,000 crores in aerospace and defence goods and services by 2025.

Measures being taken by the Government to promote defence exports:

- There have been a series of measures announced to promote domestic defence manufacturing as well as efforts to boost exports.
 - * Simplified defence industrial licensing
 - * Relaxation of export controls and grant of No Objection Certificates (NOC)
 - * A committee comprising the Defence Minister, External Affairs Minister and National Security Advisor has been set up to provide faster approvals for the export of major defence platforms
 - * Extending Line of Credit (LoC) to foreign countries to import defence products
 - * Empowering Defence Attaches in Indian missions abroad to promote defence exports

Nut Graf

The impetus being given to domestic defence manufacturing in India will help reduce strategic dependence on other countries while also helping India reap the economic benefits of the growth of domestic industries. The export of these defence equipment will not only provide business opportunities for India but will also help increase India's strategic influence both regionally and globally.

Security challenges and their management in border areas

5. '133 drones sighted along Pak. border in 2 years'

- » Mains: Concerns with increased drone sightings for India

Context:

- Punjab government informed a Parliamentary Committee on Home Affairs that drones have been sighted near the Pakistan border over 133 times in the last two years.

Drones:

- 'Drone' is the common name for an Unmanned Aerial Vehicle (UAV) which includes a ground-based controller and a communication system.

Punjab Border with Pakistan:

- The total length of Punjab's border with Pakistan is 553 kilometres.
- The International Border with Pakistan is guarded by the Border Security Force (BSF).
 - * BSF is a Central Armed Police Force under the Ministry of Home Affairs (MHA).

What are the concerns with increased drone sightings for India?

- Drone Attacks:
 - * The major concern is drone attacks as India has seen drones dropping weapons, ammunition and drugs.
 - » The BSF detected weapons dropped by a suspected Pakistan drone in Jammu.
 - » In 2020, the BSF shot down a drone in Hiranagar, Jammu.
- Lack of Effective Technology:
 - » There is no effective anti-drone technology available in the country.
- No Specific Drone Legislation:
 - » Punjab has not drafted or articulated a separate police drone policy and specific area-based mechanisms for the detection and neutralization of threats of drones.

What are the Challenges of the Drone attack for India?

- Large borders: Larger areas like borders are a challenge to avoid drone attacks.
- Drone Swarms: There is the problem of swarm drones, where scores of drones overwhelm and confuse detection systems, resulting in some of the drones sneaking through.
- Loop-holes in the Laws: There are loopholes in the drone legislation with respect to implementation, training and cost which worsen the threat of drone attacks.

- Logistics Challenges: The major challenge before the law enforcement agencies for countering the drone threat is its detection, identification and safe neutralization.

India's Anti-drone System:

- Defense Research and Development Organization (DRDO) has now developed a counter-drone system for detection, deterrence and destruction of incoming drones.
- The newly developed counter-drone system will enable mitigation of the impact of drones posing a threat to national security.

Nut Graf

The increased drone sightings at Punjab and Jammu and Kashmir have become a critical threat to security in India. Building capabilities to deter, detect and neutralize such aerial threats with the help of anti-drone technology is an urgent requirement.

Basics of cyber security

6. Taking a byte out of cyber threats

- » Mains: Concerns with Emerging Cyber Threats and possible solutions

What is a Cyber Attack?

- A cyber-attack is an assault launched by cybercriminals using one or more computers against a single or multiple computers or networks.
- Cyber-attacks are unwelcome attempts to steal, expose, alter, disable or destroy information through unauthorized access to computer systems.

Context

- Increase in Cyber-attacks

Examples of Cyber Attacks:

- The advent of the Stuxnet Worm in 2010 resulted in large-scale damage to Iran's centrifuge capabilities.
- In 2012, data from Saudi Aramco Oil Company computers were wiped out by Iranian operatives by employing malware.
- The ransomware attack on Colonial Pipeline in 2021 was the largest cyberattack on an oil infrastructure.

Indian Examples

- The data from an exam for the recruitment of police officers in 2019 in India was hacked which resulted in a leak of sensitive information of all the participants.

- In 2021, a huge leak of customer data was experienced by the famous pizza brand namely, Dominos, India.
- In 2021, the records of over 10 crore users were leaked from India-based digital payment company Mobikwik.

Concerns with Emerging Cyber Threats:

- **Wide Coverage:** Cyber threat is likely to be among concerns for both companies and governments across the globe.
- **Targeted Sectors:** Among the most targeted sectors in the coming period are likely to be: health care, education and research, communications and governments.
- **Health-care ransomware:** The ransomware attacks have led to longer stays in hospitals, apart from delays in procedures and tests, resulting in an increase in patient mortality.
- **Work From Home:** The huge security impact of working from home is likely to further accelerate the pace of cyberattacks.
- **Cloud Storage:** A tendency seen more recently to put everything on the Cloud could backfire, causing many security holes, challenges, misconfigurations and outages.
- **Dark Web:** The dark web is a subset of deep websites that can only be accessed by encryption software. The dark web is vulnerable to abuse by malicious actors as part of cyber threats.
- **Lack of Implementation:** Many companies fail to realize that inadequate corporate protection and defense could have huge external costs for national security.

Way Forward:

To tackle the increasing cyber threats, preventive and reactive cyber security strategies are needed. There is a need for clarity to ensure protection from all-encompassing cyber-attacks.

- Nations and institutions should actively prepare for cyberattacks by prioritizing the defense of data.
- The law enforcement agencies would need to play a vital role in providing an effective defense against cyber-attacks.
- There is a need to prioritize resilience through decentralized and dense networks, hybrid cloud structures, redundant applications and backup processes.
- There is a need to prioritize building trust in systems and creating backup plans including 'strategic decisions about what should be online or digital and what needs to stay analogue or physical.

Nut Graf

In the Information Age, data is gold. Failure to build cybersecurity resilience will mean that the cycle of cyber attacks will continue to threaten the foundations of a democratic society.

Security challenges and their management in border areas

7. Phensedyl smuggling a challenge for BSF

- » Prelims: What is Phensedyl? What is Phensedyl smuggling?
- » Mains: Phensedyl smuggling across India-Bangladesh border

Context

- Phensedyl, a codeine-based cough syrup, remains a challenge for the border guarding forces along the India-Bangladesh border.

What is Phensedyl?

- Phensedyl is a codeine-based cough syrup.
- It is abused as an intoxicant in the neighbouring country that follows liquor prohibition.
- It is consumed in large quantities against the recommended small dose to "get a kick".
- Phensedyl is a schedule H drug and can only be sold on a doctor's prescription.

What is Phensedyl smuggling?

- Phensedyl smuggling is the smuggling of cough syrup from India to Bangladesh utilizing the well-oiled network of pharmaceutical companies, agents and influential people.
- Excess Phensedyl is diverted through trucks to the bordering cities from where it is brought to nearby border areas and kept in safe houses managed by the main kingpins of the crime.

Challenges

- It is difficult to contain the smuggling because Phensedyl is smuggled in low quantities from India to Bangladesh.
- The Border Security Force (BSF) faces challenges like –
 - * "non-supportive" attitude of state police against Phensedyl smugglers,
 - * use of poor locals as couriers in the crime,
 - * international border cutting through villages,
 - * use of women and children to smuggle Phensedyl bottles.
- Along with Phensedyl, another narcotic that is smuggled in huge quantities is Yaba tablets which originate in Myanmar and come to India from Bangladesh.

- * Yaba is a mixture of methamphetamine and caffeine, sold as cheap red or pink pills, and works as a stimulant to the central nervous system.

Nut Graf

Drug smuggling across the India – Bangladesh border continues to remain a challenge and unless strong and effective measures are undertaken by both countries cooperating with each other, the crime can become too widespread and too enmeshed in the system making it extremely difficult to unravel and bring the perpetrators to justice.

Challenges to internal security through communication networks

8. I&B Ministry warns officials on data security

- » Prelims: National Information Security Policy Guidelines (NISPG); AES-256 Mechanism; Scientific Analysis Group (SAG)
- » Mains: Concerns of data security

Context:

- Information and Broadcasting (I&B) Ministry has given directives in order to protect data security of crucial information.

What is Data Security?

- Data security refers to the process of protecting data from unauthorized access and data corruption throughout its lifecycle.
- It includes data encryption, hashing, tokenization, and key management practices that protect data across all applications and platforms.

Orders given by the Information and Broadcasting (I&B) Ministry

- The Information and Broadcasting (I&B) Ministry has prohibited the sharing of top secret or secret documents by its officials over the Internet.
- The Ministry has raised concern over violation of the Departmental Security instructions and the National Information Security Policy Guidelines (NISPG).
 - * NISPG has been prepared by MHA in the wake of expanding information security threat scenarios.
 - * It aims at improving information security posture of organizations possessing any information.
 - * It does not restrict organizations from adopting additional stringent practices over and above these guidelines.
- The order said that confidential and restricted information could be shared on the Internet via networks having a commercial Advanced Encryption Standard (AES) 256-bit mechanism.

- * AES-256 supports the largest bit size and is practically unbreakable by brute force based on current computing power, making it the strongest encryption standard.

- The Ministry has directed that top secret and secret documents be shared only in a closed network with the leased line connectivity where the Scientific Analysis Group (SAG) grade encryption mechanism is deployed.
 - * Scientific Analysis Group (SAG) is working in the area of cryptology and information security.
 - * The SAG functions under the Defense Research & Development Organization.
- The Ministry has recommended the use of government email facilities or government instant messaging platforms.
 - * The Centre for Development of Advanced Computing's Samvad and the National Informatics Centre's Sandesh for communicating such information can be used.

Basics of Cyber Security

9. U.S. group hacked Indian research institutes: China firm

- » Prelims: Bvp47
- A new report from a China-based cybersecurity firm said hackers linked with the U.S. National Security Agency (NSA) were found to have inserted "covert backdoors" that may have given access to sensitive information in countries, including India, Russia, China and Japan.
- The list of compromised websites from India include,
 - * The Institute of Microbial Technology (IMTech) under CSIR
 - * The Indian Academy of Sciences in Bengaluru
 - * Banaras Hindu University
- The report said, "The Shadow Brokers" published two batches of hacking files claimed to be used by 'The Equation Group' of NSA in hacking files.
- It also found the private key that can be used to remotely trigger the backdoor Bvp47
- Bvp47 is a hacker tool belonging to 'The Equation Group' that allows a top-of-the-line backdoor or a secret cyber entrance.

Money - laundering and its prevention.

10. SC examines allegations of rampant misuse of PMLA

- » Prelims: Prevention of Money Laundering Act (PMLA)

- » Mains: Issues with the Prevention of Money Laundering Act

Context

- The Supreme Court is looking into holding back-to-back hearings on petitions complaining of the alleged subversion of the Prevention of Money Laundering Act (PMLA).

What is the Prevention of Money Laundering Act (PMLA)?

- PMLA refers to the Prevention of Money Laundering Act, 2002.
- PMLA enables the Government or the public authority to confiscate the property earned from the illegally gained proceeds.
- Objectives:
 - * To prevent money-laundering.
 - * To provide for confiscation of property in money-laundering.
 - * To punish those who commit the offense of money laundering.

What are the issues with the Prevention of Money Laundering Act?

- A Finance Ministry report, brought on record before the court, shows that the ED conducted 1,700 raids and launched special investigations in 1,569 cases between 2011 and 2020. However, it could secure conviction in only nine of these cases.
- Lawyers for the various petitioners argue that the PMLA is invoked in a case, say against a political rival or a dissenter, because the “process is itself the punishment”.
- The Directorate of Enforcement(ED) is empowered to issue summons, record statements, make arrests, and search and seize property. Despite having powers of investigation, the ED has not been classified as a ‘police agency’.
- Critics challenged the powers of these specialized investigation agencies that deal with economic offenses.
- The Act takes away the presumption of innocence usually afforded to accused persons under criminal law.
- To be granted bail, the accused must prove prima facie that they were not guilty, and satisfy the Court that they will not commit any further offense.
- The offenses mentioned in the Act are extremely overbroad, and in several cases, have absolutely no relation to either narcotics or organized crime.
- Besides, there is a lack of clarity about the ED’s selection of cases to investigate.

Enforcement Case Information Report (ECIR)

- Petitioners point out that even the Enforcement Case Information Report (ECIR) — an equivalent of the first information report (FIR) — is considered an “internal document” and not given to the accused.
 - * They have argued that the ED treats itself as an exception to principles and practices of criminal procedure law and chooses to register an Enforcement Case Information Report (ECIR) on its “own whims and fancies”.
 - * The accused is called upon to make statements which are treated as admissible in evidence.
 - * Throughout this whole procedure, the accused does not even know facts of the allegation against him, as the only document which contains the allegation is the ECIR, which is not supplied to the accused persons.

Nut Graf

The PMLA was enacted in response to India’s global commitment to combat the menace of money laundering. The discretion exercised under the PMLA should be guided by rule of law. It must not be “arbitrary, vague and fanciful”:-

ENVIRONMENT AND ECOLOGY

Biodiversity

1. Crimson Rose Butterflies



Image Source: Wikipedia

- Crimson rose is a large butterfly belonging to the genus *Pachliopta* (roses) of the red-bodied swallowtails.
- These are large butterflies with a mix of black, white and crimson colours on their wings and body.
- IUCN Status: Least Concern
- The species is legally protected under Schedule I of the Wildlife (Protection) Act, 1972 in India.
- The butterflies are known for crossing the sea to migrate to Sri Lanka.
- The most interesting and visually stunning aspect of the migration is that the butterflies make small pit stops on flowering plants to fuel their journey.

Conservation, environmental pollution and degradation.

2. Extended Producers Responsibility (EPR) Guidelines

- » Prelims: Extended Producers Responsibility

Context:

- The Ministry of Environment, Forest and Climate Change has issued notification on Extended Producers Responsibility to regulate plastic packaging under Plastic Waste Management Rules 2016.

Objectives:

- The guidelines have been issued on Extended Producers Responsibility to strengthen the circular economy of plastic packaging waste.
 - * It is a concept under which producers are given a significant responsibility– financial and/or physical – for the treatment or disposal of products post-consumption.
- This will create a roadmap for businesses to move towards sustainable plastic packaging.

The guidelines:

- The guidelines give a proper framework to improve the management of plastic waste and make it mandatory to reuse rigid plastic packaging material.
- The recycling of plastic waste under EPR guidelines along with the use of recycled plastic content will reduce plastic consumption and promote the practice of recycling.
- The guidelines set up a market mechanism for plastic waste management through the allowance of sale and purchase of surplus extended producer responsibility certificates.
- It will be implemented through a customised online platform that acts as the digital backbone of the system. This will enable online tracking and monitoring of EPR obligations and will decrease the compliance burden on the companies with the aid of online registration and filing of annual returns.
- It will also impose environmental compensation based on the polluter pays principle if the guidelines are not obeyed by the producers, importers and brand owners. As a result the pollution levels will be kept under check
- In order to prevent the mixing of plastic packaging waste with solid waste, the producers, importer and brand owners may avail the provisions like deposit refund system or buy back or any other model.

Conservation, environmental pollution and degradation.

3. Eco-friendly Use of Abandoned Coal Mines

- » Mains: Environment Conservation through Abandoned Coal Mines

Context:

- Coal India Limited (CIL) is exploring the reuse of closed mines for eco-friendly purposes.

Description:

- Some mines have been closed due to depletion of the reserve, spontaneous heating, safety reasons, inundation, adverse techno-economics, financial losses, adverse geo-mining conditions, surface constraints, conversion to opencast mine, etc.
- The abandoned quarries of CIL are used for the following purposes:
 - * Dumping/Filling of fly ash into the worked-out area for suitable reclamation
 - * Development of eco and mine tourism parks
 - * Afforestation
 - * Pisciculture
 - * Source to supply drinking water and other domestic use
- CIL is also exploring the possibilities to develop ground-mounted solar power projects in its suitable decoaled area.

Conservation**4. One Ocean Summit**

- » Prelims: UNESCO, World Bank, WMO
- » Mains: Efforts of the international bodies to conserve the marine ecosystems

Context:

- France has organised the One Ocean Summit in collaboration with the United Nations and the World Bank. The high-level session of the summit was virtually attended by the Prime Minister of India. Other heads of state included Germany, the United Kingdom, South Korea, Japan and Canada.

Objective:

- The Summit intended to encourage the international community to take attentive steps towards protecting and conserving the ocean ecosystem along with the sustainable use of maritime resources.
- The major idea is to collaborate on marine issues and convert the shared responsibility into achievable commitments.

About the Summit:

- The Summit involved discussions to take various initiatives for the conservation of marine ecosystems considering the following intentions:
 - * Protecting the marine ecosystem
 - * Sustainable fisheries
 - * Fight pollution
 - * Eliminating plastics from entering the marine environment

* Mitigate the impacts of climate change

* Improved governance of oceans

- OceanOPS, a joint centre of the World Meteorological Organisation and the IOC-UNESCO, will launch the Odyssey project that will be endorsed by the United Nations Decade of Ocean Science for Sustainable Development in support of the Global Ocean Observing System.
- The summit emphasised the current and future challenges of maritime cultural heritage.

Environmental pollution and degradation**5. Swachhta Saarthi Fellowship 2022**

- » Prelims: Waste to Wealth Mission, Swachhta Saarthi Fellowship
- » Mains: India's roadmap for the sustainable management of waste

Context:

- The Swachhta Saarthi Fellowship 2022 has been announced by the office of the Principal Scientific Adviser, the Government of India under the Waste to Wealth Mission.

Aim of the Initiative:

- The fellowship programme aims to empower young innovators who participate in community work of waste management, waste awareness campaigns and waste surveys.
- It also aims at reducing the waste burden on the environment making the surroundings greener.

About the Programme:

- The 'Waste to Wealth' mission is one of the nine national missions of the Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC).
- This fellowship was launched in 2021 to recognise the engagement of students, community workers/self-help groups and municipal/sanitary workers in tackling the issue of waste management.
- To continue the noble initiative, the Swachhta fellowship applications are released for the participation of all the stakeholders and encourage them to keep up the good work.



BYJU'S IAS

**SWACHHTA FELLOWSHIP :
CATEGORIES OF AWARD**

- **CATEGORY A - SCHOOL STUDENTS FROM 9TH TO 12TH STANDARDS.**
- **CATEGORY B - COLLEGE STUDENTS(UG & PG)**
- **CATEGORY C - SELF-HELP GROUPS/WORKERS**

going → ZERO WASTE

Biodiversity

6. Villagers resist sanctuary tag for langur habitat

Context:

- Neighbours of a golden langur habitat in western Assam's Bongaigaon district have opposed a move by the State government to upgrade it to a wildlife sanctuary.

Kakoijana Bamuni Hill Wildlife Sanctuary:

- Kakaijana Wildlife Sanctuary or Kakoijana Reserve Forest is situated on the banks of River Aie.
 - * The Aie River is a tributary of the Manas River in Assam.
- Its most famous inhabitants are the golden langurs which are native to western Assam and along the Indo-Bhutan border region.
- The area is mostly covered with mixed wood subtropical moist deciduous forests with teak plantations, scattered bamboo groves and miscellaneous species.

Golden Langur:

- Golden langur (*Trachypithecus geei*) are found only in Assam and Bhutan.
- IUCN Status: Endangered
- They are Schedule-I species under the Wildlife Protection Act of 1972.
- Kakoijana Reserve Forest is one of the better-known homes of the golden langur.

Biodiversity, Conservation

7. Iceland to end whaling in 2024 as demand drops

- » Prelims: International Convention for the Regulation of Whaling (ICRW); International Whaling Commission (IWC)

Context:

- Iceland, one of the only countries that still hunts whales commercially together with Norway and Japan, plans to end whaling from 2024 as demand dwindles

Details

- Demand for Icelandic whale meat has decreased dramatically since Japan – the main market for whale meat – returned to commercial whaling in 2019 after withdrawing from the International Whaling Commission (IWC).
- The hunt had also become too expensive after a no-fishing coastal zone was extended, requiring whalers to go even further offshore.
- Additionally, safety requirements for imported meat were more stringent than for local products, rendering Icelandic exports more difficult.

International Convention for the Regulation of Whaling (ICRW)

- It is an international environmental agreement aimed at the "proper conservation of whale stocks and thus make possible the orderly development of the whaling industry"
 - * It governs the commercial, scientific, and aboriginal subsistence whaling practices
- The objectives of the ICRW are to protect all whale species from overhunting; establish a system of international regulation for whale fisheries to ensure proper conservation and development of whale stocks; and safeguard

for future generations the important natural resources represented by whale stocks.

- The primary instrument implementing these aims is the International Whaling Commission, established by the convention as its main decision-making body

International Whaling Commission (IWC)

- The IWC was established in 1946 as the global body responsible for management of whaling and conservation of whales.
 - * It was set up under the International Convention for the Regulation of Whaling
- The preamble to the Convention states that its purpose is to
 - * provide for the proper conservation of whale stocks
 - * Make possible the orderly development of the whaling industry.
- An integral part of the Convention is its legally binding 'Schedule.'
 - * The Schedule sets out specific measures that the IWC has collectively decided are necessary in order to regulate whaling and conserve whale stocks.
 - * These measures include catch limits (which may be zero as in the case for commercial whaling) by species and area, designating specified areas as whale sanctuaries, protection of calves and females accompanied by calves, and restrictions on hunting methods.
- The headquarters of the IWC is in Impington, near Cambridge, England
- India is a member of IWC.

Sanctuaries

Two Sanctuaries are currently designated by the International Whaling Commission, both of which prohibit commercial whaling.

- The first of these, the Indian Ocean Sanctuary, was established in 1979 and covers the whole of the Indian Ocean south to 55°S.
- The second was adopted in 1994 and covers the waters of the Southern Ocean around Antarctica.

Conservation

8. World Wetlands Day

- » Prelims: Wetlands; National Parks; Ramsar sites
- » Mains: India's efforts to conserve the wetlands
- Each year, on February 2nd, World Wetlands Day is commemorated.
- It is observed to promote global awareness of

the importance of wetlands to people and the environment.

- This day also commemorates the adoption of the Wetlands Convention on February 2nd, 1971, in the city of Iran called Ramsar on the Caspian Sea's coasts.
- Wetlands can be found in all countries and in all climatic zones, from the poles to the tropics, from high elevations to coastal locations, and even in parched and dry deserts.

Threats to wetlands

- Wetlands are one of India's most endangered ecosystems, according to the World Wide Fund for Nature (WWF) India.
- The country's wetlands have been harmed by vegetation loss, salinization, extreme inundation, water contamination, invasive species, unsustainable development, and road construction.

List of Ramsar Sites in India up to 49:

- Khijadiya Wildlife Sanctuary in Gujarat and Bakhira Wildlife Sanctuary in UP have been added to the List of Ramsar Sites.
- India now has a network of 49 Ramsar sites covering an area of 10,93,636 hectares, the highest in South Asia.

About Bakhira Wildlife Sanctuary:

- It is a natural flood plain wetland situated in Sant Kabir Nagar District of UP.
- It was established in 1980.
- The Bakhira Wildlife Sanctuary provides wintering and staging grounds for a number of waterfowls and a breeding ground for resident birds.
 - * It is especially important for providing wintering grounds for a large number of species of the Central Asian Flyway.
 - * Examples of species supported by the sanctuary include Egyptian vulture (*Neophron percnopterus*), the vulnerable greater spotted eagle (*Aquila clanga*), common pochard (*Aythya ferina*) and swamp francolin (*Francolinus gularis*), and the near-threatened oriental darter (*Anhinga melanogaster*) and woolly-necked stork (*Ciconia episcopus*).

About Khijadiya Wildlife Sanctuary:

- Khijadiya, which is part of the Central Asian Flyway, has become the fourth wetland of Gujarat to get the Ramsar tag.
- It is a freshwater wetland near the coast of the Gulf of Kutch, which was formed following the creation of a bund (dike) in 1920 by the then ruler of the erstwhile princely state of Nawanagar to protect farmlands from saltwater ingress.
- The sanctuary is now part of Marine National

Park, Jamnagar, the first marine national park in the country.

- As one of the important waterbird habitats in North-West India, the Site provides breeding, feeding and roosting grounds for a wide range of resident aquatic and also land-based birds.
- Examples of species found here include the endangered Pallas's fish-eagle (*Haliaeetus leucorhynchus*) and Indian skimmer (*Rynchops albicollis*), and the vulnerable common pochard (*Aythya ferina*)

Environmental pollution and degradation

9. Antarctic microbes may help in plastic clean-up

Context:

- A team of Argentine scientists is using microorganisms native to Antarctica to explore the idea of cleaning up pollution from fuels and plastics.

How could the microbes help clean the plastic waste?

- The cleaning process uses the potential of native microorganisms – bacteria and fungi that inhabit the Antarctic soil, even when it is contaminated.
- The researchers helped the microbes with nitrogen, humidity and aeration to optimize their conditions.
- Basically with that, we get the microorganisms to biologically reduce, with a very low environmental impact, the level of contaminants.

Madrid Protocol:

- The Protocol on Environmental Protection to the Antarctic Treaty (also known as the Madrid Protocol) provides for comprehensive protection of Antarctica.
- The Protocol was adopted in 1991.
- The Protocol:
 - * designates Antarctica as a 'natural reserve, devoted to peace and science'
 - * establishes environmental principles that must be a fundamental consideration in the planning and conduct of all activities
 - * prohibits mining indefinitely
 - * requires that all proposed activities must be subject to a prior assessment of their environmental impacts
 - * establishes the Committee for Environmental Protection, to develop advice and formulate recommendations to the Antarctic Treaty Parties on implementation of the Protocol
 - * requires the development of contingency plans to respond to environmental emergencies.

Conservation

10. Wildlife migration to Wayanad sanctuary begins

Context:

- The seasonal migration of wild animals has begun from the adjacent wildlife sanctuaries in Karnataka and Tamil Nadu to the Wayanad Wildlife Sanctuary (WWS).

Wayanad Wildlife Sanctuary (WWS):

- Wayanad Wildlife Sanctuary is an integral part of the Nilgiri Biosphere Reserve.
- It is contiguous to the protected areas of Nagarhole and Bandipur of Karnataka on the north-east and Mudumalai of Tamilnadu on the south-east.
- Wayanad Wildlife Sanctuary is the second largest wildlife sanctuary in Kerala.
- It is part of the Deccan Plateau and the vegetation is predominantly of the south Indian moist deciduous teak forests.

Conservation, environmental pollution and degradation, environmental impact assessment.

11. Sinking Sundarbans

- » Prelims: Sundarbans
- » Mains: Climate Change and its impact on the Sundarbans

Context:

- The article examines the climate change uncertainties in Sundarbans

About Sundarbans:

- The Sunderban delta is named after a special type of mangrove tree called Sundari.
- These trees are very common in the mangrove forests of West Bengal.
- The Sundarban Delta is located from the Hooghly River in India's state of West Bengal to the Baleswar River in Bangladesh.
- The Sundarbans is a mangrove area in the delta formed by the confluence of the Ganges, Brahmaputra and Meghna Rivers in the Bay of Bengal.

Concerns

- Rising Water levels: Rising water levels have degraded the cultivable land quality and reduced crop yield, leading to a food and drinking water crisis.
- Other Disasters: Devastating floods, intense storms, and torrential rain have become frequent. Cyclones such as Aila, Amphaan and Yaas have changed the geography of the land
- Deforestation: Trees are cut down rigorously from the mangrove forest for firewood. Thus,

the green cover of the rich mangrove forest is vanishing.

- Soil Erosion: Another factor that has been posing a massive threat to the land is soil erosion.
- Water Attacks: There are not enough trees in Sundarbans to hold the soil during high tides and rain. It has become more susceptible to violent water attacks.

Migration

- The increasing trend of out migration is an indicative that the islands are no longer capable of sustaining the economic life of all the inhabitants.
 - * Increase in climate refugees due to repetitive cyclonic activities is causing problems like accommodation, employment, water and food.

Conservation

12. Railways installing solar fences to save elephants

- » Mains: Various innovative measures employed to avoid man and animal conflicts

Context:

- Railways installing solar fences to save elephants.

Details

- Railways have begun the installation of hanging solar fences at sensitive forest areas between Kanjikode and Walayar stations.
- The Southern Railways installed hanging solar fences for the first time to prevent elephant movement across the tracks.
- The hanging solar fences are being set up for 600 metres on both sides of the B-line railway track. Steel wires are hung in a row from a three-metre high overhead wire. The overhead wire is supported by posts at both ends. The hanging wires will touch the ground.
- These fences hang like a curtain with a gap underneath for smaller animals to cross
- As it is a mild shock, there will be no threat to the elephant's life.

Nut Graf

As dozens of wild animals, particularly elephants have been mowed down by trains, there is an increasing demand to check the loss of wildlife on the tracks. Indian railways has come up with an innovative measure of installing a hanging solar fence to prevent elephant movement across the tracks.

Environmental Pollution and Degradation

13. Tackling the plastic problem

- » Mains: Impact of plastic wastes, key challenges in addressing the issue and the way forward.

Context:

- A United Nations Environment Programme (UNEP) report in 2021, estimated that emissions of plastic waste into the aquatic ecosystems would triple by 2040 if no actions are undertaken.
- The UN Environment Assembly meeting scheduled in 2022 may formulate a way forward for global cooperation in this regard.

Negative impacts of Plastic waste

- Plastic products like bags, bottles, etc. take a long time to decompose.
- The increase in the consumption worldwide and low interests in recycling programmes have led to more prevalence of plastic wastes.
- Plastic wastes result in a huge loss of marine life, especially Marine fisheries and wildlife.
- This also impacts the livelihoods and income of people in the coastal regions, who are dependent on marine ecosystems.

Consumption externality

- Plastics is an example of a consumption externality (which involves many people) rather than a production externality (which involves one or multiple firms)
- Consumption externality is a complex issue, as it is challenging to differentiate the behaviour of consumers.
- Since the number of consumers is more, the cost of controlling them will also be high.

Key challenges

- Several regions across the world have banned plastic items, although this approach promotes a sustainable environment, and helps save marine and wildlife ecosystems, It causes:
 - * Inconvenience for consumers
 - * Increases substitution cost
 - * Creates unemployment as it affects the production of plastics
 - * Leads to less economic activity

- * Leads to less income generation

Way forward

- The environment regulation for plastics should include a 'command and control' approach.
 - * "Command-and-control" approach demands the polluters to meet emission-reduction targets and facilitates the installation and use of specific types of equipment to reduce emissions.
- The effectiveness of regulations depends on its framework, foundation, design and execution.
- Regulations should be credible, transparent and predictable.
- A tax rate should be carefully determined and in general, the rate of tax on plastics should be higher than the cost of compliance.
- Eco-taxes may be imposed in the various stages of production, consumption or disposal of plastics.
- The pollution-controlling authority should install meters for recording the emission or the effluent discharged in the process of production or consumption of plastics.

Evaluating the social cost

- The social costs should be estimated differently in the local/regional and global contexts.

- Health and hygiene are the factors in the local context
- Climate change is the predominant factor in the global context.
- Eco-tax rates on plastics should be equal to the marginal social cost arising from the negative externality associated with production, consumption or disposal of goods and services. This requires evaluation of damage to the environment based on scientific assessment of the adverse impacts on health, environment, etc.








Conclusion

The comprehensive policy measures against plastics should involve,





- Removal of existing taxes and subsidies that have a negative environmental impact, taking into account the different types or grades of plastics, and restructuring existing taxes in an environmentally friendly manner.
- Inclusion of creative and effective policy solutions to reduce plastic consumption.
- Promoting multiple uses of plastics through better waste management, educating the public, incentivising R & D activities for substitute development, appropriate disposal mechanisms and waste management.

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A brief analysis of important topics for the exam
-  **This day in history**
A brief note on a major event that happened in the history of India and the world on this date
-  **AIR Spotlight**
-  **Sansad TV Perspective**

Weekly Updates

-  **Economy this week**
Round-up of business newspapers
-  **International Relations This Week**
-  **Gist of economic and political weekly magazine**
-  **GK and current affairs quiz**

Monthly Updates

-  **BYJU'S current affairs magazine**
Compilation of current affairs
-  **Gist of magazines**
Extracts of articles and points from "YOJANA" and "KURUKSHETRA"

HEALTH ISSUES

Issues relating to development and management of Social Sector/Services relating to Health

1. CORBEVAX

- » Prelims: About CORBEVAX
- » Mains: India's progress in the field of vaccine development.

Context:

- CORBEVAX™ is India's first indigenously developed receptor binding domain protein sub-unit vaccine for COVID-19, has received approval from the Drug Controller General of India (DCGI) for emergency use in individuals within the age group of 12-18 years.

About the Vaccine:

- This is developed by Biological E Limited with the support of the Department of Biotechnology and Biotechnology Industry Research Assistance Council (BIRAC).
- It is a recombinant protein vaccine which uses the receptor binding domain of the spike protein on the viral surface.
- It is a double dose vaccine that is administered intramuscularly and stored at 2° C to 8° C.

Issues relating to development and management of Social Sector/Services relating to Health

2. Guduchi

- » Prelims: About Guduchi
- » Mains: Herbal medicines as an alternative method of treatment

Context:

- A herb called Guduchi has been declared safe without any toxic effects by the Ministry of Ayush.

About Guduchi:

- Guduchi (*Tinospora cordifolia*) is considered to be the best rejuvenating herb according to Ayurveda.

- The dosage is an important factor to determine the safety of the herb.
- A study inferred that a lower concentration of Guduchi powder increased the lifespan of fruit flies. The reverse is true when it is used at higher concentrations.
- It has several medicinal properties like:
 - * Anti-oxidant
 - * Anti-hyperglycemic
 - * Anti-hyperlipidemic
 - * Hepatoprotective (protects the liver)
 - * Osteoprotective
 - * Anti-cancer
 - * Antipyretic
 - * Anti-inflammatory
 - * Anti-microbial
 - * Analgesic
- It is beneficial in the treatment of various metabolic disorders and acts as a potential immunity booster.
- This herb is found in tropical and subtropical zones at an altitude of 600m and is grown in deciduous and dry forests at elevations up to 1000ft.
- In India, it is usually found in the stretch of Kumaon to Assam, West Bengal, Bihar, Karnataka, Kerala and so on.
- Stems and roots are major components of various compound preparations.

HERB POPULAR IN NORTH & EAST INDIA

➤ Tinospora cordifolia or giloy is a herb that has heart-shaped leaves

➤ It is popular in north & east India and used during viral fevers

➤ In Ayurveda, it is called guduchi or 'that which protects body from diseases'

➤ It has Vitamin C and minerals, calcium and iron



➤ It has emerged as an immunity booster after studies done among HIV patients in recent years

WHAT THE STUDY SAYS

In a subset of patients with underlying auto-immune conditions such as hypothyroidism and diabetes, the use of giloy could trigger a severe reaction that damages the liver

Image Source: Times of India

Issues relating to development and management of Social Sector/Services relating to Health

3. Weighing in on a health data retention plan

» Mains: Critical Evaluation of Health Data Retention Policy

Context:

The National Health Authority (NHA) has initiated a consultation process on the retention of health data by health-care providers in India.

Health Data Retention Policy Of India:

- The National Health Authority (NHA) released a consultation paper on a proposed health data retention policy.
 - * Data retention is the practice of storing and managing personal health data for a designated period.
- The proposed policy would fall within the ambit of the Ayushman Bharat Digital Mission ('ABDM'), formerly known as the National Health Digital Mission.
- Objective: –
 - * To ensure uniformity in record retention, as well as compliance with applicable regulations, guidelines, and laws in India.
 - * To minimize risks associated with personal health data, while also maximizing the benefits from the use of the same.

- The consultation paper specifies key considerations in formulating such a policy:
 - * determining the scope of the policy.
 - * defining aspects of retention, such as duration, data classification, storage and maintenance, and uses cases for health records; and
 - * current practices in India and in other countries.
- **Need for such a policy:**
 - * Currently, service providers can compete on how they handle the data of individuals or health records.
 - * Given the landscape of health-care access in India, including through informal providers, many patients may not think about this factor in practice.
- **Benefits of the Policy:**
 - * Individuals benefit through greater convenience and choice, created through portability of health records.
 - * The broader public benefits through research and innovation, driven by the availability of more and better data to analyze.

Justice K.S. Puttaswamy Judgment

- The Supreme Court of India, in Justice K. S. Puttaswamy (Retd) Vs Union of India, held that privacy of medical/health data is a fundamental right under Article 21 of the Constitution.
- Consequently, any policy with a significant bearing on this right must meet the four tests laid by Puttaswamy, i.e. the measure must be
 - * a procedure established by law aimed at a legitimate goal;
 - * just, fair and reasonable;
 - * proportionate to the objective sought to be achieved; and
 - * have procedural guarantees to check against abuse by state or non-state actors.
- * a procedure established by law aimed at a legitimate goal;
- * just, fair and reasonable;
- * proportionate to the objective sought to be achieved; and
- * have procedural guarantees to check against abuse by state or non-state actors.

- To anonymise data that is being retained for research purposes.
- An alternate basis for retaining data can be the express and informed consent of the individual in question.
- Health-care service providers will have to comply with the data protection law, once it is adopted by Parliament.

Nut Graf

As the pace of digitisation proceeds in modern India, it is likely that the healthcare sector too will increasingly 'go digital'. Pushing the implementation of digital health without adequately taking into account and planning for these requirements will cause more harm than any stated benefit of digitization.

Issues relating to development and management of Social Sector/Services relating to Health

4. Eating right

- » Prelims: Facts about Eat Right India initiative and FSSAI
- » Mains: The role of the Eat Right India initiative in promoting good food habits in the country.

Context:

- Eat Right India initiative of Food Safety and Standards Authority of India (FSSAI)

Background

- As a one-of-its-kind initiative, four police stations in New Delhi have been designated as 'Eat Right Campus' by the FSSAI for providing nutritious and wholesome meals to police personnel.
- The scheme has been implemented since 2017 in various government colleges and hostels.

Food Safety and Standards Authority of India (FSSAI)

- FSSAI is an autonomous statutory body set up under the Food Safety and Standards Act, 2006.
- FSSAI works under the aegis of the Ministry of Health & Family Welfare with an objective of maintaining food safety and standards in India.

Eat Right India initiative

- Eat Right India is a flagship mission of FSSAI.
- The mission aims to ensure the people of the country are provided with nutritious meals that help address the problem of various lifestyle-related diseases.
- The initiative works on the principles,
 - * Ensure that the food being served to officers, jawans, visitors and staff is safe to consume and in compliance with the Food Safety and Standards (FSS) Act, 2006.

What are the Issues with the Health Data Retention Policy?

- Privacy Concerns: The privacy risks should make us very hesitant about retaining an individual's entire health or medical record on the grounds that they might be useful for research someday. As per Indian law, if an individual's rights are to be curtailed due to anticipated benefits, such benefits cannot be potential or speculative.
- Legality Concerns: The question of legality becomes a question about the legal standing and authority of the NHA. The NHA is not a sector-wide regulator, it has no legal basis for formulating guidelines for health-care providers in general.
- Concerns with Sensitive Data: The legal systems consider health data particularly sensitive, and improper disclosure of this data can expose a person to a range of significant harms.
- Concerns with Anonymity: Standards for anonymisation are still developing. The research community is still to arrive at consensus on what constitutes adequate anonymisation.

Way Forward

- A clear and specific test for retaining data with rigorous processes run by suitable authorities.

- * It aims at promoting balanced meals and eliminating trans-fats or "bad fat" found in industrial food products.
- * It ensures a reduction in consumption of salt and sugar that increases the risk of cardiovascular diseases.
- The programme also aims at promoting local and seasonal vegetables and reducing the use of chemicals.
- Delhi government's Department of Food Safety is the implementing body of the initiative in the capital and has launched a programme called 'Sehatmand Delhi' under which places are designated as 'Eat Right Campus'.

The process for getting the 'Eat Right' tag

- To get the 'Eat Right Campus' certificate, the programme directs an initial audit of the campus and identifies gaps in cooking and hygiene.
- Later, a final audit by a third party is conducted upon which a certificate with a validity of two years is handed over.
- Regular inspections will be carried out by the Food Safety Department to keep a check on the food quality.

Changes introduced at the police stations as a part of the initiative

- Ban on the use of plastic or aluminum plates
- Cooking oil has been changed and better quality lentils are used for meals
- Cooks are directed to follow a dress code with gloves and caps
- The cooking process is recorded on CCTV cameras

Significance of the Scheme

- The campaign holds significance as it aims at good food habits for the people of the country.
- It adopts a judicious mix of regulatory, capacity building, collaborative and empowerment approaches to ensure that all the parameters are followed.
- The Initiative adopts a holistic approach as it brings together food-related mandates of the agriculture, health, environment and other ministries.
- The key reason behind the initiative was the welfare of all personnel, especially Police personnel who face difficult tasks during their duties and fall sick due to unhygienic food.
- Specific diet charts have been prepared to ensure that all police staff and visitors are provided with nutritious meals who earlier used to eat outside. This has made it budget-friendly.

Conclusion

- Considering the benefits and significance of the initiative, it has to be implemented and extended

to all the police stations and other government institutions across the country to promote healthy food habits.

Nut Graf

In a country that has been affected by various non-communicable, lifestyle-related and food-borne diseases, the Eat Right India initiative if implemented duly has the potential to bring a behavioural change and create awareness about the benefits of eating nutritious food.

Issues relating to development and management of Social Sector/Services relating to Health

5. National Polio Immunisation Drive, 2022

- » Prelims: About Polio vaccine
- » Mains: Initiatives of the government to address the issues related to the health of every child in the country

Context:

- The National Polio Immunisation Drive, 2022 has been launched to vaccinate every child below five years of age against Polio.

About the Immunisation Drive:

- This initiative indicates the government's active involvement in the strategic fight against Polio virus boosting India's public health policy.
- Under the vision of Universal Immunisation Programme, the focus is to protect every child from deadly diseases by carrying out extensive vaccination drives. This is in line with the objective of Swastha Bharath.
- The government has also ensured to introduce the injectable inactivated Polio Vaccine in its routine immunisation program.

Polio Eradication Programme in India:

- India responded to a resolution passed by the World Health Assembly for global polio eradication with firm commitment.
- The National Immunisation Day was launched in India in 1995 and it is popular as Pulse Polio Immunisation Programme.
- In states with high risk, multiple rounds of sub national immunisation day (SNID) have been conducted over the years.
- All children under five years of age have been provided with oral polio drops.
- Surveillance through acute flaccid paralysis has been carried out to detect paralysis due to Poliovirus transmission.
- All states and union territories have developed

a Rapid Response Team (RRT) to respond to any Polio outbreak in the country along with an Emergency Preparedness and Response Team for indicating steps to be taken to tackle polio cases.

About Poliomyelitis:

- Polio or Poliomyelitis is a contagious and life threatening disease caused by Poliovirus.
- It leads to paralysis by invasion of the brain and spinal cord by the virus.
- It is transmitted from person to person.
- So far, vaccination has been the best protection against the virus.
- It spreads majorly through the faecal-oral route by ingestion of contaminated food or water.
- It has a seasonal transmission tendency in temperate climates with the highest chance of occurrence in summer and autumn.
- Majority of the population is asymptomatic to polio infections and shed the virus in the stool and transmit it to other individuals.
- The symptoms are accompanied by abdominal pain, constipation, diarrhoea and influenza-like illness.
- Many people with paralytic poliomyelitis recover completely and in some cases the muscle function returns to some extent.
- Very few people get flaccid paralysis which is a clinical manifestation accompanied by weakness or paralysis and reduced muscle tone.
- Other symptoms include stiffness of neck, back or legs.

SOCIAL ISSUES

Salient features of Indian Society, Diversity of India.

1. **Tapping technology for multilingual learning**

- » Prelims: Facts about International Mother Language Day
- » Mains: The need for multilingual education in India and various initiatives undertaken.

Context:

- International Mother Language Day 2022

International Mother Language Day

- According to a UN agency, nearly 43% of about 6,000 languages spoken in the world are endangered.
- In 1999, the UNESCO General Conference approved the declaration of February 21 as International Mother Language Day, in response to the declining state of many languages.
 - * Aim: It aims to promote awareness of linguistic and cultural diversity and to promote multilingualism.

International Mother Language Day, 2022

- Theme: Using Technology for Multilingual Learning: Challenges and Opportunities.
- Objective: To discuss the role of technology to further the cause of multilingual education and use technology to support and enrich the teaching-learning experience on a multilingual level.
- Aim: To achieve a qualitative, equitable and inclusive educational experience.
- The Director-General of UNESCO said that the technology can provide new tools for protecting linguistic diversity. Such tools will help us to record and preserve languages that sometimes exist only in oral form.

Linguistic diversity in India

- India has been home to hundreds of languages and thousands of dialects, making its linguistic and cultural diversity the most unique in the world.
- India's linguistic diversity is one of the cornerstones of an ancient civilisation.
- According to the Language Census findings in 2018,
 - * India is home to 19,500 languages or dialects, of which 121 languages are spoken by 10,000 or more people in the country.
 - * 196 Indian languages fall under the "endangered" category.

The need for Technology in Multilingual Learning

- The role of technology came to the fore during the COVID-19 pandemic when school shutdowns forced educators and learners to adapt themselves to online education.
- Online education poses the challenges of required skills in distance teaching, Internet access, and adapting materials and content in diverse languages.
- The central and State governments are formulating measures to promote digital learning and ensuring that there is no digital divide is its responsibility.

Key initiatives undertaken to promote Multilingual Learning

- The National Education Policy (NEP), 2020 encourages the use of mother tongue as the medium of instruction till Class five but preferably till Class eight and beyond.
 - * The use of mother tongue is bound to create a positive impact on learning.
 - * There is a need to improve scientific and technical terminology in Indian languages that would help transform the educational experience.
- In a survey of over 83,000 students conducted by the All India Council for Technical Education (AICTE) in 2020, about 44% of students voted in favour of studying engineering in their mother tongue
 - * In this regard, the AICTE collaborated with IIT Madras to translate some courses from the Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) platform into eight regional languages such as Tamil, Hindi, Telugu, Kannada, Bengali, Marathi, Malayalam and Gujarati.
- A decision has been taken by the AICTE to permit Tech programmes in 11 native languages, in line with the NEP 2020.

Conclusion

- Sir C.V. Raman observed that "we must teach science in our mother tongue. Otherwise, science will become a highbrow activity. It will not be an activity in which all people can participate".
- By looking at his observation and the performance of countries like Japan, China, Korea and European countries, the policymakers, educators, and parents must realise that we have created a large English-based education

system including courses such as medicine and engineering that hinders a vast number of learners in the country from accessing higher education.

Nut Graf

Languages play a key role in ensuring cultural and civilisational continuity, but globalisation and westernisation have impacted the growth and survival of many of the dialects. Hence, International Mother Language Day has special significance to the Indian context that is in line with the government's vision of "sabka saath, sabka vikas, sabka vishwas".

EDUCATION

Issues Relating to Education

1. National Means-cum-merit Scholarship Scheme (NMMSS)

- » Prelims: About NMMSS
- » Mains: Preventive measures taken for reducing the dropout rate of school going children belonging to economically weaker sections of the society.
- It is a Central Sector Scheme launched in 2008 to provide scholarships for meritorious students of classes IX to XII.
- The students are selected through an examination conducted by the state and union territories. The scheme is available on the National Scholarship Portal.
- The scholarships are transferred to the bank accounts of the selected students through the Public Financial Management System (PFMS).

Objective

- To award scholarships to meritorious students of economically weaker sections to arrest their drop out at class VIII and encourage them to continue their study and complete secondary stage.

Scope

- It covers the government aided and local body schools apart from the schools under the state government.
- Students of NVS, KVS and residential schools are not entitled for the scholarships.

Scholarship Amount

- An amount of Rs. 12000/- per student per annum.

Eligibility criteria to appear in NMMSS selection test

- Students whose parental income from all sources is not more than Rs. 1,50,000/- per annum are eligible to avail the scholarships.
- The student must have minimum of 55 % marks or equivalent grade in Class VII examination for appearing in selection test for award of scholarship (relaxable by 5% for SC and ST students).
- There is reservation as per State Government norms.

Issues Relating to Education

2. One class, One Channel

- » Mains: Emerging popularity of digital education in India

Context:

- A webinar on 'Widening reach of One Class-One channel' was organised by the Ministry of Education and was addressed by the Prime Minister.

About the Webinar:

- The significance of creating online content in the mother tongue has been discussed.
- Immense focus has been provided to the futuristic vision of digital education across the country and there were discussions on technical preparations required for initiating 200 PM eVidya DTH TV channels.
- The concern of heterogeneity among the learners' group has been raised and the need to introduce innovation in pedagogy for better learning outcomes has been highlighted.
- It is envisaged that the One Class-One Channel programme will play a transforming role in creating better learning outcomes.
- The medium of tele-schooling through the satellite medium of the Edusat network was discussed.
- The successful model of Vande Gujarat channels was presented to exemplify the outcome of digital mode of learning.
- The requirement of infrastructural set-up, creation of quality e-content in various languages, creation of quality digital content for DIVYANG (Persons with disabilities) and the gifted children were some of the key elements of the One Class-One Channel initiative.

Issues Relating to Education

3. New India Literacy Programme

- » Prelims: New India Literacy Programme, National Education Policy 2020
- » Mains: Interventions intended for better learning outcomes.

Context:

- The Government of India has approved a scheme called the New India Literacy Programme to improve adult education and promote lifelong learning in accordance with the National

Education Policy 2020.

Objectives of the scheme:

- The objective of the scheme is to deliver the necessary components that intend to skill the youth and make them suitable for employment. This is in addition to the foundational literacy and numeracy.
- It focuses on providing financial literacy, digital literacy, commercial skills, health care and awareness, vocational training and so on.
- It will be implemented through volunteerism and will be through online mode.
- The materials and resources will be provided digitally with easy access to the registered volunteers.
- It will cover the non-literates of the age of 15 years and above in all states and union territories.
- It will also assist to achieve the target of foundational literacy and numeracy for FY 2022-27 which aims to cover 5 crore learners by using Online Teaching, Learning and Assessment System (OTLAS) in collaboration with the National Informatics Centre, NCERT and other institutions.
- The programme will be funded by both the centre (about 70%) and the state.

Features of the scheme:

- The school will be the unit for implementation of the scheme.
- The survey of beneficiaries and voluntary teachers will be conducted in the schools.
- Performance Grading Index will be adopted for assessment at the state/UT and district levels on a yearly basis.
- An Outcome-Output Monitoring Framework will be set up for annual achievement survey of learning outcomes.
- Priority will be given in terms of categories to the girls and women, SC/ST/OBC/Minorities, Persons with Special Needs, marginalised/nomadic construction workers, labourers.
- Priority in terms of location will pay special attention to the aspirational districts of the NITI Aayog:
 - * Districts with a female literacy rate less than 60% as per the 2011 census
 - * Literacy rates less than the national/state average
 - * Districts/Blocks with large number of SC/ST/Minority population
 - * Educationally backward blocks

* Left-wing extremism affected districts

- This scheme will be a progressive step to transform adult education into education for all in the country.

HISTORY

The Freedom Struggle—its various stages

1. Chauri Chaura Incident

- » Prelims: Chauri Chaura incident
- » Mains: Significance of Chauri Chaura incident in the freedom struggle

Context:

- The Prime Minister remembered the historic Chauri Chaura incident on the completion of 100 years in 2022. This incident was a landmark in shaping the progress of the freedom struggle taking it to the next level.

About the incident:

- The Indian National Congress under the leadership of Mahatma Gandhi had launched the non-cooperation movement in 1920.
- 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.
- The aim of the party was Swaraj or self-government.
- The people readily participated in the movement and it saw partial success at least in the participation level.
- However, an incident at Chauri Chaura changed the course of the movement. On 2 February 1922, people were protesting against high meat prices at the marketplace. They were beaten by the police and many of their leaders were arrested and detained at the Chauri Chaura police station.
- The volunteers planned another protest against the police.
- On 4 February, about 2500 people marched towards the Chauri Chaura market 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 and 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.

- The British government in response, imposed martial law in the area and arrested hundreds of people.
- 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.
- Many Congress leaders like Motilal Nehru and Chittaranjan Das were against the calling off of the movement as they felt that success was being gained in the country.

Significant personalities.

2. Maharaja Surajmal

- » Prelims: Maharaja Surajmal

Context:

- The Prime Minister pays tributes to Maharaja Surajmal on his Jayanti

Maharaja Surajmal

- Maharaja Suraj Mal or Sujan Singh was a Hindu Jat ruler of Bharatpur in Rajasthan was born in 1707.
- Under him, the Jat rule covered present-day Delhi and districts of Agra, Aligarh, Firozabad, Ghaziabad, Gurgaon, Hathras, Kanpur, Mathura, Meerut, and Muzaffarnagar.
- Modern historians describe him as "the Plato of the Jat tribe" and "Jat Odysseus", because of his political sagacity, steady intellect and clear vision.
- Lohagarh Fort was built in the 18th century by Raja Suraj Mal and is the only fort in India that no one in history has won.
- After the defeat of the Marathas by the Afghans in the Third Battle of Panipat, Maharaja Suraj Mal gave food and shelter to thousands of Maratha survivors and received them with tender warmth and hospitality, giving free rations to every Maratha soldier or camp follower.
- Suraj Mal was killed in an ambush by the Rohilla troops in 1763 near Hindon River, Delhi.
- In addition to the troops stationed at his forts, he had an army of 25,000 infantry and 15,000 cavalry when he died.

GOVERNANCE

Important aspects of governance, transparency and accountability

1. National Single Window System

- » Mains: Government initiative to promote business in the country

Context:

- Jammu & Kashmir becomes the first union territory to get integrated with the National Single Window System (NSWS).

Details of the issue:

- Under the NSWS initiative, a number of industrial parks in Jammu & Kashmir will be facilitated for further growth and development.
- Digital platforms will be available for the investors to explore land availability in the union territory to bring more business.

About NSWS:

- The Ministry of Commerce and Industry has launched the national single window system for expanding the scope of Ease of Doing Business.
- The Department for Promotion of Industry and Internal Trade in association with Invest India initiated this portal.
- It is aimed at making investments flexible and easy.
- This single window system acts as a portal that allows businesses to apply for clearances, track the process and address their queries.
- It ensures a one-stop solution for states and central governments in carrying out businesses bringing more transparency and accountability.
- It offers a Know Your Approvals service which gives information about the required approvals, criteria and a common registration form. This speeds up the process of documentation in carrying out business.
- This single window system is in alignment with the interests of schemes like Make in India, Startup India, Production Linked Incentive (PLI).

Important aspects of governance, transparency and accountability

2. Understanding the Draft India Data Accessibility & Use Policy, 2022

- » Mains: The need for the draft policy on India Data Accessibility & Use and the issues associated with it.

Context:

- The Ministry of Electronics and Information Technology (MEITY) has proposed a policy named "Draft India Data Accessibility & Use Policy, 2022"

India Data Accessibility & Use Policy, 2022

- Aim: To radically transform India's ability to harness public sector data.
- The nature of the policy objectives suggested in the draft is mainly commercial.
- The Policy proposes permitting the licensing and sale of public data by the Government to the private sector.
- The policy will apply to all data and information created and collected by the Central Government. It also has provisions for the State governments.

The key features of the Policy

- The policy proposes the establishment of an India Data Office (IDO) under the MEITY for overall management, with each government entity designating a Chief Data Officer to help achieve its objectives.
- An India Data Council will act as a consultative body.
- The policy strategy is to make Government data open by default and then maintain a negative list of datasets that cannot be shared. The declaration of sensitive data that has restricted access is left to the independent government ministries.
- The existing data sets will be enriched or processed to gain greater value and termed high-value datasets.
- As a measure of privacy protection, there is a recommendation for anonymisation and privacy preservation.

The need for the policy

- The generation of citizen data is expected to increase at a rapid rate in the next decade and become a foundation of India's \$5 trillion-dollar digital economy.
- The policy aims to harness the economic value of the generated data.
- The National Economic Survey, 2019 noted that "The private sector may be granted access to select databases for commercial use, given that the private sector has the potential to reap massive dividends from this data"
- Currently, there are several bottlenecks in data sharing and use which includes,

- * The absence of a body for policy monitoring and enforcement of data sharing
- * Absence of technical tools and standards for data sharing
- * Identification of high value datasets and licensing and valuation frameworks.

Issues associated with the policy

- Privacy Issues – India does not have a data protection law that can provide a remedy for privacy violations such as coercive and excessive data collection or data breaches. The inter-departmental data sharing poses concerns related to privacy since the open government data portal may result in state-sponsored mass surveillance.
- Lack of transparency – The list of stakeholders who have been consulted, which according to MEITY include, “academia, industry, and Government” are not revealed along with their view on the policy.
- Lack of scientific analysis – The lack of analysis of scientific evidence and the availability of tools pose a challenge as the commercial value of the data increases with greater amounts of personal data to the private sector. It becomes a challenge to limit the usage of this data by private agencies.
- The policy bypasses parliament – The policy as it contemplates large scale data sharing and enrichment that will be borne from public funds.
- The issue of federalism – The constitution of offices and prescription of standards apply to the Central government as well as State governments and schemes administered by them.

Nut Graf

Realising the economic potential of “data”, the government has proposed a policy that empowers the government to license and sell public data to the private sector. In this regard, the various issues associated with the policy, including privacy and transparency need to be addressed such that India can become a \$5 trillion-dollar digital economy without compromising social security.

GEOGRAPHY

Geographical features and their location

1. Char Chinari island

- » Prelims: 'Char Chinari' island

Context

- Recently, efforts were made to plant chinari trees and boost floriculture on the Char Chinari Island.

'Char Chinari' island:

- Char Chinari Island is in the middle of the Dal Lake in Srinagar.
- The island owes its name to chinari trees, as Char Chinari means four chinars.
- It was constructed by Murad Baksh, the brother of Mughal emperor Aurangzeb.
- Chinari trees were planted on the picturesque island with the Zabarwan hills in the backdrop.
- Other Islands of Dal Lake:
 - * One island is located on the Bod Dal and is known as Roph Lank or Silver Island.
 - * The other island is located on the Lokut Dal and is called Sone Lank or Gold Island.

Water-bodies

2. River Devika project

- » Prelims: Devika River and River Devika project

Context

- The Union Minister said that the historic River Devika project will be completed in 2022.

Devika River

- Devika River holds great religious significance as it is revered as the sister of Ganga.
- Devika, a small rivulet flows through Udhampur in Jammu & Kashmir.
- The river originates near Sudhmahadev and it merges with Suryaputri Tawi at Venisung and this confluence is a place of worship.
- As it appears and disappears in many places, Devika is also known as Gupt Ganga.

River Devika project

- The project being built at the cost of over Rs 190 crore is said to be North India's first river rejuvenation project and will offer a unique destination both for pilgrims and recreation tourists.

- The project includes the construction of three sewage treatment plants, a sewerage network of 129.27 km, the development of two cremation ghats, protection fencing and landscaping, small hydropower plants and three solar power plants.
- The construction of the project started in 2019 under the National River Conservation Plan (NRCP).
- The completion of the project will result in the reduction of pollution and improvement in water quality.

Distribution of key natural resources

3. Heli Borne Survey Technology

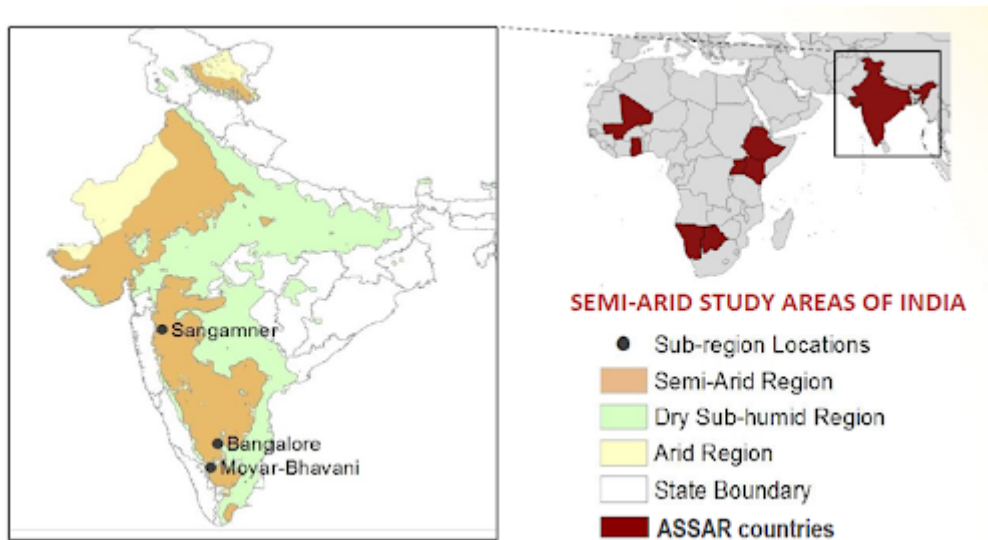
- » Prelims: Heli borne Survey
- » Mains: Significance of groundwater management

Context

- The Central Ground Water Board carried out a heli borne survey to gather aquifer related information in the arid and semi-arid regions of Rajasthan, Gujarat and Haryana under the Groundwater management and regulation scheme.

About the Heli-borne survey:

- It is a geophysical mapping technique that provides high-resolution 3D images for subsurface up to a depth of 500 metres below the ground level.
- This survey can help in the potential mapping of groundwater in arid areas.
- This was developed by the collaboration of CSIR and the National Geophysical Research Institute.
- This will bolster the water management programmes of the government like 'Har Ghar Nal se Jal' and missions such as the Jal Jeevan Mission.



SOCIAL JUSTICE

Welfare schemes for the vulnerable sections of the population by the Centre

1. PM CARES scheme for children

- » Prelims: PM CARES
- » Mains: Initiatives taken by the government to protect the interests of the children.

Context

- The PM CARES for Children scheme has been extended till the end of February, 2022 by the Ministry of Women and Child development.

About the scheme:

- This scheme was launched by the government to extend assistance to the children who lost their parents or single parents or legal guardians / adoptive parents due to COVID-19.
- Under this scheme, an amount of Rs. 10 lakhs has been allocated to the children from the PM CARES Fund. This lump sum amount would be given to the children on attaining 23 years of age.
- The major aim of the scheme is to offer care and protection to the children in a sustainable manner through health insurance, proper education along with the provision of financial support till they reach the age of 23 ensuring a monthly stipend from the age of 18.

Welfare schemes for vulnerable sections of the population by the Center and States and the performance of these schemes

2. Rashtriya Vayoshri Yojana

- » Prelims: ADIP, Rashtriya Vayoshri Yojana' (RVY Scheme)

Context

- The distribution of aids and assistive devices to 'Divyangjan' under the ADIP Scheme and to Senior citizens under 'Rashtriya Vayoshri Yojana' (RVY Scheme) were organized by the Ministry of Social Justice and Empowerment.

Assistive Devices:

- Assistive devices are external devices that are designed, made, or adapted to assist a person to perform a particular task.
- Many people with disabilities depend on assistive devices to enable them to carry out daily activities and participate actively and productively in community life.

Scheme of Assistance to Disabled Persons for Purchase/Fitting of Aids and Appliances (ADIP Scheme)

- The main objective of the scheme is to assist the needy disabled persons in procuring durable, standard aids and appliances that can reduce the effects of disabilities and enhance their economic potential.
- Assistive devices are given to Persons with Disabilities with an aim to improve their independent functioning and to arrest the extent of disability and occurrence of secondary disability.

'Rashtriya Vayoshri Yojana' (RVY Scheme):

- Rashtriya Vayoshri Yojana (RVY) is a scheme for providing Physical Aids and Assisted-living Devices for Senior citizens belonging to the BPL category.
- This is a Central Sector Scheme, fully funded by the Central Government.
- The expenditure for implementation of the scheme will be met from the "Senior Citizens' Welfare Fund".
- Under the scheme, physical aids will be provided only to the senior citizens of the nation.
- Eligibility:
 - * Senior Citizens, belonging to the BPL category and suffering from any of the age-related disabilities.
 - * The Scheme is expected to benefit all Senior Citizens across the country.

Welfare schemes for vulnerable sections of the population by the Centre.

3. Samajik Adhikarita Shivar

- » Prelims: Samajik Adhikarita Shivar
- » Mains: Important schemes for senior citizens and Divyangjan (People with disabilities)

Context

- The Social Justice and Empowerment Ministry launched 'Samajik Adhikarita Shivar' and 'An Integrated Mobile Service Delivery Van' for Divyangjan and Senior Citizens.

Samajik Adhikarita Shivar

- It is a program that will be organized to distribute aids and assistive devices to Physically Disabled persons under ADIP Scheme and Senior citizens under Rashtriya Vayoshri Yojana

- The program will be organized by the Department of Empowerment of Persons with Disabilities (DEPWD) in association with the Artificial Limbs Manufacturing Corporation of India (ALIMCO), which is a public sector enterprise under the DEPWD.
- The Union Minister will also launch 'An Integrated Mobile Service Delivery Van' which has been developed by ALIMCO to provide "After-Sale Service".
 - * It has also undertaken an awareness campaign on the use of Aids and Assistive devices and offers repairs, correction, adjustment and fitting of Prosthetics and orthotics devices.

Welfare schemes for vulnerable section of the population

4. SEED Programme

- » Prelims: Features of SEED programme
- » Mains: Government initiatives for the economic empowerment of the Denotified, Nomadic and Semi Nomadic communities.

Context

- In order to create welfare for the Denotified, Nomadic and Semi Nomadic (DNTs) communities, the Scheme for Economic Empowerment of DNTs (SEED) was launched.

Background of SEED:

- The Ministry of Social Justice and Empowerment decided to set up a National Commission for Denotified, Nomadic and Semi-Nomadic Tribes in 2014 for a span of three years.

- The National Commission was established under the chairmanship of Shri Bhiku Ramji Idade.
- The report of the commission inclusive of the lists of DNTs was submitted in 2017.
- Based on the recommendations of the commission, the Ministry of Social Justice and Empowerment had established the Development and Welfare Board for DNTs in 2019.
- Under the directives of the development board, several welfare programmes have been formulated such as the SEED initiative.

About SEED:

- The scheme has been introduced for families having an income of Rs. 2.50 lakh or less per annum.
- The families that are not benefited from the similar scheme of Central and State Governments will be covered under this scheme.
- The scheme will be implemented through a portal which is created by the Ministry of Social Justice and Empowerment.
- Followed by the registration of the beneficiaries to the portal, the applicants will be provided with a unique identification number which will be used as the permanent registration number enabling them to apply for one or more components of the scheme.
- A permanent database will be created in the portal for enrollment of applicants to the components of the scheme.



FOUR COMPONENTS OF SEED PROGRAMME

1 Provide coaching of good quality for denotified, nomadic and semi nomadic tribes to make them capable for competitive exams.

3 Facilitate livelihoods initiative at community level to build and empower small clusters of institutions for the communities.

2 Provide health insurance to the DNT communities by offering financial assistance to National Health Authority in association with State Health Agencies.

4 Financial Assistance for construction of houses for the communities.

Transfer of Funds:

- The beneficiaries will receive the funds for the welfare schemes under SEED directly in their accounts.
- The Ministry of Rural Development, National Rural Livelihood Mission and the National Health Authority are the implementing agencies.

Welfare schemes for vulnerable sections of the population by the Centre

» Will focus on Survey and identification, Mobilisation, Rescue/ Shelter Home and Comprehensive resettlement of people engaged in the act of begging.

- The scheme aims at achieving social security through multiple dimensions of identity, medical care, education, occupational opportunities and shelter.
- The Ministry of Social Justice & Empowerment has allocated Rs. 365 Crore for the scheme from 2021-22 to 2025-26.

5. SMILE Scheme

- » Prelims: SMILE Scheme
- » Mains: Significance of SMILE Scheme in alleviating the lives of Transgenders and people engaged in the act of begging

Context

- The Union Minister for Social Justice & Empowerment launched the Central Sector scheme "SMILE: Support for Marginalised Individuals for Livelihood and Enterprise".

SMILE Scheme

- This is an umbrella scheme, to provide comprehensive welfare and rehabilitation to the Transgender community and the people engaged in the act of begging.
- The two sub-schemes of SMILE include,
 - * Central Sector Scheme for Comprehensive Rehabilitation for Welfare of Transgender Persons.
 - » It provides Scholarships for Transgender Students studying in IX and till post-graduation.
 - » It has provisions for Skill Development and Livelihood under the PM-DAKSH scheme.
 - » Through Composite Medical Health, it provides a comprehensive package in convergence with PM-JAY supporting Gender-Reaffirmation surgeries through selected hospitals.
 - » The Provision of Transgender Protection Cell in each state will monitor cases of offences and ensure timely registration, investigation and prosecution of offences.
 - » The National Portal & Helpline will provide necessary information and solutions to the Transgender community and the people engaged in the act of begging when needed.
 - * Central Sector Scheme for Comprehensive Rehabilitation of persons engaged in the act of Begging.

MISCELLANEOUS

1. Rashtriya Yuva Sashaktikaran Karyakram (RYSK)

Context:

- The government has decided to extend the RYSK scheme to develop the personality and leadership qualities of the youth.

About the Scheme:

- The Rashtriya Yuva Sashaktikaran Karyakram scheme is a central sector scheme of the Ministry of Youth Affairs and Sports.
- The beneficiaries of the scheme include youth in the age group of 15-29.
- The age group has been considered in alignment with the definition of 'youth' as per the National Youth Policy of 2014.
- In the case of programme components specifically meant for the adolescents, the beneficiaries are in the age group of 10-19 years.
- The programmes of the RYSK scheme is implemented through seven sub-schemes:
 - * Nehru Yuva Kendra Sangathan (NYKS)
 - * National Youth Corps
 - * National Programme for Youth and Adolescent Development
 - * International Cooperation
 - * Youth Hostels
 - * Assistance to Scouting and Guiding Organisations
 - * National Young Leaders Programme
- The scheme programme includes skilling and propagating the vision of Atmanirbhar Bharat, mass awareness and action plan, establishing disaster risk reduction and preparedness teams and so on and so forth along with the promotion of youth volunteerism.
- The government collaborates with UN agencies like the UNDP and the Commonwealth Youth Programme to provide effective exposure to the young population.

Objectives:

- The major aim of the scheme is to motivate the youth to strive for excellence in their respective fields and engage them in the developmental process.
- It seeks to harness the immense youth energy for nation-building.

- Besides, it also aims at enhancing National Integration, Adventure, Youth Leadership and Personality Development and Empowerment of Adolescents, Technical and Resource Development.

2. Sahkar Se Samridhhi

Context:

- The Government of India is planning to formulate a new National Cooperation Policy to empower the cooperative sector by bringing more transparency, modernisation and competitiveness.

About the scheme:

- 'Sahkar se Samridhhi' is a futuristic vision under the Ministry of Cooperation that aims to provide an administrative, legal and policy framework to encourage the cooperative movement in the country.
- In order to establish prosperity through cooperation, the government has decided to frame a new National Cooperation Policy.
- This policy will involve consultations with stakeholders such as various ministries, departments of the central and state governments, cooperative federations, NABARD and other cooperative institutions.
- The joint efforts of both the centre and the states will strengthen the scheme and aid in the implementation of developmental programmes.
- For better engagement with the cooperatives, the government has also decided to create a national database.

3. Swaminatha Iyer

- » Prelims: Sangam Literature

Context:

- The Prime Minister paid homage to Swaminatha Iyer on his birth anniversary (on the 19th of February) commemorating his significant contributions to promote the cultural richness of the Sangam period

About Swaminatha Iyer (also known as 'Tamil Thatha'):

- Swaminatha played a revolutionary role in the revival of forgotten works of Tamil literature.

- The Tamil poet and nationalist, Subramania Bharati equated Swaminatha with the sage Agastya who was among the first exponents of Tamil.

Contributions

- The palm leaf manuscripts, a Buddhist work, were transcribed by him into paper and edited with special attention.
- The Silappathikaram, Purananooru and Manimekalai were some of the palm leaf manuscripts transcribed by Swaminatha and received enormous appreciation.
- It was his efforts that highlighted many literary treasures of the Sangam period and came to the public notice or else they would have been restricted only to the palm leaf manuscripts.
- The Jain classic called Civaka Cintamani was revived and published owing to the tireless efforts of Swaminatha.
- He also worked on and refurbished the Pattupattu which is an anthology of ten long poems in the Sangam literature.

Awards and recognition

- He was awarded with the title 'Mahamahopadhyaya' which decodes as 'Great Teacher', by the Government of Madras in 1906.
- The title of 'Dakshina Kalanidhi' was awarded to him by Sri Sankara Swamigal.
- In order to recognise his service towards reviving Tamil culture and language, the Madras University accorded Swaminatha with the title of 'Doctor'.

PRACTICE QUESTIONS

1. Consider the following statements with regards to the National Commission for Protection of Child Rights:

1. It is a statutory body under the Commissions for Protection of Child Rights (CPCR) Act, 2005 under the administrative control of the Ministry of Women & Child Development, Government of India.
2. The commission defines a child as a person between the ages of 0 and 18 years.
3. The commission has a chairperson and six members of which at least two should be women.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

2. Consider the following statements with regards to the appointment of judges in the higher judiciary in India:

1. Collegium is the system of appointment and transfer of judges that has evolved through judgments of the Supreme Court, and not by an Act of Parliament or by a provision of the Constitution.
2. In the Supreme Court Advocates-on-Record Association Vs Union of India, 1993, a nine-judge Constitution Bench devised a specific procedure called 'Collegium System' for the appointment and transfer of judges in the higher judiciary.
3. As per the third judges' case, the sole opinion of the CJI does not constitute the consultation process.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

3. Which of the following nations is not a signatory to the Nuclear Non-Proliferation Treaty (NPT):

- A. Iran
- B. Syria
- C. South Sudan
- D. Afghanistan

4. Consider the following statements with respect to the National Clean Air Programme:

1. The NCAP has set a target of reducing key air pollutants PM₁₀ and PM_{2.5} (ultra-fine particulate matter) by 20-30% by 2024, taking the pollution levels in 2019 as the base year.
2. The NCAP has identified 132 cities as non-attainment cities as they did not meet the national ambient air quality standards for 2011-15 under the National Air Quality Monitoring Program.
3. The NCAP was launched in 2019.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

5. With reference to the provisions contained in Part IV of the Constitution of India, which of the following statements is/are correct:

1. They shall be enforceable by courts.
2. They shall not be enforceable by any court.
3. The principles laid down in this part are to influence the making of laws by the State.

Select the correct answer using the code given below:

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

6. Which of the following ministries is the nodal agency for observing 'Azadi ka Amrit Mahotsav' celebrations:

- A. Ministry of Culture
- B. Ministry of Home Affairs
- C. Ministry of Urban Housing Development
- D. Ministry of Health & Family Welfare

7. Consider the following statements with regards to Alternate Minimum Tax:

1. It was introduced in 1988 for the first time to bring zero tax companies into the ambit of tax.
2. Companies are taxed at 15% under this regime.
3. It is not applicable to foreign companies operating in India.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

8. Consider the following statements with regards to Cess & Surcharge:

1. The Central Government levies both Cess and surcharge.
2. Both are collected and taken into the Consolidated Fund of India.
3. State Governments cannot share any of these.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

9. Consider the following statements with regards to International Financial Services Centre (IFSC):

1. An IFSC caters to customers outside the jurisdiction of the domestic economy.
2. The first IFSC in India has been set up at the Gujarat International Finance TecCity (GIFT City) in Gandhinagar.
3. The SEZ Act 2005 allows setting up an IFSC in an SEZ or as an SEZ after approval from the central government.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

10. Rajya Sabha has equal powers with Lok Sabha in

- A. The matter of creating new All India Services
- B. Amending the Constitution
- C. The removal of the government
- D. Making cut motions

11. Consider the following statements with regards to Delimitation Commission:

1. The Delimitation Commission is a high-level body set up by an act of the Parliament.
2. It is appointed by the President of India.
3. It works in tandem with the Election Commission of India.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

12. Which of the following is/are amongst the Ramsar sites in India:

1. Sultanpur National Park, Haryana
2. Sunderbans Wetland, West Bengal
3. Tsomoriri Lake, Ladakh
4. Samaspur Bird Sanctuary, Uttar Pradesh

Choose the correct code:

- A. 2, 3 & 4 only
- B. 2 & 4 only
- C. 1 & 3 only
- D. All of the above

13. According to the Indus Water Treaty of 1960, which of the following rivers were portioned/allocated to India:

1. Jhelum
2. Ravi
3. Sutlej
4. Indus
5. Chenab
6. Beas

Choose the correct code:

- A. 1, 3 & 5 only
- B. 2, 3 & 6 only
- C. 4, 5 & 6 only
- D. 1, 2 & 4 only

14. Consider the following statements with regards to EXIM Bank of India:

1. The organization was established in 1982 under the Export-Import Bank of India Act 1981 as a purveyor of export credit.

2. EXIM Bank is owned jointly by the Indian Government and RBI.
3. It offers term loans to Indian companies for equity investments in their overseas joint ventures or wholly-owned subsidiaries.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

15. Which of the following statements correctly explains the impact of the Industrial Revolution on India during the first half of the nineteenth century? (UPSC CSE 2020)

- A. Indian handicrafts were ruined.
- B. Machines were introduced in the Indian textile industry in large numbers.
- C. Railway lines were laid in many parts of the country.
- D. Heavy duties were imposed on the imports of British manufactures.

16. When a Bill is reserved by a Governor for the consideration of the President, what is the time limit prescribed by the constitution for returning the bill?

- A. Six Weeks
- B. Three Months
- C. Six Months
- D. No time limit

17. With respect to River Cities Alliance (RCA), which of the following statements is/are correct:

1. It was launched by the Ministry of Jal Shakti and the Ministry of Environment, Forest and Climate Change.
2. The Alliance is open to all river cities of India. Any river city can join the Alliance at any time.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

18. Which of the following statements is/are incorrect with respect to National Adaptation Fund for Climate Change:

1. It is a Centrally Sponsored Scheme which was set up in the year 2015-16.
2. National Bank for Agriculture and Rural Development (NABARD) is the National Implementing Entity (NIE).

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

19. Consider the following statements with respect to cartelization:

1. The Competition Commission is responsible for enforcing the cartel laws in India.
2. Prices controlled by the government under a law is not cartelization.
3. Both companies and individuals can be prosecuted under the Competition Act.

Which of the above statements is/are correct?

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

20. With reference to the water on the planet Earth, consider the following statements:

1. The amount of water in the rivers and lakes is more than the amount of groundwater.
2. The amount of water in polar ice caps and glaciers is more than the amount of groundwater.

Which of the statements given above is/are correct? [UPSC 2021]

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

21. Consider the following statements with regards to Sri Ramanujacharya:

1. He was also referred to as Ilaya Perumal which means the radiant one.
2. His philosophical foundations for devotionalism were influential to the Bhakti movement.

3. He is famous as the chief proponent of Vishishtadvaita subschool of Vedānta.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

22. Consider the following statements with regards to private member bills in the Parliament:

- 1. No private member bill has ever been passed in the Indian Parliament.
- 2. The government bills can be introduced and discussed on any day, private member's bills can be introduced and discussed only on Fridays.
- 3. Its introduction in the House requires 15 days' notice.

Choose the correct code:

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

23. Consider the following statements with regards to Golden Langur:

- 1. They are highly dependent on trees, living in the upper canopy of forests and are thus known as leaf monkeys.
- 2. They are listed in Schedule I of the Wildlife Protection Act, 1972.
- 3. They are endemic to Assam and Bhutan.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

24. Consider the following statements with regards to the Preamble of the Indian Constitution:

- 1. The ideals behind the Preamble to India's Constitution were laid down by Jawaharlal Nehru's Objectives Resolution, adopted by the Constituent Assembly on January 22, 1947.
- 2. The date mentioned in the Preamble is when it was adopted i.e. November 26, 1949.

3. The Preamble of the Constitution can't be amended.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

25. Consider the following events in the history of India: PYQ (2020)

- 1. Rise of Pratiharas under King Bhoja
- 2. Establishment of Pallava power under Mahendravarman – I
- 3. Establishment of Chola power by Parantaka – I
- 4. Pala dynasty founded by Gopala

What is the correct chronological order of the above events, starting from the earliest time?

- A. 2 – 1 – 4 – 3
- B. 3 – 1 – 4 – 2
- C. 2 – 4 – 1 – 3
- D. 3 – 4 – 1 – 2

26. Tropic of Cancer passes through which of the following states in India:

- 1. Gujarat
- 2. Rajasthan
- 3. Chhattisgarh
- 4. Manipur
- 5. Tripura
- 6. West Bengal

Options:

- A. 1, 2, 3, 4 and 5 only
- B. 2, 3, 4, 5 and 6 only
- C. 1, 2, 3, 5 and 6 only
- D. 1, 4 and 6 only

27. Consider the following statements with respect to Dholavira:

- 1. Dholavira's location is on the Tropic of Cancer.
- 2. It is located on Khadir Bet Island in the Kutch Desert Wildlife Sanctuary in the Great Rann of Kutch.
- 3. It is the first site of the ancient Indus Valley Civilisation (IVC) in India to get the UNESCO World Heritage tag.

Which of the above statements is/are correct?

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

28. Which Agreement/Convention is also described as a "Berne and Paris-plus" Agreement:

- A. Cancun Agreement
- B. Basel Convention
- C. TRIPS Agreement
- D. Abolition of Forced Labor Convention

29. With respect to the International Crops Research Institute for the Semi-Arid Tropics:

- 1. ICRISAT is an international organization that conducts agricultural research for development in Asia & sub-Saharan Africa.
- 2. It is headquartered in Hyderabad.
- 3. ICRISAT founded the Smart Food Initiative in 2013.

Options:

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

30. Consider the following Rivers:

- 1. Brahmani
- 2. Nagavali
- 3. Subarnarekha
- 4. Vamsadhara

Which of the above rise from the Eastern Ghats? PYQ (2021)

- A. 1 and 2
- B. 2 and 4
- C. 3 and 4
- D. 1 and 3

31. Which of the following articles in the Indian constitution is/are associated with Education:

- 1. Article 21A
- 2. Article 27
- 3. Article 45
- 4. Article 47

Options:

- A. 1 and 2 only
- B. 2, 3 and 4 only
- C. 1 and 3 only
- D. 1, 3 and 4 only

32. Consider the following statements with respect to Right to Education (RTE):

- 1. The 86th Constitutional Amendment (2002) inserted Article 21A in the Indian Constitution
- 2. It provides free and compulsory education for children between the age of 6 to 14 years
- 3. The RTE Act has provisions for a non-admitted child to be admitted to an age appropriate class.

Which of the above statements is/are correct?

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

33. With respect to African Union (AU), which of the following statements is/are correct:

- 1. The AU's secretariat, the African Union Commission is based in Abuja, Nigeria
- 2. The Abuja Treaty led to the creation of the African Union

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

34. Which of the following statements about Basai Wetland is/are correct:

- 1. It located in Gurgaon district in Haryana
- 2. It is recognised globally as an Important Bird Area (IBA) by the BirdLife International

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

35. A legislation which confers on the executive or administrative authority an unguided and uncontrolled discretionary power in the matter of the application of law violates which one of the following Articles of the Constitution of India:

- A. Article 14
- B. Article 28
- C. Article 32
- D. Article 44

36. Consider the following statements with regards to Ordinance making powers of the Governor:

1. The Governor can promulgate an ordinance when the Legislative Assembly is not in session in case of the unicameral legislature or when both Legislative assembly and council are not in session in case of a bicameral legislature.
2. His power to promulgate ordinances is one of the discretionary powers given to the Governor.
3. President's instructions on the state ordinance are required if a bill containing the same provisions would have required the previous sanction of the President for its introduction into the state legislature.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

37. Consider the following statements with regards to Anticipatory Bail:

1. It is a direction issued to release a person on Bail even before the person is arrested.
2. It is issued only by the High Court and Supreme Court.
3. An application for anticipatory Bail can be filed in cases of both bailable and non-bailable offences.

Choose the correct code:

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

38. Consider the following statements with regards to Pradhan Mantri Matru Vandana Yojana:

1. PMMVY is a maternity benefit programme being implemented in all districts of the country with effect from 1st January 2017.
2. Cash benefits are provided to pregnant women in their bank account directly to meet enhanced nutritional needs and partially compensate for wage loss.
3. It is a centrally sponsored scheme being executed by the Ministry of Women and Child Development.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

39. The Supreme Court recently stated, "The grant of _____ is to break the monotony of imprisonment and to enable the convict to maintain continuity with family life and integration with society. Although _____ can be claimed without a reason, the prisoner does not have an absolute legal right to claim _____. The grant of _____ must be balanced against the public interest and can be refused to certain categories of prisoners."

What was the Supreme Court referring to?

- A. Parole
- B. Furlough
- C. Bail
- D. Anticipatory Bail

40. Along with the Budget, the Finance Minister also places other documents before the Parliament which include 'The Macro Economic Framework Statement'. The aforesaid document is presented because this is mandated by:

- A. Long standing parliamentary convention
- B. Article 112 and Article 110(1) of the Constitution of India
- C. Article 113 of the Constitution of India

D. Provisions of the Fiscal Responsibility and Budget Management Act, 2003

41. Consider the following statements with regards to MGNREGA:

1. The scheme is a demand-driven wage employment scheme, which functions under the Ministry of Panchayati Raj.
2. Every adult member of a household in a rural area with a job card is eligible for a job under the scheme.
3. It covers all districts of India except the ones with a 100% urban population.
4. Under the law, the States may make provisions for providing additional days beyond the period guaranteed under the Act from their own funds.

Choose the correct code:

- A. 1 & 2 only
- B. 2, 3 & 4 only
- C. 1, 3 & 4 only
- D. All of the above

42. Consider the following statements with regards to Aadhar:

1. UIDAI is a statutory body working under the Ministry of Home Affairs.
2. Under the Aadhaar Act, foreigners who have stayed in India for 182 days or more in the 12 months, are eligible to apply for Aadhaar.
3. During enrolment for Aadhaar, an individual has three options for gender – Male, Female and Transgender.

Choose the correct code:

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

43. As per the FRBM Act, the target for Debt to GDP ratio for the central government is:

- A. 20%
- B. 40%
- C. 60%
- D. 80%

44. Consider the following statements with regards to the Foreign Contribution (Regulation) Act:

1. Foreign funding of persons in India is regulated under the FCRA act and is implemented by the Ministry of Home Affairs.
2. Under the Act, organisations are required to register themselves every five years.
3. The Act states that foreign contributions must be received only in an account designated by the bank as FCRA account in such branches of the State Bank of India only.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

45. "The experiment will employ a trio of spacecraft flying in formation in the shape of an equilateral triangle that has sides one million kilometres long, with lasers shining between the craft." The experiment in question refers to (UPSC-2020):

- A. Voyager-2
- B. New Horizons
- C. LISA Pathfinder
- D. Evolved LISA

46. Which of the following best defines 'Khabar Lahariya':

- A. Only newspaper in India operated by only Dalit women
- B. NGO working in the Bundelkhand region, raising issues of Dalit women
- C. A special provision under RTI, ensuring faster replies to questions submitted by Dalits
- D. A direct benefit transfer scheme for Dalit women in Madhya Pradesh

47. Consider the following statements:

1. Energy by nuclear fusion promises to be low carbon, but more dangerous than how nuclear energy is now produced.
2. A kilogram of fusion fuel contains about 10 million times as much energy as a kilogram of coal, oil or gas.
3. The ITER is a fusion research mega-project supported by seven members — China, the European Union, India, Japan, South Korea, Russia and the U.S. — and based in the south of France.

Choose the correct code:

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

48. INCOIS (Indian National Centre for Ocean Information Services) operates under which of the following ministries:

- A. Ministry of Science & Technology
- B. Ministry of Earth Sciences
- C. Ministry of Environment, Forest & Climate Change
- D. Ministry of Defence

49. Consider the following statements with regards to ASEAN:

1. The motto of ASEAN is "One Vision, One Identity, One Community".
2. ASEAN was established with the signing of the ASEAN Declaration (Bangkok Declaration) in 1969 by its founding fathers – Indonesia, Malaysia, Philippines, Singapore and Thailand.
3. India has a separate mission to ASEAN in Jakarta.

Choose the correct code:

- A. 1 & 2 only
- B. 2 & 3 only
- C. 1 & 3 only
- D. All of the above

50. Who among the following rulers advised his subjects through this inscription - "Whosoever praises his religious sect or blames other sects out of excessive devotion to his own sect, with the view of glorifying his own sect, he rather injures his own sect very severely." (UPSC 2020)

- A. Ashoka
- B. Samudragupta
- C. Harshavardhana
- D. Krishnadeva Raya

51. It is an internationally significant waterway located in Northwestern Turkey. It connects the Black Sea with the Sea of Marmara. The strait being talked about is:

- A. Bab-el-Mandeb
- B. Strait of Tartar
- C. Kerch Strait
- D. Bosphorus Strait

52. Which of the given statement/s is/are correct?

1. The One Ocean Summit is organized by UNESCO in cooperation with the World Bank.
2. The agenda of the One Ocean summit is to build international cooperation for anti-piracy.
3. The UNESCO is the custodian of unique ocean places, through 232 marine biosphere reserves and 50 marine World Heritage sites of outstanding universal value.

Options:

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

53. Consider the following statements with respect to Madhvacharya:

1. He is the founder of Tattvavada.
2. The Bhakti movement vocalist Purandara Dasa was a follower of Madhvacharya's philosophy.
3. His name at birth was Ilaya Perumal.

Which of the given statements is/are INCORRECT?

- A. 1 and 2 only
- B. 3 only
- C. 1 only
- D. None of the above

54. Which of the following statements with respect to the scheme 'Krishi Udan 2.0' is/are correct:

1. The scheme aims to ensure seamless air transportation and associated logistics for agricultural produce from the North Eastern states, hilly and tribal regions of the country.
2. The scheme was launched by the Ministry of Agriculture and Farmers' Welfare.
3. The scheme was announced by the finance minister during the Union Budget 2022-23.

Options:

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

55. Which of the following is not included in the assets of a commercial bank in India:

- A. Advances
- B. Deposits
- C. Investments
- D. Money at call and short notice

56. Consider the following statements with respect to Koalas:

- 1. It is an arboreal herbivorous marsupial native to Australia.
- 2. Its IUCN status is Critically Endangered.
- 3. Koalas are mostly nocturnal.

Which of the above statements is/are incorrect?

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

57. With respect to Index of Industrial Production (IIP), which of the following statements is/are correct:

- 1. It is calculated and published by the Central Statistical Organization (CSO) every three months.
- 2. The CSO has revised the base year of the IIP from 2012 to 2016.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

58. Which amongst the following statements is the best description of Exercise Milan:

- A. Naval exercise in the Indo-Pacific region by India, Japan and USA
- B. India, Thailand and Singapore annual trilateral exercise
- C. Naval exercise between India and Oman
- D. Multilateral naval exercise hosted by the Indian Navy

59. River Sal flows through the state of :

- A. Sikkim
- B. Manipur
- C. Goa
- D. Tripura

60. In the context of India's preparation for Climate-smart Agriculture, consider the following statements: [PYQ 2021]

- 1. The 'Climate-Smart village' approach in India is a part of a project led by climate change, Agriculture and food security (CCAFS), an international research programme.
- 2. The project of CCAFS is carried out under Consultative Group on International Agricultural Research (CGIAR) headquartered in France.
- 3. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in India is one of the CGIAR'S research centres.

Which of the statements given above are correct?

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

61. Which of the following statements are correct:

- 1. SMILE scheme (Support for Marginalized Individuals for Livelihood and Enterprise) is set to provide welfare and rehabilitation for unemployed youth, widows & the disabled.
- 2. It is a Central Sector scheme.
- 3. It has been launched by the Ministry for Social Justice & Empowerment.

Options:

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

62. Which of the following statements are correct:

- 1. Forum for India-Pacific Islands cooperation (FIPIC) is a multinational grouping developed in 2014 for cooperation between India and 14 Pacific Islands nations.
- 2. India has announced a \$150 million worth line of credit to the group of Pacific island nations for undertaking solar, renewable energy and climate-related projects.

3. Two summits of this forum have been held to further India's extended Act East policy.

Options:

- A. 1 and 2 only
- B. 3 only
- C. 1, 2 and 3
- D. None of the above

63. TOR or The Onion Router is often associated with :

- A. Cryptocurrencies
- B. 5G Networks
- C. Darknet
- D. Internet of Things (IoT)

64. Under Article 12 of the Indian Constitution, the 'state' comprises:

- 1. Government of India
- 2. Parliament of India
- 3. State Government
- 4. State Legislature
- 5. Local or other authorities within the territory of India or under the control of the Government of India.

Options:

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2, 3, 4 and 5

65. Consider the following statements:[PYQ 2019]:

- 1. The Parliament (Prevention of Disqualification) Act, 1959 exempts several posts from disqualification on the grounds of 'Office of Profit'.
- 2. The above-mentioned Act was amended five times.
- 3. The term 'Office of Profit' is well-defined in the Constitution of India.

Which of the statements given above is/are correct?

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

66. Consider the following statements :

- 1. The fort at Masulipatnam was built by the French
- 2. Chandannagar was the first trading post on the eastern bank of the Hooghly, set up by the Dutch
- 3. During the British Raj, Darjeeling's temperate climate led to its development as a hill station for British residents

Which of the above statements is/are correct?

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

67. Consider the following pairs :

Bird Sanctuary	State
1. Ranganathittu Bird Sanctuary	Karnataka
2. Kolleru Bird Sanctuary	Andhra Pradesh
3. Karnala Bird Sanctuary	Maharashtra

Which of the above pairs is/are correctly matched?

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

68. Which amongst the following statements is the best description of The Egmont Group:

- A. The primary purpose of the group is to help countries develop their national anti money laundering systems.
- B. It is a group that promotes and protects intellectual property
- C. It seeks to protect and conserve the world's oceans and marine wildlife
- D. It is a group of nuclear supplier countries that seeks to contribute to the nonproliferation of nuclear weapons

69. Modified Elephant recently seen in news is a/an:

- A. Advanced Persistent Threat (APT) group that has been targeting activists, journalists, lawyers and others in India
- B. Adult-size humanoid that is reportedly capable of face and object detection, speech recognition and generation

- C. GPS collar that help scientists track the animal movements in real time once they are released into their new habitat
- D. Remote Access Trojan (RAT) focused on password stealing, keylogging and remote control capabilities.

70. Consider the following statements:

The effect of devaluation of a currency is that it necessarily

1. Improves the competitiveness of the domestic exports in the foreign markets
2. Increase the foreign value of domestic currency
3. Improves the trade balance

Which of the above statements is/are correct?

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

71. Which of the following statements is/are correct with respect to the Central Bureau of Investigation (CBI):

1. When a state gives general consent to the CBI for probing a case, the agency is not required to seek fresh permission every time it enters that state in connection with investigation.
2. Withdrawal of consent, if any, by a State Government can be effected prospectively and retrospectively.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

72. Consider the following statements:

1. Gambling and betting is a State subject.
2. Gambling Legislations can impose a ban on 'Games of skill' and not on 'Games of chance'.

Which of the above statements is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both
- D. None

73. The festival of Medaram Jatara is celebrated in the State/Union Territory of :

- A. Telangana
- B. Kerala
- C. Tamil Nadu
- D. Puducherry

74. With reference to Lassa fever, which of the following statements is/are correct:

1. The Lassa virus is named after a town in Malaysia where the first case was discovered.
2. The fever is spread by Bats.
3. Human-to-human transmission is possible.

Options:

- A. 1 and 2 only
- B. 3 only
- C. 2 and 3 only
- D. None

75. With reference to Chausath Yogini Temple situated near Morena, consider the following statements:

1. It is a circular temple built during the reign of the Kachchhapaghata Dynasty.
2. It is the only circular temple built in India.
3. It was meant to promote the Vaishnava cult in the region.
4. Its design has given rise to a popular belief that it was the inspiration behind the Indian Parliament building.

Which of the statements given above are correct?
PYQ (2021)

- A. 1 and 2
- B. 2 and 3 only
- C. 1 and 4
- D. 2, 3 and 4

76. Bhiku Ramji Idatte commission was set up by the Government of India to:

- A. Review the governance of the board of banks in India
- B. Suggest appropriate measures in respect of Denotified and Nomadic Tribes that may be undertaken by the Central Government or the State Government

- C. Review various Acts administered by the Ministry of Environment
- D. Consider reforms to the country's existing criminal laws

77. Consider the following statements with respect to East Asia Summit (EAS):

1. The concept of an 'East Asia Grouping' was first promoted in 1991 by the then Malaysian Prime Minister, Mahathir bin Mohamad.
2. The First East Asia Summit was held in Tokyo, Japan.
3. India is a founding member of the East Asia Summit.

Which of the above statements is/are incorrect?

- A. 1 only
- B. 1 and 3 only
- C. 2 only
- D. None

78. With respect to The Energy and Resources Institute (TERI), which of the following statements is/are correct:

1. It is a not-for-profit, policy research organization that is headquartered in New Delhi.
2. The World Sustainable Development Summit (WSDS) is the annual event of TERI.
3. Green Rating for Integrated Habitat Assessment was conceived by TERI and developed jointly with the Ministry of Housing and Urban Affairs.

Options:

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

79. Which of the following statements about Guru Ravidas is/are correct:

1. He was an Indian mystic poet-saint of the Bhakti movement.
2. His poems were included in the Guru Granth Sahib which is the sacred scripture of Sikhism.

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

80. Consider the following statements in respect of the Bharat Ratna and Padma Awards:

1. Bharat Ratna and Padma Awards are titles under Article 18(1) of the Constitution of India.
2. Padma Awards, which were instituted in the year 1954, were suspended only once.
3. The number of Bharat Ratna Awards is restricted to a maximum of five in a particular year.

Which of the above statements are not correct? PYQ (2021)

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

81. Consider the following statements with respect to the New India Literacy Programme:

1. The scheme has been launched for the period FYs 2022-2027 to cover all the aspects of Adult Education.
2. It will cover non-literates aged 18 years and above in all states and UTs in the country.
3. Besides foundational literacy and numeracy, the scheme aims at imparting critical life skills and vocational skills development.

Which of the given statements is/are correct?

- 1. 3 only
- 2. 2 only
- 3. 1 and 3 only
- 4. 1, 2 and 3

82. Consider the following statements with respect to "Pasuvula Panduga", recently seen in news:

1. It is the most important festival of the Bodo Tribe.
2. Hunting is mandatory as part of the festival.
3. The festival is dedicated to cows, bulls and other animals that are part of the agrarian economy.

Which of the given statements is/are incorrect?

- A. 2 only
- B. 1 and 3 only
- C. 1 and 2 only
- D. None of the above

83. Which of the given statements with respect to Green Hydrogen is/are INCORRECT:

1. Hydrogen produced by electrolysis using renewable energy is known as Green Hydrogen.
2. Green Hydrogen is generated from natural gas, or methane, through a process called steam reforming.
3. Green Hydrogen production is the cleanest form of hydrogen generation since the by-products are just water and water vapour.

Options:

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

84. Which of the given statements is/are INCORRECT:

- A. The interest rate that the RBI charges when commercial banks borrow money from it is called the repo rate.
- B. The rate at which RBI lends to commercial banks by buying the securities sold by the commercial banks is called the reverse repo rate.
- C. The interest rate that the RBI pays commercial banks when they park their excess cash with the central bank is called the reverse repo rate.
- D. The rate at which the commercial banks borrow money from the RBI by selling their securities to the RBI is called the repo rate.

85. Who of the following had first deciphered the edicts of Emperor Ashoka? (UPSC CSE 2016)

- A. Georg Bihler
- B. James Prinsep
- C. Max Muller
- D. William Jones

86. Consider the following statements with respect to the Normandy Format:

1. The diplomatic grouping was created in January 2022 with the aim of finding a peaceful resolution to the conflict between Russia and Ukraine.
2. It is an informal forum that was set up by France, Germany, Russia and Ukraine.
3. It takes its name from the Normandy landings in the second world war.

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

87. Which among the following is/are Earth Observation Satellites:

1. Bhaskara-I
2. INSAT-3D
3. SARAL
4. SCATSAT-1
5. Megha-Tropiques

Options:

- A. 2, 4 and 5 only
- B. 1, 2 and 5 only
- C. 3 and 4 only
- D. 1, 2, 3, 4 and 5

88. Falkland Islands, recently in news, are located in:

- A. South China Sea
- B. Indian Ocean
- C. South Pacific Ocean
- D. South Atlantic Ocean

89. Which of the following are correctly matched:

Diseases Vector

1. Malaria Anopheles mosquito
2. Yellow Fever Aedes aegypti mosquito
3. Japanese Encephalitis Culex mosquito

Options:

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

90. What is the aim of the programme 'Unnat Bharat Abhiyan'? (UPSC CSE 2017):

- A. Achieving 100% literacy by promoting collaboration between voluntary organizations and government's education system and local communities.
- B. Connecting institutions of higher education with local communities to address development challenges through appropriate technologies.

C. Strengthening India's scientific research institutions in order to make India a scientific and technological power.

D. Developing human capital by allocating special funds for health care and education of rural and urban poor, and organizing skill development programmes and vocational training for them.

Options:

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

91. Arrange the following hills from east to west:

- 1. Jaintia Hills
- 2. Sadar Hills
- 3. Garo Hills
- 4. Khasi Hills

Options:

- A. 1-2-3-4
- B. 2-1-4-3
- C. 3-4-1-2
- D. 4-1-3-2

92. Consider the following statements:

- 1. The first municipal corporation in India was set up at Madras.
- 2. All the members of a municipality shall be elected directly by the people of the municipal area and the State Election Commission may provide the manner of election of the chairperson of a municipality.
- 3. The 73rd constitutional amendment act established the system of Urban Local Governments.

Which of the statements given above is/are correct?

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

93. With respect to First Information Report (FIR), which of the following statements is/are correct?

- 1. It is not defined in the Indian Penal Code (IPC) or the Code of Criminal Procedure (CrPC)
- 2. An FIR should contain an exhaustive account of the incident
- 3. An FIR that can be lodged in any police station irrespective of any territorial jurisdiction of the police station is called the Zero FIR

94. Which of the following statements is/are incorrect with respect to the International Bank for Reconstruction and Development (IBRD):

- 1. The Bank only finances sovereign governments directly, or projects backed by sovereign governments
- 2. IBRD offers its borrowers products to convert or swap their IBRD loans into their domestic currencies

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

95. Consider the following statements:

- 1. The Montague-Chelmsford Reforms of 1919 recommended granting voting rights to all women above the age of 21.
- 2. The Government of India Act of 1935 gave women reserved seats in the legislature.

Which of the statements given above is/are correct?

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

96. Consider the following statements with respect to Tolkappiyam:

- 1. It was composed by Tolkappiyar.
- 2. It is the oldest extant Tamil work till date
- 3. It is a unique work on grammar

Which of the statements given above is/are correct?

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

97. Which of the following statements is/are correct about Gravitational lensing:

1. It occurs when a huge amount of matter such as a massive galaxy creates a gravitational field that distorts and magnifies the light from objects behind it
2. The more massive the object, the stronger its gravitational field and hence greater the bending of light rays
3. The effect allows researchers to study the details of early galaxies too far away to be seen otherwise with even the most powerful space telescopes.

Options:

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

98. With respect to the Giant Metrewave Radio Telescope (GMRT), which of the following statements is/are correct:

1. It is one of the largest radio telescopes in the world located in Nainital
2. It is operated by the Aryabhata Research Institute of Observational Sciences (ARIES)

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

99. Messier 77 recently seen in news is a/an

- A. New exotic planet outside our solar system in the constellation Cassiopeia.
- B. Red dwarf star which is about 110 light years from the Earth
- C. Barred spiral galaxy
- D. Solar array designed by NASA

100. Which of the following have species that can establish a symbiotic relationship with other organisms:

1. Cnidarians
2. Fungi
3. Protozoa

Select the correct answer using the code given below:

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

101. The Organization for Security and Co-operation in Europe (OSCE) is known to perform which of the following functions:

1. Arms control
2. Promotion of human rights
3. Conflict prevention and post-conflict rehabilitation
4. Crisis management
5. Counter-terrorism

Options:

- A. 1, 2 and 5 only
- B. 2, 3, 4 and 5 only
- C. 1, 3, 4 and 5 only
- D. 1, 2, 3, 4 and 5

102. The Indus Waters Treaty (IWT) between India and Pakistan was brokered by –

- A. USA
- B. World Bank
- C. UNSC
- D. UK and France

103. Which of the following statements are incorrect:

1. Pashmina wool and shawls are made from animal-hair fibre forming the downy undercoat of the Changthangi goat.
2. It is a special breed of goat indigenous to the high altitude regions of Ladakh.
3. These goats are domesticated and reared by nomadic communities called the Changpa.

Options:

- A. 1 only
- B. 2 only
- C. 3 only
- D. None of the above

104. It is an emerging science that deals with engineering life forms for a wide range of applications from making designer medicines to foods. It is seen as one of the top 10

breakthrough technologies as part of the “new industrial revolution” that is most likely to change the world. Instances of its application include the use of gene editing systems such as CRISPR that allow defective genes in animals, plants and even people to be silenced, or changed, and control biological outcomes. This field of science & technology is known as :

- A. Synthetic Biology
- B. Artificial Bioscience
- C. Modified Biology
- D. Engineered Biology

105. Which of the following is not included in the assets of a commercial bank in India:

- A. Advances
- B. Deposits
- C. Investments
- D. Money at call and short notice

106. During the 2022-23 Union Budget, the Finance Minister announced the establishment of a dedicated promotion task force for which sector:

- A. Domestic drone production
- B. Animation, Visual Effects, Gaming and Comics (AVGC)
- C. Electric and hybrid vehicles
- D. 5G and other high speed communication networks

107. The Coastal Regulation Zone (CRZ) norms notified in 2018 is based on the recommendations of which committee:

- A. Madhav Gadgil committee
- B. Shailesh Nayak committee
- C. Kasturirangan committee
- D. Rangarajan committee

108. What is the IUCN status of the Greater One-horned Rhino:

- A. Endangered
- B. Critically Endangered
- C. Vulnerable
- D. Near Threatened

109. Its objective is to promote smart, sustainable and inclusive growth and employment opportunities with regard to maritime economic activities. It emphasizes on integration of development of marine economy with social inclusion, environmental sustainability, combined with an innovative business model. It is reflected in SDG 14, which calls to conserve and sustainably use the oceans, seas and marine resources for sustainable development. This model of marine development is known as –

- A. Blue Economy
- B. Sustainable Marine Strategy
- C. Ocean Economy
- D. Both a and c

110. With reference to agricultural soils, consider the following statements:

1. A high content of organic matter in soil drastically reduces its water holding capacity.
2. Soil does not play any role in the sulphur cycle.
3. Irrigation over a period of time can contribute to the salinization of some agricultural lands.

Which of the statements given above is/are correct?

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

111. Which of the following is/are correctly matched:

Pair 1	Pair 2
1. eMARG	an e-Governance solution for maintenance of rural roads constructed under Pradhan Mantri Gram Sadak Yojana
2. Geospatial Rural Road Information System	national level geographic presentation of Pradhan Mantri Gram Sadak Yojana
3. GeoSadak	online Geospatial Transaction System for Pradhan Mantri Gram Sadak Yojana
4. National Rural Infrastructure Development Agency	the nodal implementation agency of Pradhan Mantri Gram Sadak Yojana scheme

Options:

- A. 4 only
- B. 2 and 3 only
- C. 1, 3 and 4 only
- D. 1, 2, 3 and 4

112. Which of the following statements best describes Mission Vatsalya:

- A. An umbrella scheme for child welfare services and child protection services all over India.
- B. An umbrella scheme covering schemes for empowerment and protection of women across India.
- C. An umbrella scheme for nutritional development of children.
- D. An umbrella scheme covering comprehensive measures aimed at reducing neo-natal mortality and maternal mortality.

113. Consider the following statements:

- 1. Original constitution did not contain any provisions related to Fundamental Duties.
- 2. All the Fundamental Duties were added to the constitution through the 42nd amendment act to the constitution, based on the recommendations of the Swaran Singh Committee.
- 3. Swaran Singh Committee suggested penal provisions for not adhering to Fundamental Duties.
- 4. Both Fundamental Rights and Fundamental Duties are not applicable to non-citizen residents of India.

Which of the given statement/s is/are INCORRECT?

- A. 3 only
- B. 2 and 4 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

114. Which of the given statement/s is/are correct with respect to the National Meanscum-Merit Scholarship (NMMSS) Scheme:

- 1. One lakh fresh scholarships are awarded to selected students of class IX every year for study in State Government, Government-aided, Local body and Private schools under the scheme.
- 2. Complete funds under the scheme are provided by the Central Government only.
- 3. The scholarships are disbursed to the students directly by electronic transfer into their bank accounts under Direct Benefit Transfer (DBT).

Options:

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. None of the above

115. 'SWAYAM', an initiative of the Government of India, aims at:

- A. promoting the Self Help Groups in rural areas
- B. providing financial and technical assistance to young start-up entrepreneurs
- C. promoting the education and health of adolescent girls
- D. providing affordable and quality education to the citizens for free

116. Consider the following statements with respect to Temples of Khajuraho:

- 1. Khajuraho group of temples are linked to two religions- Hinduism and Buddhism
- 2. The Temples of Khajuraho are a magnificent example of the Nagara style of temples
- 3. It was built by the Chandela rulers

Which of the above statements is/are correct?

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

117. Which of the following statements with respect to Exercise Cobra Warrior is/are correct:

- 1. They are a series of international Air Force exercises between the Indian Air Force and the United States Air Force
- 2. The exercise showcases efforts and commitment of the two nations to a free and open Indo-Pacific region

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

118. Golan Heights often seen in news is related to affairs surrounding which amongst the following regions:

- A. Scandinavia
- B. Middle East
- C. Baltic region
- D. Western Africa

119. With respect to International Space Station (ISS), which of the following statements is/are correct:

1. The ISS was launched in 1998 as part of joint efforts by the U.S., Russia, China, Canada and Europe.
2. It is the largest artificial object in space and the largest satellite in low Earth orbit

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

120. "R2 Code of Practices" constitute a tool available for promoting the adoption of

- A. Environmentally responsible practices in the electronics recycling industry
- B. Ecological management of "Wetlands of International Importance" under the Ramsar Convention
- C. Sustainable practices in the cultivation of agricultural crops in degraded lands
- D. "Environmental Impact Assessment" in the exploitation of natural resources

121. Consider the following statements with respect to PM-DevINE Scheme:

1. The scheme will fund infrastructure and social development projects in the spirit of PM GatiShakti in the Naxal-affected states
2. It will not be a substitute for existing Central or State Schemes

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. Both
- D. None

122. With respect to endosulfan, which of the following statements is/are correct:

1. It is a widely-banned pesticide with hazardous effects on human genetic and endocrine systems
2. It is listed by the Stockholm Convention as a Persistent Organic Pollutant (POP) and targeted for global elimination

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

123. Which of the following statements with respect to Indian National Army (INA) is/are incorrect:

1. It was formed in 1942 by Subhas Chandra Bose
2. They had participated in operation U-Go, the 1944 Japanese campaign towards British India

Options:

- A. 1 only
- B. 2 only
- C. Both
- D. None

124. Which of the following statements is/are incorrect:

1. Article 323 A contemplates establishment of tribunals for public service matters only, Article 323 B contemplates establishment of tribunals for certain other matters.
2. Tribunals under Article 323 A can be established only by Parliament, tribunals under Article 323 B can be established both by Parliament and state legislatures with respect to matters falling within their legislative competence.
3. Under Article 323 A, only one tribunal for the Centre and one for each state or two or more states may be established. There is no question of hierarchy of tribunals, whereas under Article 323 B a hierarchy of tribunals may be created.

Options:

- A. 2 only
- B. 1, 2 and 3
- C. None
- D. 2 and 3

125. Among the following, which one is the least water-efficient crop: (UPSC CSE 2021)

- A. Sugarcane
- B. Sunflower
- C. Pearl millet
- D. Red gram

126. Which of the following statements is/are correct with respect to Swami Dayananda Saraswati:

1. He founded Arya Samaj a Hindu reform movement
2. He stressed on One God and rejected idol worship.
3. He wrote many books. His major contribution is the Karmyogi

Options:

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

127. Consider the following statements:

1. The most common plutonium isotope formed in a typical nuclear reactor is the fissile Pu-239
2. Plutonium-244 is the most stable isotope of plutonium

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both
- D. None

128. With respect to Ammonia, which of the following statements is/are correct:

1. Ammonia is the second largest chemical product produced in the world, behind sulphuric acid
2. Majority of Ammonia produced is used in agriculture as a fertilizer.
3. Ammonia is used in wastewater treatment, used as an Anesthetic and in the manufacture of plastics

Options:

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

129. Which amongst the following statements is the best description of 'Snapback Mechanism':

- A. A process created by the Council of Europe for the Legal protection of human rights
- B. A procedure introduced by United States to unilaterally reimpose sanctions on Iran
- C. Security Council resolution to hold Russia accountable for its aggression against Ukraine
- D. A procedure introduced by Quad to advance a free and open Indo-Pacific

130. With reference to the Indian Judiciary, consider the following statements.

1. Any retired judge of the Supreme Court of India can be called back to sit by the Chief Justice of India with prior permission of the President of India.

2. A High court in India has the power to review its own judgement as the Supreme Court does.

Which of the statements given above is/are correct?

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

131. With respect to Cheetah, which of the following statements is/are correct:

1. Cheetahs are the world's fastest land animal
2. Cheetahs in India went extinct long back in 1952 due to reckless hunting activities
3. Asiatic Cheetahs are listed as critically endangered species in the (IUCN) Red List of Threatened Species.

Options:

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

132. The Golden Fibre Revolution in India is related to:

- A. Jute
- B. Coir
- C. Silk
- D. Cotton

133. Arrange the following events in the chronological order:

1. The first animals evolved
2. The dinosaurs went extinct
3. The first vertebrates (fish) evolved
4. The first land plants evolved

Options:

- A. 1-2-3-4
- B. 1-3-4-2
- C. 3-4-1-2
- D. 4-1-3-2

134. Okinawa Island is under the control of:

- A. China
- B. Japan
- C. South Korea
- D. Philippines

135. According to Portuguese writer Nuniz, the women in Vijayanagar Empire were experts in which of the following areas: (UPSC CSE 2021)

- 1. Wrestling
- 2. Astrology
- 3. Accounting
- 4. Soothsaying

Select the correct answer using the code given below:

- A. 1, 2 and 3 only
- B. 1, 3 and 4 only
- C. 2 and 4 only
- D. 1, 2, 3 and 4

136. Consider the following statements with respect to International Atomic Energy Agency (IAEA):

- 1. It is headquartered in Vienna, Austria
- 2. India is a founding member of the IAEA
- 3. RATS is a network for providing international assistance, upon request from a Member State, following a nuclear or radiological incident or emergency

Which of the above statements is/are correct?

- A. 1 and 2 only
- B. 3 only
- C. 1, 2 and 3
- D. None

137. Which of the following are the Specialized agencies of the United Nations:

- 1. Food and Agriculture Organization
- 2. International Atomic Energy Agency (IAEA)
- 3. International Telecommunication Union
- 4. World Health Organization
- 5. World Meteorological Organization

Options:

- A. 1, 2, 3 and 4 only
- B. 2, 3, 4 and 5 only
- C. 1, 3, 4 and 5 only
- D. 1, 2, 3, 4 and 5

138. Which amongst the following statements is the best description of Doctrine of eminent Domain:

- A. It is a doctrine whereby a party may be barred from raising a claim due to an unreasonable delay in pursuing the claim
- B. It holds that a larger and greater body should not exercise functions which can be carried out efficiently by smaller and lesser body
- C. The purpose of this doctrine is to determine under which head of power or field i.e. under which list a given piece of legislation falls
- D. It is the right of the Central or State Government to acquire private property for public purpose

139. The term 'Base Erosion and Profit Shifting' often seen in the news is related to

- A. Mining operation by multinational companies in resource-rich but backward areas
- B. Curbing of the tax evasion by multinational companies
- C. Exploitation of genetic resources of a country by multinational companies
- D. Lack of consideration of environmental costs in the planning and implementation of developmental projects

140. With reference to the casual workers employed in India, consider the following statements:

1. All casual workers are entitled for employees Provident Fund Coverage
2. All casual workers are entitled for regular working hours and overtime payment
3. The government can by a notification specify that an establishment or industry shall pay wages only through its bank account.

Which of the above statements are correct?

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

Prelims Test Series

18 tests covering the entire syllabus of
General Studies Paper-I and CSAT Paper



General Studies Paper I -
10 Module Wise test



General Studies Paper II -
2 Module Wise test



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ANSWER KEYS

1	D
2	D
3	C
4	B
5	D
6	A
7	A
8	D
9	D
10	B
11	D
12	D
13	B
14	C
15	A
16	D
17	B
18	A
19	D
20	B

21	D
22	B
23	D
24	A
25	C
26	C
27	D
28	C
29	D
30	B
31	C
32	D
33	D
34	C
35	A
36	C
37	A
38	D
39	B
40	D

[CLICK HERE TO READ EXPLANATION](#)

41	B
42	D
43	B
44	D
45	D
46	A
47	D
48	B
49	C
50	A
51	D
52	C
53	B
54	C
55	B
56	C
57	D
58	D
59	C
60	D

61	D
62	C
63	C
64	D
65	A
66	C
67	D
68	A
69	A
70	A
71	A
72	B
73	A
74	B
75	C
76	B
77	C
78	A
79	C
80	D

[CLICK HERE TO READ EXPLANATION](#)

81	C
82	C
83	A
84	B
85	B
86	A
87	D
88	D
89	D
90	B
91	B
92	A
93	C
94	D
95	B
96	D
97	D
98	D
99	C
100	D

101	D
102	B
103	D
104	A
105	B
106	B
107	B
108	C
109	D
110	B
111	D
112	A
113	B
114	C
115	D
116	B
117	D
118	B
119	B
120	A

[CLICK HERE TO READ EXPLANATION](#)

121	B
122	C
123	A
124	C
125	A
126	B
127	C
128	A
129	B
130	C
131	D
132	A
133	B
134	B
135	D
136	A
137	C
138	D
139	B
140	D

[CLICK HERE TO READ EXPLANATION](#)

MAINS PRACTICE QUESTIONS

GS Paper 1

Indian Society and social Issues

1. History has taught us the importance of preserving one's mother tongue. What steps have been taken by the Government in India to ensure the same? (250 words; 15 marks)
2. Globalization and Westernization have impacted not just the growth but also the survival of many Indian languages and dialects. Discuss the measures undertaken to protect the linguistic and cultural identity of India. (10 Marks, 150 Words)

GS Paper 2

Polity

1. By failing to decide key constitutional cases in a timely way, the apex court has failed in its constitutional duty. Critically examine. (250 words; 15 marks)
2. Governors must work within constitutional parameters, not as agents of the Centre. Critically evaluate. (250 words; 15 marks)
3. Critically examine the controversy surrounding NEET. (250 words; 15 marks)
4. Rights and duties are conceptually linked to one another. Illustrate the debate. (250 words; 15 marks)
5. Critically examine the new Central Media Accreditation Guidelines. (250 words; 15 marks)
6. A law on job quota for locals not only violates fundamental rights, it also breaches the basic structure of the Constitution. Do you agree? Justify. (15 Marks, 250 Words)
7. Allowing the State to raise the national security ground to restrict media freedom without any checks can lead to dangerous consequences. Examine. (10 Marks, 150 Words)
8. The essential practices test is antithetical to the individualistic conception of rights. Analyze. (10 Marks, 150 Words)
9. Special category status as an instrument has outlived its relevance and utility. Discuss. (10 Marks, 150 Words)
10. Has the Indian polity seen a considerable shift of Indian federalism from cooperative to combative? Critically analyze. (15 Marks, 250 Words)
11. For a robust judicial framework, the High Courts in India need to be empowered to fulfil their constitutional mandate. Comment. (250 words; 15 marks)
12. Discuss the major objectives of the SVAMITVA scheme. How would it help in resolving ground level disputes? (250 words; 15 marks)
13. Should the Judiciary revisit the doctrine of "rarest of rare cases" for awarding death penalty? Critically examine. (15 Marks, 250 Words)
14. India has a long history of sheltering refugees and it is high time that a domestic law to protect the persecuted is in place. Discuss. (10 Marks, 150 Words)
15. With the emergence of multiple online gaming platforms, it is time for the government to relook into the existing policy and make favourable changes to help this sector grow. Comment. (250 words; 15 marks)
16. Although Fundamental Duties are not made enforceable by a writ of court like the Fundamental Rights, they are equally fundamental to the well-being of society and individuals. (250 words; 15 marks)

International Relations

1. How will the India – UK Free Trade Agreement (FTA) help both countries and in which sectors? (250 words; 15 marks)
2. Considering the recent spate of incidents at the border, is India right in announcing a diplomatic boycott of the Winter Olympics to be held in China? (250 words; 15 marks)
3. Many countries have announced a diplomatic boycott of the Beijing Winter Olympics. What can a diplomatic boycott achieve and what are its limits? (10 Marks, 150 Words)
4. China-Pakistan Economic Corridor (CPEC) which is envisaged as a transformational project in Pakistan is unlikely to ever fulfil the aspirations of the people. Substantiate. (10 Marks, 150 Words)
5. Examine the rise and decline of the Islamic State as a 'caliphate'. (250 words; 15 marks)
6. Off late, there has been a renewed enthusiasm in New Delhi to engage the Central Asian region. While the gains from engaging Central Asia may be minimal, non-engagement could be costly. Analyse. (250 words; 15 marks)
7. A wave of military coups has hit West Africa again and it not only threatens regional stability but also affects Indian interests. Comment. (250 words; 15 marks)
8. Critically examine the fall of USSR which brought the Cold War to an end. Analyse how it affects current geo-politics in Eurasia. (250 words; 15 marks)
9. What is the Munich Security Conference? Illustrate its role in global geo-politics. (250 words; 15 marks)
10. Discuss the potential of India – UAE bilateral relations beyond the trade in Oil. (250 words; 15 marks)
11. What are the major provisions of the Indus Water Treaty? Why are some of these provisions seen as being unfavourable towards India? (250 words; 15 marks)
12. Is growing proximity between Russia and China a cause of concern for India? Evaluate how the Indian government can navigate through the challenges emerging from this relation. (250 words; 15 marks)

Health

1. Discuss the objectives of the 'Eat Right India' mission. How can it help improve nutrition and health across campuses? (250 words; 15 marks)

GS Paper 3**Economy**

1. Illustratively bring out some of the key findings of Economic Survey 2021-22. (250 words; 15 marks)
2. Union Budget 2022 gives a solid push for infrastructure and growth while falling short in the social sector. Analyse. (250 words; 15 marks)
3. The thrust on capital expenditure in the Union Budget will help drive growth and create jobs, but it comes with some caveats and risks. Examine. (250 words; 15 marks)
4. Describe the short term and long term consequences of increased consumption expenditure on the Indian Economy. (250 words; 15 marks)
5. What is the debate around the legality of cryptocurrencies after the announcement of a 30% tax? Illustrate. (250 words; 15 marks)
6. A few WTO members are pushing ahead with the Joint Statement Initiative (JSI) on ecommerce. But India has thus far resisted pressures from the developed world to jump onto the JSI bandwagon. Analyse. (250 words; 15 marks)
7. Why is the Government introducing a Central Bank Digital Currency (CBDC)? What will be the risks in the transition to a new monetary system? (250 words; 15 marks)

8. There is a need for a comprehensive review of labour inspection and the labour statistical system in India. Examine. (10 Marks, 150 Words)
9. Discuss the implications of the Government's decision to sell a stake in the LIC. How would it impact the market? (250 words; 15 marks)
10. What potential does India's geospatial sector hold in invigorating India's job market? What steps are required to be taken in that direction? (250 words; 15 marks)
11. A decline in the Chinese growth story presents an opportunity for India to stake a claim as the world's factory. Discuss the challenges in achieving this mission. (250 words; 15 marks)
12. Despite the promises of 24x7 power supply, the power sector has not been complemented with enough reforms in India. Evaluate. (250 words; 15 marks)
13. This decade has the potential to reinvigorate India's trade relations with a series of trade agreements in the pipeline or in advance stages of discussion. Discuss. (250 words; 15 marks)
14. For far too long, we have made the mistake of seeing agriculture only as a way to ensure 'food security'. Discuss. (250 words; 15 marks)(GS-3, Agriculture]
15. Discuss the economic impact of Russia - Ukraine confrontation on India and the best possible ways to shield our economy. (250 words; 15 marks)
16. While hailing solar energy as the future, we are overlooking the issues related to solar waste handling. Suggest some ways to address this problem. (250 words; 15 marks)
17. Loss of lives by road accidents in India is one of the highest in the world. What are the causes behind it? Also, suggest ways to ensure better road safety in the country. (250 words; 15 marks)
18. As the government readies LIC for an IPO, examine the challenges that lie ahead. Will regulatory requirements, competition, COVID-19 and government retaining majority control impact the company? (250 words; 15 marks)

Environment and Ecology

1. Plastic sticks around in the environment for ages, threatening wildlife and marine species. Discuss India's efforts towards reducing its plastic footprint. (10 Marks, 150 Words)
2. Climate change coupled with anthropogenic disturbances poses a serious threat to Sundarbans. Comment. (10 Marks, 150 Words)

Science and Technology

1. India should set itself free from the cultural chains of the past to foster critical thinking. In the light of the statement, examine how the National Science Day can nurture a new generation of youth. (10 Marks, 150 Words)
2. What do you understand by Artificial Neural Networks? Examine how it has made artificial intelligence more powerful. (250 words; 15 marks)

Security and Defence

1. Explain the meaning of Cyber Attack with relevant examples and discuss cyber security solutions to reduce the risk of such attacks. (15 Marks, 250 Words)
2. What efforts have been made by the government to make India Atmanirbhar when it comes to defence equipment? Evaluate the success of these efforts. (250 words; 15 marks)
3. Prevention of Money Laundering Act (PMLA) takes away an individual's liberty depriving them of constitutional guarantees. Elaborate. (10 Marks, 150 Words)

Mains Test Series

15 Tests covering 4 General Studies Papers and Essay



15 Tests covering 4 GS papers and Essay



8 Modular tests (2 for 4 GS papers)



3 essay tests



4 Simulated Full Length Tests



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Online essay orientation class

INTERVIEW TRANSCRIPT

Candidate Details:

- Name: Keerthi Vasan V
- AIR: 29 (CSE-2017)

Chairman of the Interview Board: Air Marshal A. S. Bhonsle (Retd.)

Personal Details:

- Education: B.Tech (Civil Engineering), National Institute of Technology, Tiruchirappalli.
- Home town: Dharmapuri, Tamil Nadu
- Hobbies: Digital Poster designing, Watching English web series

QUESTIONS ASKED BY THE INTERVIEW BOARD**Economy based**

- What are the major functions of the RBI?
- Is the Monetary Policy Committee's (MPC) mandate implementable in the longer run?
- Don't you think government appointees to MPC affect its independence?
- Is the RBI really independent today?

IR based

- How has India-Nepal relations evolved in the recent past?
- Do you think China has overshadowed India in an economic cooperation between India, Nepal and China?
- Is the current Nepal PM pro-China or pro-India?
- Do you think morality is relevant in domestic as well as international administration?
- Why do you think the Indian government had to interfere in the domestic issue of Sri Lanka during the civil war?
- Was there any pressure from the state government?

State based Questions

- Most of the states perform well at the level of policy formulation, but fail at policy implementation. But in TN, we are able to see good performance at both levels. What could be the reasons behind this?
- Can you name a few schemes whose implementation has been good?
- The TN farmers' protest in Delhi was unique in its own way. What made it unique?
- Why do you think they approached the central government?

Hobbies Based Questions

- What is this 'web series'?
- What is your favorite genre?
- Which one is your favorite series?

Questions based on Academics

- You studied in Maharishi International School. What is 'International' about this school?
- What was the proportion of foreign students in your class?
- I have seen pictures of 10 pointers (Class X CGPA) only in flex boards of various institutes. This is the first time I am meeting one in person. Does any institute have your photograph printed on a flex board?
- I feel people who are good in academics are generally 'dull' when it comes to social or administrative responsibilities. What about you?

General Questions

- The training process would make you a good administrator. But, what qualities of a good administrator do you think you already have?

Interview Guidance Program

- A detailed roadmap for Interview Preparation with a special focus on Detailed Application Form (DAF).
- Mock interview sessions with highly experienced panellists including retired Civil Servants and Senior Bureaucrats.
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- Performance analysis and evaluation of strengths and weaknesses.

Our Advisory Board-cum-Interview Panelists

Dr. Pushpesh Pant
(Eminent Academician)

S N Jha
(IAS Retd., Former
Chief Secretary, Bihar)

Vineet Ohri
(IRS Retd., Former
Chief Commissioner,
Customs & Excise)

C Uday Bhaskar
(Defence Analyst and Strategist)

CNS Nair
(IAS Retd., Former
Secretary to Govt of India)

B S Lamba
(IAS Retd., Former
Indian Envoy to UNO)

Arun Kumar Mago
(IAS Retd., Former
Chief Secretary, Maharashtra)

AK Puri
(IPS Retd., Former
DGP, Himachal Pradesh)

Prabhakar Mani Tripathi
(Sr. Psychologist)

AK Rastogi
(IAS Retd., Former
Secretary to Govt of India)

B L Vohra
(IPS Retd., Former
DGP, Tripura)

G. Subba Rao
(IAS Retd., Former Chairman,
Gujarat State Police
Complaints Authority)

ATTENDANCE NO.:

To be filled by the Supervisor

केन्द्र CENTRE	विषय SUBJECT		विषय कोड S. CODE		अनुक्रमांक ROLL NUMBER						
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पुस्तिका सिरीज
BOOKLET SERIES

(A)

(B)

(C)

(D)

विषय
SUBJECT

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अनुक्रमांक
ROLL NUMBER

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(9) (9) (9) (9) (9) (9) (9)

निर्देश :
DIRECTIONS:

केवल काला
बाल प्वाइंट पेन
इस्तेमाल करें |

USE BLACK
BALL POINT
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उदाहरण
EXAMPLE
(a) (b) (c) (d)

निरीक्षक पुस्तिका
सिरीज काला
बाल प्वाइंट पेन
से कूटबद्ध करें

BOOKLET SERIES
to be coded by
Invigilator with
Black Ball
Point Pen
(a) (b) (c) (d)

Invigilator in Black Ball Point Pen

निरीक्षक काला बाल प्वाइंट पेन से आशुकर करें

1	(a)	(b)	(c)	(d)	41	(a)	(b)	(c)	(d)	81	(a)	(b)	(c)	(d)	121	(a)	(b)	(c)	(d)
2	(a)	(b)	(c)	(d)	42	(a)	(b)	(c)	(d)	82	(a)	(b)	(c)	(d)	122	(a)	(b)	(c)	(d)
3	(a)	(b)	(c)	(d)	43	(a)	(b)	(c)	(d)	83	(a)	(b)	(c)	(d)	123	(a)	(b)	(c)	(d)
4	(a)	(b)	(c)	(d)	44	(a)	(b)	(c)	(d)	84	(a)	(b)	(c)	(d)	124	(a)	(b)	(c)	(d)
5	(a)	(b)	(c)	(d)	45	(a)	(b)	(c)	(d)	85	(a)	(b)	(c)	(d)	125	(a)	(b)	(c)	(d)
6	(a)	(b)	(c)	(d)	46	(a)	(b)	(c)	(d)	86	(a)	(b)	(c)	(d)	126	(a)	(b)	(c)	(d)
7	(a)	(b)	(c)	(d)	47	(a)	(b)	(c)	(d)	87	(a)	(b)	(c)	(d)	127	(a)	(b)	(c)	(d)
8	(a)	(b)	(c)	(d)	48	(a)	(b)	(c)	(d)	88	(a)	(b)	(c)	(d)	128	(a)	(b)	(c)	(d)
9	(a)	(b)	(c)	(d)	49	(a)	(b)	(c)	(d)	89	(a)	(b)	(c)	(d)	129	(a)	(b)	(c)	(d)
10	(a)	(b)	(c)	(d)	50	(a)	(b)	(c)	(d)	90	(a)	(b)	(c)	(d)	130	(a)	(b)	(c)	(d)
11	(a)	(b)	(c)	(d)	51	(a)	(b)	(c)	(d)	91	(a)	(b)	(c)	(d)	131	(a)	(b)	(c)	(d)
12	(a)	(b)	(c)	(d)	52	(a)	(b)	(c)	(d)	92	(a)	(b)	(c)	(d)	132	(a)	(b)	(c)	(d)
13	(a)	(b)	(c)	(d)	53	(a)	(b)	(c)	(d)	93	(a)	(b)	(c)	(d)	133	(a)	(b)	(c)	(d)
14	(a)	(b)	(c)	(d)	54	(a)	(b)	(c)	(d)	94	(a)	(b)	(c)	(d)	134	(a)	(b)	(c)	(d)
15	(a)	(b)	(c)	(d)	55	(a)	(b)	(c)	(d)	95	(a)	(b)	(c)	(d)	135	(a)	(b)	(c)	(d)
16	(a)	(b)	(c)	(d)	56	(a)	(b)	(c)	(d)	96	(a)	(b)	(c)	(d)	136	(a)	(b)	(c)	(d)
17	(a)	(b)	(c)	(d)	57	(a)	(b)	(c)	(d)	97	(a)	(b)	(c)	(d)	137	(a)	(b)	(c)	(d)
18	(a)	(b)	(c)	(d)	58	(a)	(b)	(c)	(d)	98	(a)	(b)	(c)	(d)	138	(a)	(b)	(c)	(d)
19	(a)	(b)	(c)	(d)	59	(a)	(b)	(c)	(d)	99	(a)	(b)	(c)	(d)	139	(a)	(b)	(c)	(d)
20	(a)	(b)	(c)	(d)	60	(a)	(b)	(c)	(d)	100	(a)	(b)	(c)	(d)	140	(a)	(b)	(c)	(d)
21	(a)	(b)	(c)	(d)	61	(a)	(b)	(c)	(d)	101	(a)	(b)	(c)	(d)	141	(a)	(b)	(c)	(d)
22	(a)	(b)	(c)	(d)	62	(a)	(b)	(c)	(d)	102	(a)	(b)	(c)	(d)	142	(a)	(b)	(c)	(d)
23	(a)	(b)	(c)	(d)	63	(a)	(b)	(c)	(d)	103	(a)	(b)	(c)	(d)	143	(a)	(b)	(c)	(d)
24	(a)	(b)	(c)	(d)	64	(a)	(b)	(c)	(d)	104	(a)	(b)	(c)	(d)	144	(a)	(b)	(c)	(d)
25	(a)	(b)	(c)	(d)	65	(a)	(b)	(c)	(d)	105	(a)	(b)	(c)	(d)	145	(a)	(b)	(c)	(d)
26	(a)	(b)	(c)	(d)	66	(a)	(b)	(c)	(d)	106	(a)	(b)	(c)	(d)	146	(a)	(b)	(c)	(d)
27	(a)	(b)	(c)	(d)	67	(a)	(b)	(c)	(d)	107	(a)	(b)	(c)	(d)	147	(a)	(b)	(c)	(d)
28	(a)	(b)	(c)	(d)	68	(a)	(b)	(c)	(d)	108	(a)	(b)	(c)	(d)	148	(a)	(b)	(c)	(d)
29	(a)	(b)	(c)	(d)	69	(a)	(b)	(c)	(d)	109	(a)	(b)	(c)	(d)	149	(a)	(b)	(c)	(d)
30	(a)	(b)	(c)	(d)	70	(a)	(b)	(c)	(d)	110	(a)	(b)	(c)	(d)	150	(a)	(b)	(c)	(d)
31	(a)	(b)	(c)	(d)	71	(a)	(b)	(c)	(d)	111	(a)	(b)	(c)	(d)	151	(a)	(b)	(c)	(d)
32	(a)	(b)	(c)	(d)	72	(a)	(b)	(c)	(d)	112	(a)	(b)	(c)	(d)	152	(a)	(b)	(c)	(d)
33	(a)	(b)	(c)	(d)	73	(a)	(b)	(c)	(d)	113	(a)	(b)	(c)	(d)	153	(a)	(b)	(c)	(d)
34	(a)	(b)	(c)	(d)	74	(a)	(b)	(c)	(d)	114	(a)	(b)	(c)	(d)	154	(a)	(b)	(c)	(d)
35	(a)	(b)	(c)	(d)	75	(a)	(b)	(c)	(d)	115	(a)	(b)	(c)	(d)	155	(a)	(b)	(c)	(d)
36	(a)	(b)	(c)	(d)	76	(a)	(b)	(c)	(d)	116	(a)	(b)	(c)	(d)	156	(a)	(b)	(c)	(d)
37	(a)	(b)	(c)	(d)	77	(a)	(b)	(c)	(d)	117	(a)	(b)	(c)	(d)	157	(a)	(b)	(c)	(d)
38	(a)	(b)	(c)	(d)	78	(a)	(b)	(c)	(d)	118	(a)	(b)	(c)	(d)	158	(a)	(b)	(c)	(d)
39	(a)	(b)	(c)	(d)	79	(a)	(b)	(c)	(d)	119	(a)	(b)	(c)	(d)	159	(a)	(b)	(c)	(d)
40	(a)	(b)	(c)	(d)	80	(a)	(b)	(c)	(d)	120	(a)	(b)	(c)	(d)	160	(a)	(b)	(c)	(d)

कृपय इस जगह पर कोई निशान न लगायें

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