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Pratibha Verma

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Rank 8
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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

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May, 2020	Economics	Economics					
June, 2020	Modern History	Modern History	Modern History				
July, 2020	Geography	Geography	Geography	Geography			
August, 2020	Ethics, Essay, Governance	Polity	Polity	Polity	Polity		
September, 2020	Internal Security, AH, MH, Art & Culture, IR	Internal Security, AH, MH, Art & Culture, IR	Economics	Economics	Economics	Economics	
October, 2020	World History, PI, DM, Society & Social Justice	World History, PI, DM, Society & Social Justice	World History, PI, DM, Society & Social Justice	Modern History	Modern History	Modern History	Modern History
November, 2020	Environment + S&T + CSAT	Environment + S&T + CSAT	Environment + S&T + CSAT	Environment + S&T + CSAT	Geography	Geography	Geography
December, 2020		Ethics, Essay, Governance	Ethics, Essay, Governance	Ethics, Essay, Governance	Ethics, Essay, Governance	Polity	Polity
January, 2021			Internal Security, AH, MH, Art & Culture, IR	Internal Security, AH, MH, Art & Culture, IR	Internal Security, AH, MH, Art & Culture, IR	Internal Security, AH, MH, Art & Culture, IR	Economics
February, 2021				World History, PI, DM, Society & Social Justice	World History, PI, DM, Society & Social Justice	World History, PI, DM, Society & Social Justice	Internal Security, AH, MH, Art & Culture, IR
March, 2020					Environment + S&T + CSAT	Environment + S&T + CSAT	Environment + S&T + CSAT
June, 2021						Ethics, Essay, Governance	Ethics, Essay, Governance
July, 2021							World History, PI, DM, Society & Social Justice

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May, 2020	Modern History	Modern History					
June, 2020	Economics	Economics	Economics				
July, 2020	Polity	Polity	Polity	Polity			
August, 2020	Internal Security, AH, MH, Art & Culture, IR	Geography	Geography	Geography	Geography		
September, 2020	Ethics, Essay, Governance	Ethics, Essay, Governance	Modern History	Modern History	Modern History	Modern History	
October, 2020	Environment + S&T + CSAT	Environment + S&T + CSAT	Environment + S&T + CSAT	Economics	Economics	Economics	Economics
November, 2020	World History, PI, DM, Society & Social Justice	World History, PI, DM, Society & Social Justice	World History, PI, DM, Society & Social Justice	World History, PI, DM, Society & Social Justice	Polity	Polity	Polity
December, 2020		Internal Security, AH, MH, Art & Culture, IR	Internal Security, AH, MH, Art & Culture, IR	Internal Security, AH, MH, Art & Culture, IR	Internal Security, AH, MH, Art & Culture, IR	Geography	Geography
January, 2021			Ethics, Essay, Governance	Ethics, Essay, Governance	Ethics, Essay, Governance	Ethics, Essay, Governance	Modern History
February, 2021				Environment + S&T + CSAT	Environment + S&T + CSAT	Environment + S&T + CSAT	Environment + S&T + CSAT
March, 2020					World History, PI, DM, Society & Social Justice	Internal Security, AH, MH, Art & Culture, IR	Internal Security, AH, MH, Art & Culture, IR
June, 2021						World History, PI, DM, Society & Social Justice	Ethics, Essay, Governance
July, 2021							World History, PI, DM, Society & Social Justice

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July, 2020	Economics	Economics	Economics	Economics			
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March, 2020					World History, PI, DM, Society & Social Justice	World History, PI, DM, Society & Social Justice	Environment + S&T + CSAT
June, 2021						Ethics, Essay, Governancea	Ethics, Essay, Governance
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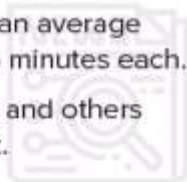
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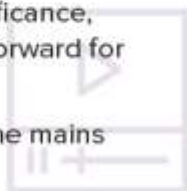
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POLITY

Indian Constitution-Features and significant provisions

1. **Farm laws**

» Prelims: Related constitutional articles

» Mains: Judicial review and Judicial over-reach

Context:

- The honourable Supreme Court of India has put brakes on the farm laws and also has set up a committee consisting of experts to negotiate between the farmers and the government.

Supreme Court's role:

- The Supreme Court will decide upon the constitutional validity of farm laws based on the following:

Federalism aspects:

- The legal challenge to the laws is on the legislative competence of the Parliament to enact the new farm laws as the item of agriculture falls in the state list.

House rules:

- It is said that the voting on the Farm Bills in the Rajya Sabha was not done in accordance with the rules of the House. The rules of the house place an obligation on the Chair to order for the recording of votes (division) by members even if one member demands it. The Deputy Chairman of the House, who was chairing the sitting, did not order division even at the request of many members of the house. The excuse of disorder in the house cannot be justified for passing the bill without division of votes. Thus, there was a violation of the rules of the House in passing the Bills by voice vote when there was a demand for the division.

Voice vote is unrecognised:

- The issue in hand is more than mere subversion of rules of the house. It involves the violation of the Constitution itself.
- Article 100 says that all questions at any sitting of either House shall be determined by a majority of votes of the members present and voting. The majority can be determined only in terms of number, the Constitution does not recognise voice vote to determine the majority in a legislature. However, deciding a question by voice vote is a practice prevailing in all legislatures.

- Voice vote is for matters of convenience and when there is an overwhelming majority or consensus of the issue. But when a member demands voting in the House and the Chair has, then, no option but to order the actual voting.
- Since this was not done and the Bills were all passed by voice vote, there is a violation of the rules as well as the Constitution.

Options before the judiciary:

- The Article 122 of the Constitution provides for protection to the proceedings of the house from judicial review, however, this protection is available only when the proceedings are challenged on the irregularity of procedure as the constitution does not stand violated on a mere irregularity of procedure. The Supreme Court in Raja Ram Pal's case had laid down that the proceedings can be challenged on substantive grounds like a violation of the Constitutional provisions but not on mere procedure irregularity.
- The Farm Bills were passed in the Rajya Sabha in violation of Article 100 of the Constitution and can be challenged in the Supreme Court on that ground.
- Article 107 says that the bill is not deemed to have been passed unless it has been agreed to by both Houses. Thus paving the way for the Court to strike down the laws as the requirement of Article 107 has not been fulfilled.
- The Court may also choose to invalidate the proceedings of the Rajya Sabha and send the three 'Acts' back to that House for further proceedings in accordance with the constitutional provisions. If this happens, it may provide a good opportunity for the government to revisit these laws.
- These can then be referred to a Select Committee of the Rajya Sabha which can invite the farmers and all other stakeholders and finally produce better Bills.
- The above-mentioned scenario provides both the parties a way out of this impasse. Such an opportunity is invaluable in the present circumstances when the government is facing virtually a no-win situation.

Criticism:

- Judicial Review is the power of Courts to pronounce upon the constitutionality of legislative and executive acts of the government which fall within their normal jurisdiction.

- The SC while choosing to stay the implementation rejected the arguments of the Attorney General that laws made by the legislature should not be ordinarily stayed, as there is a presumption of constitutionality in favour of the laws, this rare exercise of staying the laws has attracted criticism from the legal luminaries.

- Some experts have also pointed out that by suspending a law, the judiciary is upsetting the concept of separation of powers.

Conclusion:

- The judicial intervention marks a new phase of the farm agitations. Staying of farm laws provides an opportunity for the government to revisit the laws.

- However, the judiciary in this case can only adjudicate on the constitutional validity of the laws but cannot offer a way out of this deadlock.

- The role of the parliament has gained prominence in this scenario, once the Court decides the legality or constitutionality of a law, the political and legislative aspects of the issue will have to be dealt with only by Parliament.

- Parliament and its systems alone can produce a satisfactory solution.

Functioning of the legislature

2. Kerala Assembly rejects motion to remove Speaker

   » Prelims: Effective majority

   » Mains: Role of speaker and the need for reforms with respect to powers of the Speaker

Context:

- The Kerala Assembly has rejected a motion moved by the Opposition seeking the removal of Speaker P. Sreeramakrishnan alleging his role in the diplomatic channel gold smuggling case and reckless expenditure in the various activities by the Legislature Secretariat.

Removal of the Speaker:

- The Speaker can be removed from Office only on a resolution of the House passed by an effective majority.

   * Effective majority refers to a majority of more than 50% of the effective strength of the House. In the Constitution, an effective majority is mentioned as "all the then members".

      » For example, in the Lok Sabha, out of the total strength of 545, suppose 5 are vacant seats. This means, the effective strength of the House is (545 – 5) = 540. In this case, the effective majority is 270.

   * Instances where an effective majority is needed:

      » Removal of the Chairman (Vice President of India), Deputy Chairman in the Rajya Sabha (Article 67(b)).

      » Removal of the Speaker and the Deputy Speaker of the Lok Sabha and the State Legislatures.

- During resolution for removal of Speaker, the Speaker is not in position to cast his vote even if there is tie.

- The resolution to remove the speaker has to satisfy some conditions:

   * It should be specific with respect to the charges and it should not contain arguments, inferences, ironical expressions, imputations or defamatory statements, etc.

   * It is also mandatory to give a minimum of 14 days' notice of the intention to move the resolution.

   * The discussions on the motion should be confined to charges referred to in the resolution.

Indian Constitution-Features and significant provisions

3. A case to dispose of mercy petitions swiftly

   » Prelims: Important judicial cases, Relevant constitutional articles

   » Mains: Pardoning powers-associated concerns and remedial measures required

Context:

- The Supreme Court has asked the Centre to decide by January 26 Balwant Singh Rajoana's plea for commuting the death penalty awarded to him in former Punjab Chief Minister Beant Singh's assassination case

Background:

- In the case of Shatrughan Chauhan v. Union of India, a three-judge bench of the Indian Supreme Court delivered a landmark judgment on the death penalty. It declared that an excessive delay in carrying out the death sentence was valid grounds for seeking commutation.

- The Supreme Court has previously termed the prolonged detention of death row convicts in prison as inhuman and against the canons of justice.

Details of the case:

- The convict, Balwant Singh Rajoana, has been in jail for over 25 years after being convicted for triggering a bomb blast that killed former Punjab chief minister Beant Singh in August 1995.

- Balwant Singh Rajoana was sentenced to death in 2007 by a special CBI court. His mercy petition was filed in 2014 by the Shiromani Gurudwara Prabhandhak Committee.

- In 2019, the Ministry of Home Affairs sent a letter to the Punjab government to commute Rajoana's death sentence. The Ministry of Home Affairs said it had decided to commute the death sentence as a "humanitarian gesture" ahead of the 550th birth anniversary celebrations of Guru Nanak Dev.

- However, its decision could not be implemented because the Cabinet did not send the file to the President.

- The Supreme Court has thus urged the Centre to decide on an eight-year-old mercy plea of a death row convict in two weeks.

Abolishing capital punishment:

- The Supreme Court in its judgement in the case of Shatrughan Chauhan v. Union of India has held that any delay in carrying out the death penalty is one of the reasons to review India's position on capital punishment.

- The debate on the efficacy of the death penalty has been ongoing for several decades together, wherein there is no substantial evidence to suggest that capital punishment has been able to deter and prevent crimes.

- A few years ago, the issue of abolishing capital punishment was raised in the Rajya Sabha but was rejected by a voice vote.

- Through its report in 2015, the Law Commission of India proposed abolishing the death penalty and sought to elicit the views of the states and the union territories on the same.

- However, the response from the states has been lackadaisical, with only 14 States responding by 2018. Of these, 12 States rejected the proposal, while Karnataka and Tripura concurred.

International scenario:

- India finds itself among 56 nations in the world that have retained the death penalty, while 142 have abolished it either by practice or by law.

- The total number of executions across the world came down in 2018 to 690 from 993 in 2017.

Justification for swift decision on death penalty:

- At the heart of the argument is the idea that keeping a death row convict under the shadow of death for years is a form of cruel, inhuman and degrading punishment that no civilized society (whether or not it allows capital punishment) should inflict upon human beings.

  * In India, 102 convicts were awarded the death sentence in 2019, raising the total number of death row prisoners to 378. Some death row convicts have suffered imprisonment up to 25 years.

- A delay in the execution of death row convicts coupled with long years of solitary confinement leads to psychological trauma for them. The inevitable mental agony that accompanies waiting for inevitable death demeans individual dignity.

- The judiciary has interpreted Article 21's guarantee of the right to life to include treating all individuals with dignity. It means that whatever the crime might have been, human beings continue to have a legitimate claim to be treated with dignity under the Constitution.

Conclusion

- The prolonged detention of death row convicts in prison is against the human right jurisprudence and also against the canons of justice. Thus, it does not come as a surprise that judiciary has been pushing for a reduction in the sentence when such cases of prolonged years of detention come before them.

- A time frame needs to be fixed for the President to dispose of mercy petitions.

  * The former President Pranab Mukherjee was appreciated for his swift disposal of mercy petition cases, his track record of the disposal of 34 mercy petitions that were pending for years was commendable. While 30 were rejected, four were given reprieves, while the fact that he rejected 30 mercy petitions can be up for a debate, but the crux of the matter is that he dealt with the petitions swiftly.

- Delays in investigations, court hearings and administrative steps to be taken after the final verdict need to be inquired into, and responsibility fixed. The lack of accountability of various officials in the government and the courts has adversely affected our criminal justice system.

Election related issues

4. Remote voting project

  » Prelims: Block chain technology

  » Mains: Concerns associated with remote voting; need for remote voting.

Context:

- The Chief Election Commissioner has announced that the ECI is commencing trials of a "remote voting project".

Remote voting in U.S.:

- Remote voting was seen in the recent US presidential election, and the concept gained traction owing to the COVID-19 pandemic so as to keep social distancing.

- The mail-in ballot system was used in the U.S., it is a system wherein the registered voters receive ballots and they return it via post or dropped it off at secure "drop boxes" or voting centres, an important observation to be made here is that the entire exercise was paper-based.

Details:

- The Election Commission has collaborated with IIT-Madras to come up with a new technology which will allow electors to vote from faraway cities without going to designated polling station of their constituencies.

- The mock trials for a remote voting facility for electors are expected to begin shortly.

- The ECI officials have mentioned that the system, being developed by IIT-Madras, employs the blockchain method for "two-way remote voting" at designated centres.

Blockchain technology:

- Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system.

- A blockchain is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain.

- The blockchain method implements an online public bulletin board that allows for a linear ordering of data to which a user can only further append data. The board itself is public and available for anyone to read and verify.

- The blockchain technology has already been deployed in cryptocurrencies, the Bitcoin blockchain records a list of transactions that can be read to find out who owns which bitcoins without any centralised authority.

Blockchain technology in voting:

- In the case of a blockchain-based voting system, the voting authority will have to authenticate this bulletin board in which users sign in using cryptographic signatures to register their votes in a ledger.

- The cryptographic features enable this system to guarantee data security and verifiability, but its dependence upon a network and devices could allow vulnerabilities that are present in any Internet-based system to creep into the system.

Concerns:

- The announcement by Chief Election Commissioner that the ECI is commencing trials of a "remote voting project" will surely bring about discussions on the safety of the move.

- A draft paper by MIT and Harvard researchers has raised alarms over the designs of a remote block-chain-based voting system and has flagged off serious vulnerabilities in some instances where it was tried out.

- Since it would be dependent upon network; it could allow vulnerabilities that are present in any Internet-based system to creep into the system.

- The paper points out that the remote block-chain based voting system will not just have the vulnerabilities faced by any Internet-based system, but also introduces an element of complexity.

Conclusion:

- The ECI would do well to exercise caution before deploying this method in elections, besides subjecting it to a rigorous public appraisal.

- The trust of the public in the electoral system is a prerequisite to the healthy functioning of any democracy.

Functioning of the Indian Judiciary

5. SC asks for timeline on appointments

» Prelims: Collegium system

» Mains: Concerns associated with the collegium system and the need for reforms

Context:

- The Supreme Court has questioned the government about the delay in clearing Collegium recommendations for judicial appointments to various High Courts.

- The bench has asked the Centre if there is a timeline for government clearance of such recommendations.

Details:

- The Supreme Court has noted how recommendations from the High Courts of Bombay and Allahabad dated back to May or June 2020 are still pending for approval. Around 189 proposals for judicial appointments were still pending.

- The Supreme Court in many instances has conveyed its concern at the rising number of judicial vacancies in various High Courts.

  * On average, the High Courts suffer at least 40% vacancies.

* Some of the High Courts are functioning only with half their sanctioned strength.

Government's stand:

- Attorney-General has explained that the Collegium had also delayed the appointment process. The A-G pointed out that the judiciary took 119 days on an average merely to forward the file of recommendation to the government.

- The A-G asserted that the government's delay was largely because it thoroughly combed through the antecedents of the candidate. The process, on an average, took at least 127 days.

Third tier of governance

6. Urban Local Bodies reforms

» Prelims: Urban local body reforms

» Mains: Need for performance/reform based fiscal incentives

Context:

- Telangana, Manipur and Rajasthan states have recently completed Urban Local Bodies reforms.

Details:

- Telangana has become the 3rd State, Manipur the 4th state and Rajasthan the 5th state in the country to successfully undertake "Urban Local Bodies (ULB)" reform stipulated by the Department of Expenditure, Ministry of Finance.

- Thus, these states have become eligible to mobilise additional financial resources through Open Market Borrowings.

- These states have now joined two other states namely, Andhra Pradesh and Madhya Pradesh, who have completed this reform.

- Reforms in the urban local bodies and the urban utilities reforms are aimed at the financial strengthening of ULBs in the states and to enable them to provide better public health and sanitation services.

  * Economically rejuvenated ULBs will also be able to create good civic infrastructure.

- The reforms stipulated by the Department of Expenditure to achieve these objectives are:

  * The State will notify –

    » Floor rates of property tax in ULBs which are in consonance with the prevailing circle rates (i.e. guideline rates for property transactions)

    » Floor rates of user charges in respect of the provision of water-supply, drainage and sewerage which reflect current costs/past inflation.

* The state will put in place a system of periodic increase in floor rates of property tax/user charges in line with price increases.

Background:

- To meet the challenges posed by the pandemic, GOI had enhanced the borrowing limit of the states by 2 percent of their GSDP.

- Half of this special dispensation was linked to undertaking citizen centric reforms by the states.

- The four citizen centric areas for reforms identified were:

  * Implementation of One Nation One Ration Card System

  * Ease of doing business reform

  * Urban Local body/utility reforms

  * Power sector reforms

Miscellaneous

7. Plea seeks appointment of PMLA tribunal chief

» Prelims: PMLA Act, Money laundering

Context:

- The Supreme Court has asked the government to respond to a petition seeking reasons for the delay in appointment of chairman and members to the appellate tribunal under the Prevention of Money Laundering Act (PMLA).

Background:

Prevention of Money Laundering Act:

- The Prevention of Money Laundering Act (PMLA) was enacted by the Indian Parliament in 2002 to prevent money laundering in India.

- The act was amended in 2019 to further empower the Enforcement Directorate in dealing with money laundering cases.

- The chief objective of this legislation is to fight money laundering, that is, the process of converting black money into white.

Details:

- A plea was filed stating that the appointments to the appellate tribunal under the Prevention of Money Laundering Act (PMLA) should be made on a priority basis.

- According to a plea, the tribunal in New Delhi is struggling to dispense justice.

  * The PMLA tribunal is plagued by the absence of its chairman and three members out of sanctioned strength of four. It also faces the issue of acute shortage of administrative staff.

- The plea argued that the very object for constituting tribunals is to supplement the functions of High Courts and other courts and to ensure that the consumer of justice gets speedy redress.

Important Supreme Court Judgments

8. I.R. Coelho v State of Tamil Nadu

- » Prelims: 9th schedule; Important court cases;
- » Mains: significance and concerns associated with Judicial review

Introduction:

- Also known as the Ninth Schedule Case, this unanimous judgement delivered by a 9-judge bench led by Chief Justice Sabharwal upheld the validity of the Doctrine of Basic Structure propounded in the Kesavananda Bharti case.
- Moreover, the Court also upheld the power of the Judiciary to review any such law which in its opinion would in any way destroy the basic structure of the Constitution. Thus in effect, this case put an end to any controversy that was left behind regarding the validity and implementation of the basic structure doctrine.
- The case arose because of the reference made by a 5-judge Constitution Bench in 1999 after the Gudalur Janmam Estates (Abolition and Conversion into Ryotwari) Act, 1969 was struck down by the Supreme Court in Balmadies Plantations Ltd. & Anr. v. State of Tamil Nadu.
- The Constitution Bench, in its referral, noted that according to the Waman Rao Case, insertion of amendments in the Constitution after the Kesavananda Bharti case by inserting new laws into the Ninth Schedule, can be challenged on the ground that they are violative of the fundamental rights provided in Articles 14, 19 and 31.
- Therefore, the referral asked the 9-judge bench to relook into the Waman Rao judgement and determine whether it needs to be overruled or not.

Issue before the Court:

- The basic issue before the Court was whether it was permissible for the Parliament to insert laws into the Ninth Schedule post-Kesavananda Bharati case in order to make them immune from judicial review on the basis of the basic structure doctrine.
- It is pertinent to mention here that since the Ninth Schedule was inserted, various pieces of agrarian reform legislation were placed in it but with the advent of time, various other pieces of legislation were arbitrarily and indiscriminately placed in the Ninth Schedule to make them immune from judicial review despite the fact that most of them had nothing to do with the agrarian or socio-economic reforms.
- It was amply clear that the legislature in the guise of the Ninth Schedule was trying to escape not only the limitations imposed by the basic structure doctrine but also bypass the judicial review of legislation that were manifestly ultra vires to the Constitution.

Ruling:

- The Court unanimously held that it was not permissible for the legislature to escape the scrutiny of the Basic Structure doctrine by finding manifestly cunning ways to get around it.
- The basic structure doctrine is the very essence of the Constitution and any acts, rules and regulations that violate its essence cannot be allowed to continue in this brazen manner.
- If any laws in the Ninth Schedule were inconsistent with Part III, they are liable to be struck down by the Court.
- The Ninth Schedule was a part of the Constitution and as such any alterations made to these parts which bypass the restrictions that are in place cannot be allowed to continue to the detriment of well-established principles.
- These insertions into the Ninth Schedule are an attempt to invade into the sphere of fundamental rights and as such these invasions have to be dealt with in order to preserve inherent rights.
- The Court also delved upon the importance of the Power of Judicial Review – the importance of which was made abundantly clear by the Court in Indira Gandhi v Raj Narain.
- Any new amendment or alteration in the Constitution is to be tested on its own merits in order to determine whether such a change is violative of the basic features of the Constitution.
- The fundamental rights chapter was added in the Constitution in order to keep a check on the powers of the State and make sure that the State does not fiddle with the individual rights in a manner that is contrary to the basic setup of the fundamental rights.
- The power of judicial review bestowed upon the Courts is a check on the aforesaid attempts of the State to chip away at the fundamental rights in the Constitution.

Criticism:

- This judgement was criticised for further solidifying the concept of basic structure which has no textual basis in the Constitution.
- Critics argue that such judgements are chipping away at the power of the legislature to enact laws in order to further their legitimate policies.

- Every now and then the Court keeps on adding new principles as a part of the basic structure, thus hampering not only the legislature but also paving the way for new litigation which only adds to the vagueness and confusion that has always surrounded the basic structure doctrine.

- Till date, the judiciary has neither given any exhaustive definition of the basic structure nor has it given an exhaustive list which constitutes the basic structure of the Indian Constitution.

- Justice Mathew, in the Indira Gandhi case, had perceptively stated that 'the concept of basic structure as a brooding omnipresence in the sky apart from specific provisions of the Constitution is too vague and indefinite to provide a yardstick for the validity of an ordinary law.'

Conclusion:

- The I R Coelho case has further strengthened the hold of the basic structure doctrine in the constitutional setup of the country by emphasising that all amendments, depending on its impact and consequences if violative of the doctrine of the basic structure, need to be struck down.

- Judicial review is the most effective way to deal with laws that infringe upon the fundamental rights of the citizens. The legislatures cannot act with impunity by using concepts of federalism and welfare state to bring in legislation to fulfil their ulterior motives of invading upon fundamental rights.

ECONOMY

Indian Economy and issues relating to growth and development

1. **Planning an exit out of the easy money regime**

   » Prelims: Monetary policy terminology, Monetary policy committee, trilemma

   » Mains: Concerns associated with expansionary monetary policy

   Context:

   • The RBI's abilities to balance the inflation-growth equation would be tested with the Indian economy recovering and the need to ease the expansionary monetary policy

   Expansionary monetary policy:

   • The COVID-19 pandemic and the ensuing lockdown has crippled economies world over, with India being no exception.

   • The Reserve Bank of India (RBI) resorted to an expansionary monetary policy to make way for credit creation and dispersal.

   • As a part of such a policy, the RBI slashed policy interest rates aggressively, creating conditions of a market with high liquidity availability and instituted a slew of measures for targeted assistance to especially distressed sectors.

   Recovery process:

   • The economy has appeared to have been on a recovery mode, with better second-quarter performance than the first quarter and also the second quarter seeing an expansion in the manufacturing output.

   • There has been optimism expressed by several economists who have talked a 'V-shaped recovery' and have predicted an improved performance in the rest of the fiscal year.

   Easing of the expansionary policy:

   • RBI's expansionary policy to resuscitate the economy that's struggling post the pandemic, cannot be seen as a strategy without a due-date. The RBI must be devising a strategy for a gradual easing of the expansionary policy.

   • Reversing a crisis-induced expansionary policy has to be a deliberative process, care has to be given to ensure its timing and sequencing is not disruptive. The lessons from the global financial crisis have taught us that any knee-jerk reaction on the exit-path can undo a lot of hard work done until then.

   Challenges:

   Inflation concerns:

   • The expansionary monetary policy without enhancing the supply capabilities will pave way for inflation.

   • Inflation could be on an upward journey owing to several factors even though there could be some apparent softening purely because of base effects.

   • Core inflation could firm up because of rising input prices. 'Excessive margins', among the factors cited by the MPC as one of the causes of high inflation, may not disappear if firms, regaining pricing power amid demand recovery, raise prices to mend their balance sheets.

   • Several economists fear that persistent inflation will spill over to food items. Core inflation is the change in the costs of goods and services but does not include those from the food and energy sectors. This measure of inflation excludes these items because their prices are much more volatile.

   Balancing inflation targeting and growth promotion:

   • The biggest challenge that the RBI will have to deal with is balancing inflation and growth aspirations.

     * The much talked about an economic recovery is still fragile in nature, and the recovery hasn't been uniform, with large industries finding their foothold while small and medium enterprises and the entire informal sector are some way away from recovery. The improved performance should not be read too much into, as some of the firms are resorting to laying off workers to trim the wage bill.

     * The inflation-growth policy dilemma is not a novel issue haunting the RBI, this is an issue that is prevalent even when the macroeconomic situation is benign. The pandemic has only accentuated this issue. The Monetary Policy Committee (MPC) review suggested that the inflation remained above the RBI's target band for the past several months, and according to the RBI's own estimates, is expected to remain above the band for the next several months.

   • The RBI chose not to alter the policy rate out of concerns for growth and financial stability. The MPC expects inflation to climb down on its own in the near future as supply chains, disrupted by the lockdown, get back on track and the bumper winter crop comes into the market.

Plight of savers:

- RBI can ill-afford to forget the plight of savers, who are affected by low-interest rates at a time of high inflation.

Ineffectiveness of policy:

- A major challenge will be to withdraw the 'excess' liquidity in good time.

- Banks are routinely depositing trillions of rupees with the RBI every day, evidencing that all the money that the central bank unleashed into the system is not doing much good anymore.

Threat of expansionary policy:

- For sure, there was a clear purpose behind the RBI joining the global central bank bandwagon of 'dash for cash' to inspire confidence in the economy when confidence was at a very low ebb.

- However, every financial crisis can be traced back to mispricing of risk, and mispricing of risk is what results when there is too much liquidity in the system for too long. It will drive investors into dodgy ventures and threaten financial stability.

Market reactions:

- The RBI aims to protect financial stability by normalising liquidity and any move to do that will have to deal with possible market tantrums.

- The policy of 'quantitative easing' followed by the US. Federal Reserve in the aftermath of the sub-prime crisis led to market tantrums in the U.S. Post the announcement of gradual tapering of the 'Quantitative easing', it set off a wave of panic and uncertainty.

  - * Quantitative easing (QE) is a monetary policy whereby a central bank purchases at scale government bonds or other financial assets in order to inject money into the economy to expand economic activity.

Challenges with respect to rupee value:

- The current account surplus this year together with massive capital flows has meant an excess of dollars in the system putting upward pressure on the rupee which is already overvalued in real terms.

- The RBI has absorbed the excess US Dollars in the tune of $90 billion from the economy.

- The mopping-up operation in this fiscal year has been with an aim to prevent the appreciation of exchange rate and to maintain the competitiveness of the rupee, which is very crucial for Indian exports to remain competitive in the global market.

- The RBI also cannot be overzealous in absorbing the excess dollars as that may further lead to excess in rupee availability, leading to a spike in liquidity and consequently the inflation.

- Thus RBIs actions of intervening in the forex market are not without limitations. Managing the impossible trinity will be a tricky challenge for RBI going forward.

  - * The impossible trinity (also known as the trilemma) is a concept in international economics which states that it is impossible to have all three of the following at the same time: a fixed foreign exchange rate. free capital movement (absence of capital controls) an independent monetary policy.

Conclusion:

- The RBI is confronted with a classic case of 'the impossible trinity' of keeping doors open for capital flows while simultaneously maintaining a stable exchange rate and restraining inflation. Maintaining a policy balance across all three conflicting objectives can be tricky

Indian Economy and issues relating to growth and development

2. ## Banking sector in 2021

   - » Prelims: Twin balance sheet problem, NPA, IBC, Financial stability report

   - » Mains: Risks in Indian financial system and steps to be taken

Context:

- The volume of bad loans in the Indian financial system declined in the September quarter.

Background:

Twin balance sheet problem:

- March 2018 saw a peak in NPAs, about Rs. 10 lakh crore — around 11.5% of all loans.

- India's 'twin balance sheet problem' was largely a product of high levels of non-performing assets. The 'Twin balance sheet problem' can be traced back to the latter half of the 2010s, as assumptions of persistently high economic growth made several large corporates overambitious in their investment ambitions and began over-leveraging themselves in the process.

- And lenders, led by public sector banks, fuelled these plans through easy money on credit. The problem was particularly acute in the infrastructure sector, where high-stakes bets on several projects unravelled as growth (and demand) fizzled out following the global financial crisis of 2008.

- The stress from stretched corporate balance sheets adversely affected banks' books and underwhelmed their capacity for fresh lending.

Improvement in bank's health:

- The period since then saw a gradual betterment in the health of the banks.

- India's Scheduled commercial banks turned profitable in 2019-20 after undergoing two consecutive years of losses.

- State-run banks have witnessed losses for five years in a row, but their losses were lesser than previous years.

- This vicious cycle of the twin balance sheet problem was interrupted to an extent by the IBC, which, along with tighter recognition norms for bad loans, helped correct the course over time.

Details:

- The Reserve Bank of India (RBI) believes that the first half of 2020-21 saw redemption in bank's health as seen by the improvement seen in certain bank's statistical indicators like the non-performing assets (NPAs) falling to 7.5% of outstanding loans by September 2020.

- Insolvency and Bankruptcy Code (IBC) in 2016 has been credited for the speedy resolution of a few large accounts.

Existing threats:

- The RBI has noted that the improved GNPA ratio of 7.5% at end-September 2020 does not reveal the accurate picture and doesn't reflect the stress the economy is under.

- Though a decline in bad loans is good news, there are doubts over whether this could be taken as an indicator of the good health of the Indian financial system due to the following reasons.

Impact of the pandemic:

- The COVID-19 pandemic and the national lockdown that followed has created problems of plenty in the economic arena. This has put brakes on the economic activities.

- What makes the Indian economy peculiar was that the Indian economy was showing signs of slowdown from the past 2 years and the pandemic just made it worse.

- The RBI report revealed that the uncertainty induced by COVID-19 and its real economic impact, the asset quality of the banking system may deteriorate sharply, going forward.

  * The report also stated that there are large-scale loan defaults looming over housing finance companies, which have been hit by delays in completion of housing projects, cost overruns due to reverse migration of labourers, and delayed investments by buyers in the affordable housing sector as incomes shrank and jobs were lost.

Regulatory forbearance:

- The regulatory forbearance has been cited by several economists as the reason why bad loans and insolvency proceedings have not surged yet.

- Regulatory forbearance is a regulatory policy where a policy implemented by central banks and other regulatory authorities permits banks and financial institutions to continue operating even when their capital is fully depleted.

- The series of regulatory forbearance steps taken by authorities to help tide over unprecedented crisis brought out by the pandemic include the following.

  * Interest rates were cut after the onset of the pandemic.

  * A moratorium was offered on loan instalments due from borrowers.

  * The Insolvency and Bankruptcy Code 2016 is currently suspended. Sections 7, 9 and 10 of the bankruptcy law were suspended for six months from March 25 by way of an ordinance in June. The Government has extended the suspension on the Insolvency and Bankruptcy Code (IBC) till the end of the present financial year (March 31 2021).

    » Sections 7, 9 and 10 of IBC enable financial creditors to initiate insolvency proceedings against a corporate debtor. Whereas Section 9 grants these powers to operations creditors, Section 10 allows corporate debtors to initiate insolvency proceeding

- RBI believes that a real picture of the state of borrowers' accounts (and consequently, the banking system in general, and the economy at large), will emerge once these policy support measures are rolled back.

Ineffectiveness of measures taken by administration:

- Liquidity infusion into the system has provided only a temporary respite. Also despite the various facilitative measures taken by the Indian financial system regulators, the credit disbursal to key sectors of the economy has been insufficient.

Risk-averse attitude of banks:

- Banks are the backbone of any economy, a pileup of bad loans hurts the banks' ability and willingness to lend and push them into the risk-averse mode.

- Banks deem it is safer to park their funds in government securities, and public sector banks, that have seen a surge in deposits after the recent troubles at co-operative and private lenders like the PMC Bank, Yes Bank, and now Lakshmi Vilas Bank, may also prefer to go down the route.

* During 2020-21 so far, deposits with PSBs grew at a higher pace than usual, partly reflecting the perception of their safe-haven status.

- The Currency with public increased in the times of COVID-19 thus decreasing the ability of the banks to mobilize resources for economic growth of the country.

Steps to be taken:

- In the face of challenges faced by the Indian economy and the banking sector amidst the pandemic, RBI believes that it is important to "rewind various relaxations in a timely manner", rein in loan impairment and ensure adequate capital infusion into banks.

- Since public sector lenders still play a huge role in financing economic activity, it is important that they raise additional capital from the market or from the government — before the stress 'obscured' by the COVID-19 relief measures becomes apparent.

    * While several private lenders have chosen to raise additional buffer capital to offset shocks from potential loan defaults, some large state-run lenders have announced plans to raise resources in a staggered manner, depending on the prevailing market circumstances.

    * Several other experts have also stated that the government will have to dip into the tax revenues to shore up public sector banks.

Conclusion:

- While the ability and willingness of banks to lend are critical for businesses and the economy to grow, similarly the restoration of the economy is crucial to improving the health of banking and non-banking financial sectors.

- The Union Budget for 2021-22, will have to address these issues in detail, the budget will also be of extreme importance for banks on the issues of a revival of demand and investments and the capital that can be earmarked for public sector bank recapitalization.

- The RBI's upcoming Financial Stability Report could help provide a more accurate assessment of the banking sectors health.

Indian Economy and issues relating to growth and development

3. **New Foreign Trade Policy 2021-26**

   » Prelims: FTP 2015-20

   » Mains: District Export Hubs initiative, significance of export in Indian economy

Context:

- New Foreign Trade Policy (FTP) 2021-2026 to be rolled out from April 2021.

Details:

- The Union Ministry of Commerce and Industry said that India's new Foreign Trade Policy 2021-2026, under formulation, will come into effect from April 1, 2021.

- India's FTP has conventionally been formulated for five years at a time. The FTP 2015-20 came into effect in April 2015 and the same was extended by one year till 31 March 2021, due to the Covid-19 pandemic.

- The FTP will strive to make India a leader in the area of international trade and channelize the synergies gained through merchandise and services exports for growth and employment with a goal to make India a USD 5 Trillion economy.

- Improvements in the operations of the domestic manufacturing and services sector in combination with efficient infrastructure support by the government would result in correcting the imbalances within India and feed into the trade policy.

- The District Export Hubs initiative will form an important component of the new FTP. The Department of Commerce through the Regional Authorities of the Directorate General of Foreign Trade (DGFT) has engaged with State/UT Governments to take forward this initiative in the districts and enable its implementation in a phased manner. The objective is to mobilize the potential of each district of the country to achieve its potential as an export hub.

Indian Economy and issues relating to growth and development

4. **Quality gigs, a solution to urban unemployment**

   » Prelims: Gig economy features

   » Mains: Significance and challenges associated with gig economy

Context:

- Indian economy entering the recessionary phase has created fears over deepening of the unemployment problem.

Background:

Impact of the pandemic on employment scenario:

- The lockdown enforced to curb the pandemic meant that the economy came to a standstill and the fact that Indian economy was facing a slump in growth figures for several quarters meant that the problem of unemployment became aggravated.

- There have been some optimistic outlook towards the future with the narrowing down of the contraction in the economy, this can be seen in the second-quarter figures, where the contraction is seen to be at 7.6% as against the 23.9% in the first quarter.

- This improved figures in the second quarter and an expectation of even better growth figures going forward has got the economists talking about the 'V-shaped recovery'

- The discussion about the growth figures and the recovery rate has taken away the focus from the unemployment scenario

- The Centre for Monitoring Indian Economy data indicates a gradual slowdown in employment recovery from July, with the latest figures indicating a sharp rise in the national unemployment rate from 6.51% in November to 9.06% for December.

Employment guarantee in rural areas:

- The lockdown witnessed a migrant crisis, thousands of migrants rushed back to their homes in rural India amidst the pandemic.

- The National Rural Employment Guarantee Scheme (NREGA), provided the much needed employment to the people heading back.

- For labour flocking back to rural India, the employment support came in the form of an increased outlay for the National Rural Employment Guarantee Scheme (NREGA), which witnessed a meteoric rise of 243% person workdays.

- The increase in people enrolling in the NREGA meant that the Rural Development Ministry spent nearly 90% of its increased Rs. 86,4000 crore allocation by the month of November, while still being unable to fulfil demands for nearly 13% of the 75 million households that demanded work.

- The guaranteed employment under NREGA proved to be a boon to the rural people, especially in the times of pandemic.

Issue in urban areas:

- People seeking work in urban centres find it difficult to secure a job, the lack of an urban equivalent to the NREGA has meant that unemployment is a graver problem in urban centres.

- The option of not having a guaranteed employment programme like that seen in rural areas with the NREGA, it is important that the focus and attention are provided to a new form of employment in the urban areas.

- Indian cities have witnessed numerous business shutting down, relocated, downsizing leaving behind millions of workers without a job, this has left many to seek refuge under the gig economy for employment.

Gig economy:

- The changing times have witnessed the burgeoning of the gig economy. In a gig economy, large numbers of people work in part-time or temporary positions or as independent contractors.

- Cities tend to have the most highly developed services and are the most entrenched in the gig economy.

- The result of a gig economy is cheaper, more efficient services.

- Increasing internet access facilitates the gig economy.

Assessment of the gig economy working conditions:

- The Fairwork Foundation's annual review of platform labour throws light on the gig economy working conditions.

- The well-being of gig workers on 11 digital platforms was evaluated by the report. The report evaluates the condition of platform workers based on five metrics of Fair Pay, Fair Conditions, Fair Contracts, Fair Management and Fair Representation.

- The report has revealed that among the firms surveyed, only two firms (Urban Company and Flipkart) score greater than five (out of a maximum of 10) while seven scores only 2 or less.

- It is very disconcerting to see India's four largest platform giants, namely, Uber, Ola, Swiggy and Zomato occupy the bottom ranks.

Issue of regulation:

- The need for regulation of the gig economy is essential but very challenging. There is a lack of common definition of nature of work in the gig economy, given the varied nature of gig work, while some workers use these platforms as a "side hustle", for others it continues to serve as a primary source of employment.

- The regulation is complex for another reason that a one-size-fits-all regulatory strategy will inadvertently hurt the similar, yet distinct, market for highly skilled (and highly paid) freelancers, that continues its rapid growth due to pandemic related full-time staff layoffs.

- Taking into consideration the nature of complexity, a more feasible way forward will involve conditional government partnerships with platforms under some of its flagship schemes.

- A case in point may be the successful pilot of Swiggy's Street Food Vendors programme under the PM Street Vendor's AtmaNirbhar Nidhi scheme, while Swiggy has announced the on boarding of 36,000 street food vendors onto the platform under the scheme this month, it

has also looked to ensure that each vendor is registered and certified by the Food Safety and Standards Authority of India.

- Forging partnerships with platforms to employ workers, will result in cost-cutting for state and as well as their partners. The additional benefit is that it shall also create an ecosystem where the firms would be willing to cooperate with the state. This will save some hostility and a lengthy legal tussle

- The simultaneous creation of jobs, alongside the voluntary adoption of quality standards, is an example of a symbiotic relationship between the state and a platform that creates jobs while incentivising greater levels of compliance.

Recommendations:

- There is the need to mandate the labour platforms to comply with disclosure norms and worker compensation standards in order to access government support.

- A potential intervention could be the move to fix daily worker wages at approximately Rs. 300, at a cost of Rs. 1-lakh crore to the exchequer for an Urban Employment Guarantee Programme.

Conclusion:

- India requires to adopt a more innovative method to tackle urban unemployment, this is extremely crucial in the post-pandemic world.

- The 2011 census show that nearly one-third of India lives in the urban areas, thus it is very important to provide for adequate employment opportunities.

- Thrust has to be given to evaluate, regulate and support new forms of employment that may currently be serving as an informal safety net for those desperately in search of work.

Indian Economy and Issues relating to growth and development

5. India's dependence on China for critical imports

- » Prelims: RCEP, India's major imports and exports,
- » Mains: Significance of PLI scheme for Indian economy

Context:

- India's overdependence on China for critical imports.

Background:

Bilateral trade ties between India and China:

- China is the leading destination of India's imports, however, the imports last year dipped by 10.8%, the lowest since 2016.

- Two-way trade in 2020 reached $87.6 billion, down by 5.6%, while the trade deficit declined to a five year-low of $45.8 billion.

- India's decision to opt-out of the Regional Comprehensive Economic Partnership (RCEP) was largely based on being in the same trading bloc as China.

- China has been very rigid in terms of imposing a plethora of non-tariff barriers, thus not allowing India's exports to make headway in the Chinese economy.

- In 2018, both sides signed a number of protocols, including for rice and tobacco, but none of this has contributed to a substantial trade. India's exports to China did, however, cross $20 billion for the first time last year.

Details:

- Imports from China is very essential for the mobile phone industry and pharmaceuticals.

  * India's production chain in mobile phone manufacturing lacks resilience as it can be disrupted with any supply chain shocks with close to 85% content coming from China.

  * Similarly, if China were to stop the active pharmaceutical ingredients (APIs), India would not be able to produce many medicines currently in production in India.

- The overdependence on China for the critical imports is a worrying concern, such high overdependence can hurt India in the long run.

Efforts being made:

- India has taken a note of the excessive dependence on China and has begun working on a multi-pronged strategy to reduce this dependence; these efforts range from the Production Linked Incentive (PLI) scheme to boost domestic manufacturing, a global effort involving India's foreign missions to find alternatives to China, and the utilization of free trade agreements (FTAs) with other trading partners

  * Production Linked Incentive (PLI) is a scheme that intends to give companies incentives on incremental sales from products manufactured in domestic units. The scheme also aims to invite foreign companies to establish their base in India, the scheme also aims to encourage local companies to set up or expand existing manufacturing units.

  * There is a sense of optimism that PLI is going to accelerate the investment in India and the optimism is also backed up with Apple start manufacturing in India.

- The COVID-19 has been an enabler in this change, had helped accelerate this change. When production in China was hit early in 2020, India shared with its foreign missions lists of items critically dependent on China, following which the missions linked up with suppliers in their countries.

Way forward:

- There is a need to have a multi-pronged strategy with a detailed outline to foster self-reliance and address the skewed nature of the balance of trade with China.
- It is foolhardy to expect a drastic reduction in the critical imports from China as China still occupies the position of the largest source of imports for critical items.
- There is the need to focus on diversifying the supply base and should not come across as a anti-China move.

Indian Economy and Infrastructure

6. Kochi – Mangaluru Natural Gas Pipeline

- » Prelims: Map based location questions
- » Mains: One Nation One Gas Grid, Gas based economy-Challenges and significance

Context:

- Recently, the Prime Minister dedicated Kochi – Mangaluru Natural Gas Pipeline to the nation.

Kochi – Mangaluru Natural Gas Pipeline:

- It is a 450 km long pipeline built by GAIL (India) Ltd.
- It has a transportation capacity of 12 Million Metric Standard Cubic Metres per day and will carry natural gas from the Liquefied Natural Gas (LNG) Regasification Terminal at Kochi (Kerala) to Mangaluru (Dakshina Kannada district, Karnataka), while passing through Ernakulam, Thrissur, Palakkad, Malappuram, Kozhikode, Kannur and Kasaragod districts.

- Laying of the pipeline was an engineering challenge as the route of the pipeline necessitated it to cross water bodies at more than 100 locations. This was done through a special technique called Horizontal Directional Drilling method.
- The pipeline will supply environment-friendly and affordable fuel in the form of Piped Natural Gas (PNG) to households and Compressed Natural Gas (CNG) to the transportation sector.
- It will also supply Natural Gas to commercial and industrial units across the districts along the pipeline.
- Consumption of cleaner fuel will help in improving air quality by curbing air pollution.
- The event is also a milestone towards the creation of 'One Nation One Gas Grid'.

Indian Economy and Infrastructure

7. Sagarmala Seaplane Services

- » Prelims: Map based location questions, Sagarmala initiative
- » Mains: Benefits offered by seaplane services

Context:

- The Ministry of Ports, Shipping & Waterways is kicking off the Sagarmala Seaplane Services (SSPS).

About Sagarmala Seaplane Services:

- The Ministry is commencing operations of the Seaplane services, on select routes, under a Special Purpose Vehicle (SPV) framework through prospective airline operators.

PROPOSED LOCATIONS FOR SAGARMALA SEAPLANE SERVICE

- One such Seaplane Service is already in operation between Kevadia and Sabarmati Riverfront in Ahmedabad, inaugurated in October 2020.

- The project execution and implementation would be through the Sagarmala Development Company Ltd (SDCL), which is under the administrative control of the Ministry.

- To provide connectivity and easier accessibility to remote locations, SDCL is exploring plans to leverage the potential of the vast coastline and numerous water bodies/rivers across India by commencing seaplane operations.

- Sea Plane will utilize the nearby water bodies for take-off and landing and thus connect those places in a much economical way as conventional airport infrastructure like a runway and terminal buildings are not required for seaplane operations.

Benefits of seaplane operations:

- Provide faster and comfortable transportation across the nation.

- Improve air connectivity to tourist/religious destinations.

- Boost domestic and international tourism.

- Save travel time to remote/hilly areas.

- Boost business activities in the regions.

Indian Economy and Infrastructure

8. Interconnection Usage Charges

- » Prelims: Interconnection usage charges, TRAI,

- » Mains: Issues in India's telecom sector

Context:

- The termination charge for wireless to wireless domestic calls has been zeroed from January 1, 2021 onwards.

Background:

Interconnection Usage Charges:

- Interconnection Usage Charges (IUC) is a charge paid by the Telecommunication service provider (TSP), whose subscriber makes a call, to the Telecommunication Service Provider, whose subscriber receives the call. It is the cost that a mobile operator pays to another operator for carrying through/ terminating a call.

- Until now operators paid Interconnection Usage Charges (IUC) of 6 paise per minute on mobile calls.

- In India, IUC is set by the Telecom Regulatory Authority of India.

Details:

- TRAI has introduced an arrangement called bill and keep, which does away with the IUC.

- The end of IUC creates a new era in which the telecom companies can focus on upgrading their networks and service. The end of the IUC should facilitate an expansion of high-capacity networks, going beyond 2G and 3G.

- With this change, the imbalance between different telecom players has reduced.

  - * The Economic Survey of 2019-20 notes that intense competition has reduced the number of private players in the sector and the public sector operators BSNL and MTNL continue to face an existential threat.

- For the subscriber, other than those who had to pay higher access tariffs on one wireless network due to the IUC system, the latest measure may not carry a significant impact, since providers sold unlimited call packs even earlier

Conclusion:

- India is a mass market for voice and data services that fuel the digital economy. India's high density telecom market is poised for further growth as it awaits expansion through 5G and Internet-connected devices.

- Badly priced spectrum could lead to auction failures and lack of genuine competition is bound to hamper the growth of the next big wave of telecoms, of which the 5G piece is critical for new services.

- Now that the need to monitor call termination data and make IUC payments no longer exists and spectrum auction scheduled in 2021, the focus must shift to giving the users a better deal — as reliable call quality and competitive tariffs.

Indian Economy and Infrastructure

9. Global Housing Technology Challenge-India

- » Prelims: GHTC-India initiative, PMAY-U scheme

- » Mains: Housing infrastructure-challenges.

Context:

- Prime Minister laid the foundation stone of six Light House Projects in six cities as part of the Global Housing Technology Challenge-India (GHTC-India) initiative.

Details:

Light House Projects (LHP):

- As a part of GHTC- India, six Light House Projects (LHP) consisting of about 1,000 houses each with physical & social infrastructure facilities is being constructed at six places across the country namely Indore; Rajkot; Chennai; Ranchi; Agartala and; Lucknow.

- Modern construction practices from countries such as France, Germany and Canada would be adopted.

- These projects will showcase the use of the six distinct shortlisted innovative technologies for field level application, learning and replication.

- LHPs will demonstrate and deliver ready to live mass housing at an expedited pace as compared to conventional brick and mortar construction and will be more economical, sustainable, of high quality and durability.

Global Housing Technology Challenge-India (GHTC-India) initiative:

- Global Housing Technology Challenge-India (GHTC-I) intends to get the best globally available innovative construction technologies through a challenge process.

- It aims to demonstrate and deliver ready to live-in houses in minimum time and minimum cost with high-quality of construction in a sustainable manner.

- This challenge seeks to promote future potential technologies through Incubation support and accelerator workshops, in order to foster an environment of research and development in the country.

- It aims to fast-track the construction of affordable housing and meet the target of constructing 1.2 crore houses by 2022 under the Pradhan Mantri Awas Yojana (PMAY).

Pradhan Mantri Awas Yojana – Urban (PMAY-U):

- The PMAY-U was launched in 2015 to provide housing for all by 2022.

- The scheme provides central assistance to Urban Local Bodies (ULBs) and other implementing agencies through States/UTs.

- It is being implemented by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA).

- The programme has 4 components:

  1. Credit Link Subsidy Scheme (CLSS).

  2. In-situ rehabilitation of existing slum dwellers using land as a resource through private participation.

  3. Affordable Housing in Partnership (AHP).

  4. Subsidy for beneficiary led individual house construction/enhancement.

Indian Economy and Infrastructure

10 Embracing energy efficiency

  » Prelims: Electricity rules, 2020

  » Mains: Need for pursuing energy efficiency in the Indian context and steps to be taken in this direction

Context:

- The Electricity (Rights of Consumers) Rules, 2020.

The Electricity (Rights of Consumers) Rules, 2020:

- The Electricity (Rights of Consumers) Rules, 2020 serve to "empower" consumers with rights that would allow them to access a continuous supply of quality, reliable electricity. This is because the provisions make distribution companies more accountable to consumers.

- The rules cover 11 key areas of power supply to consumers in the country, including obligations of distribution licensees, metering arrangements, the release of new connections and modifications of existing connections and grievance redressal and compensation mechanisms.

- These rules provide for rights of consumers and obligations of distribution licensees, the release of new connection and modification in existing connection, metering arrangement, billing and payment, among others.

- The rules seek to ensure uniform performance standards for power distribution companies (discoms) and make the discoms responsible for their acts of commission and omission by having a compensation mechanism in events of violations.

Concerns:

- The new rules come at a juncture when Indian discoms are finding it hard to stay afloat financially. This is can be partially attributed to a fall in payment rates, with large scale evasion of bill payment owing to an increase in consumption and tight finances among the people.

- There has been a lack of long-term policy measure to aid discoms, the Indian government's liquidity relief to help discoms tide over this crisis will not address the deep lying issues affecting the discoms.

- Various studies and data have projected India's residential electricity consumption to increase by 200% by 2030.

- The capability of discoms to deliver dependable power supply at affordable rates will be called into question as households buy more electric appliances to meet their domestic needs.

- There is a possible demand-supply mismatch in the making, therefore taking measures to adopt energy efficiency solutions appears to be a logical solution.

Energy efficiency:

- The energy efficiency can be a potential game-changer on two-fronts, as this can clamp down upon household energy bills and reduce discoms' financial stress.

- The India Residential Energy Survey conducted by the Council on Energy, Environment and Water and the Initiative for Sustainable Energy Policy has given valuable insights into how India has witnessed a steady adoption of energy-efficient appliances, especially those appliances covered under the mandatory labelling programme.

  * The survey discovered that in excess of the three-fourth of the 75% of air-conditioners and 60% of refrigerators used in Indian homes were star-labelled and a near 90% of Indian homes deployed LED lamps or tubes.

- The survey also revealed some of the concerns such as a limited uptake of energy-efficient ceiling fans and televisions. A major proportion of fans used in residential facilities lacked efficiency.

  * Several case studies suggest that in spite of having a voluntary labelling scheme since 2009, less than 5% of ceiling fans produced in India are star-rated.

  * While the Bureau of Energy Efficiency (BEE) plans to bring ceiling fans under mandatory labelling from 2022, the high upfront cost will be another barrier. At present, the most efficient fans cost more than double the price of conventional models.

- The survey also noted that nearly 60% of our television stock comprises the big old energy-consuming CRT (cathode ray tube) models. The Desert coolers, used by 15% homes, are not even covered under the labelling programme.

- If these issues can be addressed appropriately in the near future, this can lead to significant efficiency gains

The way forward:

Availability and affordability of energy-efficient appliances:

- Availability and affordability of energy-efficient appliances will be the pillars of any energy-efficient strategy

- We need innovative business models that can attract manufacturers to produce efficient technology at scale and bring it within purchasing capacity

Consumer awareness:

- India needs a nationwide consumer awareness campaign on energy efficiency.

- There is a need to carry out an energy awareness drive as a meagre 25% of Indian households are currently mindful of BEE's star labels.

- The awareness among people also varies with geography, the awareness levels seems to be concentrated among residents of metros and tier-1 cities leaving behind the majority in small towns and rural areas remain unaware.

- A decentralized and a consumer-centric engagement strategy will have to be designed to narrow the gap, and this would entail a joint corroborative effort from State governments, discoms and retailers.

Monitoring:

- There is a need to monitor supply quality and changing consumption pattern on a real-time basis.

- Encouraging deployment of smart meters which measure actual savings and provide evidence of benefits accruing due to energy-efficient devices will build confidence in the households.

- The smart metering network would also be crucial for enforcing consumer rights rules.

Conclusion:

- Energy efficiency as a concept is being embraced by the people of India in recent years.

  * The UJALA scheme transformed the market for LED bulbs, while also helping India reduce its annual carbon emissions by nearly 82 million tonnes.

- A similar focus towards other energy-efficient appliances would allow India to ensure 24x7 power for all.

Indian Economy and Infrastructure

11. Freight corridor

» Prelims: DFC of India- map based questions

» Mains: Benefits of DFCs,

Context:

- Indian Prime Minister flagged off world's first 1.5 km-long electrified double-stack container train and inaugurated the New Rewari-New Madar section of the Western Dedicated Freight Corridor

Background:

Dedicated Freight Corridor:

- Dedicated Freight Corridors (DFC) is a high speed and high capacity railway corridor that is exclusively meant for the transportation of freight or in other words goods and commodities. DFC involves the seamless integration of better infrastructure and state of the art technology.

- Such a corridor would catalyze the development of growth centres and points in several cities. The corridor would also have positive spillovers like the creation of job opportunities and will act as an enabler for attracting new investments.

- The corridor will provide much-needed impetus to the local industries and manufacturing units by securing them faster and cheaper access to the national and international markets.

Details:

- The Prime Minister has highlighted the need to modernize the country's infrastructure as being pivotal to India's growth aspirations.

- The newly inaugurated portion of the Western Dedicated Freight Corridor is expected to benefit farmers, industrialists and businessmen in the National Capital Region, Haryana and Rajasthan.
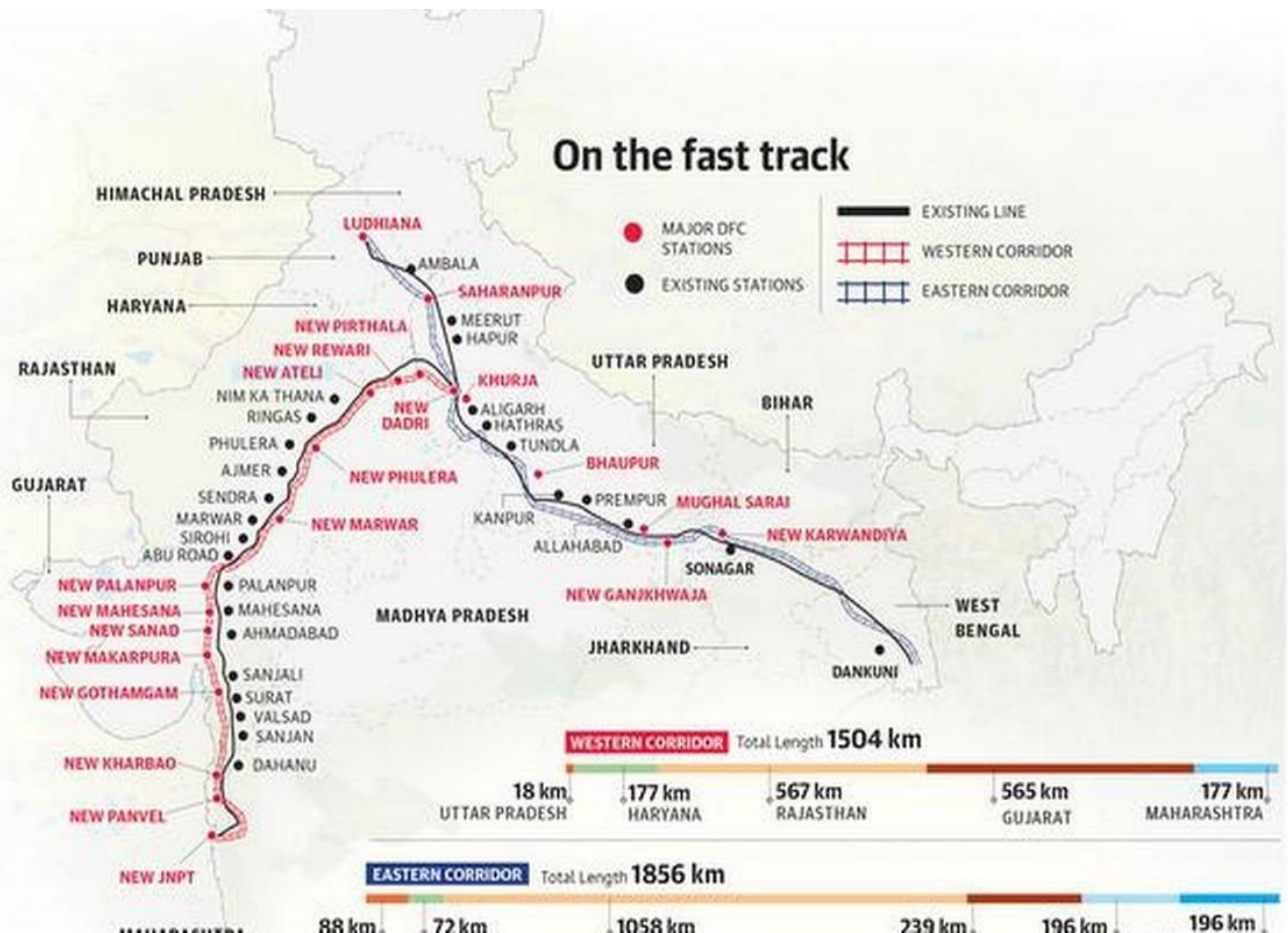
Western Dedicated Freight Corridor:

- The Western Dedicated Freight Corridor (WDFC) is a broad gauge freight corridor under construction in India by Indian Railways. It will connect India's capital, Delhi, and its economic hub, Navi Mumbai.

Eastern Dedicated Freight Corridor:

- The Eastern Dedicated Freight Corridor (EDFC) with a route length of 1856 km runs from Dankuni in West Bengal to Ludhiana (Punjab).

- It covers Punjab, Haryana, Uttar Pradesh, Bihar, Jharkhand and West Bengal. New multi-model logistic parks, freight terminals, container depots/ terminals and parcel hubs would be developed at these places.

Industrial Growth

12. Draft policy to help grow nano, micro enterprises

- » Prelims: Udyog Sahayak Enterprises Network

- » Mains: Significance of MSME sector in the Indian economy

Context:

- Draft policy on the Udyog Sahayak Enterprises Network (USENET).

Details:

- The proposed Udyog Sahayak Enterprises Network framework drafthas been put together by the Federation of Indian Chambers of Commerce and Industry (FICCI), the Tata Institute of Social Sciences (TISS) and Azim Premji University.

USENET Framework approach:

- The approach is based on the belief that India rather than creating more nano-entrepreneurs, should rather focus on helping existing MSEs grow in size. The framework is aimed at providing a slew of growth-driven services to over 62 million nano and micro-enterprises that currently employ over 100 million people in India.

- The USENET framework aims to create a countrywide entrepreneurial network. The platform will give the nano and micro-enterprises, facing growth challenges, information on policies, government schemes and credit options, and visibility to lenders and customers and thereby help them grow. The framework will also create a support system to help these enterprises adopt new technologies, and increase productivity.

- The Union government is likely to sanction upto ₹5,000 crore to part-fund CAPEX to set up at least 19 lakh USENET centres. Each of these centres will be headed by a Udyog Sahayak, who will have a mandate to help and monitor the growth of 15 to 50 enterprises

Significance:

- This new policy may give a major fillip to the growth-stunted nano and micro-enterprises in India's informal sector.

- By enabling scale-up of nano and micro enterprises, USENET can aid in the creation of an additional 10.3 million jobs over five years, going up to nearly 56.9 million jobs over 10 years. Hence it holds the potential to grow and create a large number of jobs.

- The framework is expected to boost the value-added per worker potential and this alone could bring in a 12% nominal growth in GVA (gross asset value), amounting to an economic value of Rs. 2.16 lakh crore in five years and over Rs. 19 lakh crore at the end of 10 years.

Governmental schemes/Programmes/initiatives

13. TRIFOOD Parks

- » Prelims: TRIFOOD parks, TRIFED, Van dhan yojana.

Context:

- TRIFOOD Parks to be set up in Madhya Pradesh.

Details:

- TRIFED signs an MoU with Akhil Bhartiya Vanvasi Kalyan Ashram to set up TRIFOOD Parks in 5 districts of MP.

TRIFOOD:

- It is a joint initiative of TRIFED (under the Ministry of Tribal Affairs) and the Ministry of Food Processing.

- TRIFOOD Parks are food processing centres aiming at promoting value addition to minor forest produce.

- It was launched under the Van Dhan Yojana in 2020.

- The parks procure raw materials from the Van Dhan Kendras and process them to be sold across the country through Tribes India outlets.

Governmental schemes/Programmes/initiatives

14. Udyog Manthan

- » Prelims: Udyog Manthan

Context:

- The Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry, Govt. of India is organizing Udyog Manthan.

Details:

- Udyog Manthan is a marathon of focused sector-specific webinars for promoting Quality and Productivity in Indian Industry.

- DPIIT is organising the webinars in association with the Quality Council of India, the National Productivity Council, and industry bodies.

- Udyog Manthan will identify challenges, opportunities, draw upon solutions and best practices.

- The conversations will enable learning across industries and sectors for enhancing quality and productivity to promote 'Vocal for Local' and realizing the vision of 'Aatmanirbhar Bharat'.

Governmental schemes/Programmes/initiatives

15. Liberalised Authorised Economic Operator Package for MSMEs

- » Mains: Measures supporting the MSME sector

Context:

- The Central Board of Indirect Taxes & Customs introduces flagship Liberalised Authorised Economic Operator Package for MSMEs.

Details:

- The Central Board of Indirect Taxes & Customs (CBIC) has taken a new initiative to introduce its flagship "Liberalised MSME AEO Package" for Micro Small and Medium Enterprises (MSMEs) for swift customs clearances.

- In order to attract MSMEs to become Authorised Economic Operators (AEOs) and avail various benefits, the CBIC has relaxed the compliance criteria provided the MSMEs have a valid certificate from their line-ministry.

- The 'Liberalised MSME AEO Package' scheme is a voluntary compliance programme which enables swifter Customs clearance for accredited stakeholders in the global supply chain namely importers, exporters, logistic service providers, custodians, etc.

Which MSMEs can apply for the scheme?

- The relaxed requirements allow MSMEs who have filed minimum 10 customs clearance documents in one year and who have a clean compliance record over 2 years to apply for the scheme.

Benefits of the scheme:

- Simplified documentation
- CBIC commits to take a decision on an application for grant of AEO status within only 15 days from electronic submission of complete documents for AEO Tier 1
- Reduction in bank guarantee requirements
- Facility of Direct Port Delivery (DPD) of imported containers
- Direct Port Entry (DPE) of Export Containers
- High level of facilitation in customs clearance of consignments thereby ensuring shorter cargo release time
- Facility of a Client Relationship Manager at the customs port as a single point of interaction

Governmental schemes/Programmes/initiatives

16. Ease of doing business reforms

» Mains: "Ease of Doing Business" reform

Context:

- Kerala becomes the 8th state to complete ease of doing business reforms.

Details:

- Kerala has become the 8th state in the country to successfully undertake "Ease of Doing Business" reform stipulated by the Department of Expenditure, Ministry of Finance.
- Thus, the state has become eligible to mobilise additional financial resources of Rs. 2,261 crore through Open Market Borrowings.
- Kerala has now joined the seven other states namely, Odisha, Andhra Pradesh, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu and Telangana, who have completed this reform.

Background:

- The ease of doing business is an important indicator of the investment-friendly business climate in the country.
- Improvements in the ease of doing business will enable faster future growth of the state economy.

- Therefore, the government of India had in May 2020, decided to link the grant of additional borrowing permissions to states who undertake the reforms to facilitate ease of doing business.
- The reforms stipulated in this category are:
  * Completion of first assessment of 'District Level Business Reform Action Plan'
  * Elimination of the requirements of renewal of registration certificates/approvals/ licences obtained by businesses under various Acts.
  * Implementation of computerized central random inspection system under the Acts wherein allocation of inspectors is done centrally, the same inspector is not assigned to the same unit in subsequent years, prior inspection notice is provided to the business owner, and inspection report is uploaded within 48 hours of inspection.
- To meet the challenges posed by the pandemic, GOI had enhanced the borrowing limit of the states by 2 percent of their GSDP. Half of this special dispensation was linked to undertaking citizen-centric reforms by the states.
- The four citizen-centric areas for reforms identified were:
  * Implementation of One Nation One Ration Card System (done by 10 states)
  * Ease of doing business reform (done by 8 states)
  * Urban Local body/utility reforms (done by 4 states)
  * Power sector reforms

Schemes/Programmes/initiatives

17. RBI's Digital Payments Index

» Prelims: Digital Payments Index

Context:

- The Reserve Bank of India (RBI) has come up with a composite Digital Payments Index (DPI).

Details:

- The RBI-DPI comprises five broad parameters, including Payment Enablers, Payment Infrastructure – Demand-side factors and Supply-side factors, Payment Performance and Consumer Centricity.
- The index has been constructed to capture the extent of digitisation of payments across the country.
- It has been constructed with March 2018 as the base period.
- The DPI for March 2019 and March 2020 work out to 153.47 and 207.84 respectively.

* This indicates appreciable growth in the digital payment sector.

18. Three States to divert more sugar for ethanol

» Prelims: National Bio fuel policy, Ethanol blending

» Mains: Benefits of ethanol blending

Context:

• Major sugar-producing States — Uttar Pradesh, Maharashtra and Karnataka are expected to see mills diverting a higher quantity of the B heavy molasses and sugarcane juice for ethanol production compared with the previous year.

Ethanol blending in India:

• The government has proposed the adoption of E20 fuel as an automobile fuel. India had set a goal of 20% ethanol blending with petrol by 2030. Recently, the target was preponed by five years to 2025 as it looks to cut dependence on costly oil imports.

• As much as 4 billion litres of ethanol will be needed for achieving 10% mixing ratio.

Benefits of Ethanol blending:

• India is 83% dependent on imports for meeting its oil needs. Doping petrol with ethanol will cut down the import requirement.

• Ethanol blending with petrol helps saves the country's valuable foreign exchange.

• Ethanol being less polluting fuel, it will cut down carbon emissions.

• The move to raise ethanol content in petrol will also provide an alternate source of revenue for sugar mills and help them clear farm dues.

Steps taken by the government:

• To encourage sugar mills to divert excess sugarcane to produce ethanol for blending with petrol, the government has allowed production of ethanol from B-Heavy Molasses, sugarcane juice, sugar syrup and sugar; and has also fixed a remunerative ex-mill price of ethanol derived from these feed-stocks.

• Sugar mills having distillation capacity have been advised to divert B-heavy molasses and sugar syrup for producing ethanol to utilize their capacity to maximum extent; and those sugar mills which do not have distillation capacity should produce B-Heavy molasses and should tie up with distilleries which can produce ethanol from B-Heavy molasses.

• States have also been requested to ensure smooth movement of molasses & ethanol.

19. Green Tax

» Prelims: Corporate Average Fuel Economy (CAFE) Standard

» Mains: Significance of Green tax and old vehicle scrappage policy

Context:

• As automobile technology tends to change every 5 to 10 years, older vehicles fail to match the upgraded pollution standards and hence are more polluting than newer vehicles.

• In order to disincentivise the use of polluting vehicles and to curb pollution in the country, the Centre plans to notify a system of imposing "green tax" on older vehicles

Green Tax:

• A green tax is imposed on the environment polluting goods or activities, to discourage people from anti-ecological behaviour and make them sensitive towards the environment.

• It encourages people to upgrade to newer vehicles rather than spending huge amounts on maintaining the longevity of their current vehicles.

Tax to be imposed:

• Transport vehicles older than eight years could be charged green tax at the time of renewal of fitness certificate at the rate of 10 to 25 per cent of road tax.

• Fitness Certificate is an official document certifying that the holder's vehicle is fit to drive at public places

• Personal vehicles are proposed to be charged green tax at the time of renewal of registration certification after 15 years

• Differential tax will also be charged depending on fuel (petrol/ diesel) and the type of vehicle.

Exemption:

• Vehicles like strong hybrids, electric vehicles and those running on alternate fuels like CNG, ethanol and LPG will be exempted

• Apart from them vehicles used in farming, such as tractor, harvesters and tillers will be exempted from the tax

Other Measures:

• Govt has also approved the policy of deregistration and scrapping of vehicles owned by government department and PSU, which are above 15 years in age.

• The ministry said it will dissuade people from using vehicles which damage the environment and motivate them to switch to newer, less polluting vehicles.

How will the revenue be used?

- The revenue collected from the green tax will be kept in a separate account and will be used for tackling pollution.

Benefits:

- It can give a boost to the automobile industry and related businesses by stimulating demand, and lead to recovery of steel, aluminium, plastic and so on for recycling.

- Newer vehicles conforming to stricter emissions and fuel efficiency standards are more environment-friendly, and have modern safety features

- India notified the Corporate Average Fuel Economy (CAFE) Standard for passenger vehicles in 2016, the CAFÉ standards boost fuel efficiency.

- They aim at lowering fuel consumption (or improving fuel efficiency) of vehicles by lowering carbon dioxide (CO_2) emissions, thus serving the twin purposes of reducing dependence on oil for fuel and controlling pollution.

- Corporate Average refers to sales-volume weighted average for every auto manufacturer. The norms are applicable for petrol, diesel, LPG and CNG passenger vehicles. CAFE regulations in India came into force from April 1, 2017. Under this, average corporate CO_2 emission must be less than 130 gm per km till 2022 and below 113 gm per km thereafter.

- The benefits from vehicle replacements can be gauged from Transport Ministry data: commercial vehicles making up 5% of the vehicle fleet but contribute an estimated 65-70% of total vehicular pollution.

Is the proposed policy for scrappage workable?

- During the drafting of the scrappage policy in 2015, the idea of providing a discount of Rs. 30,000 to Rs. 50,000 for new passenger vehicles was mooted for those choosing to put their vehicles for scrapping.

- The commercial vehicle had the benefits including taxes around an estimate of Rs. 1.5 lakh, however, this idea did not materialize.

- The NITI Aayog had raised concerns over the proposal, it cited that some sections may be deterred by the high capital costs to retire old vehicles.

- Other proposals in earlier drafts included tax discounts for those who exchanged old motors for new ones.

- The present initiative, however, has the limited objective of pushing the owners of older vehicles to sell the older vehicles rather than pay a green tax penalty.

- In the absence of adequate incentive or penalty, and careful targeting of vehicles with knowledge of their condition, a tax penalty would not be effective in nudging the commercial vehicle owners, since the tax would be far lower than its resale value and earnings potential; there would be no compulsion to retire it. Continued operation of the vehicles would defeat the clean air objective and bring no cheer to the automobile industry.

What are the options available to tweak the policy?

- The automobile industry in general and commercial transport vehicles, in particular, are key planks to tackling air pollution, the metrics which will be focused will be fuel efficiency, emissions and safety.

- The Centre should work on financial options instruments such as loans and grants aimed at supporting the smaller operators to scrap their junk vehicles while escalating the green tax annually to achieve the nudge effect.

- A second stimulus to bus companies could help green the fleet and cut pollution.

- Small operators such as autorickshaws could be offered low-interest loans, particularly to move to electric vehicles.

Schemes/Programmes/Initiatives

20. Punjab to build fiscal information platform

- The Punjab government has signed an agreement with the eGovernments (eGov) Foundation to build a first-of-its-kind fiscal information exchange platform. The platform will facilitate real-time availability of financial information to the stakeholders.

- This will aid in data-driven and efficient deployment of public funds and policy making.

- This will also help the state to better monitor and track its financial health and allow it to adapt to dynamic and evolving needs such that available funds can be deployed actively to meet its development agenda and priorities.

Reports

21. Global Economic Prospects

Context:

- World Bank has released its Global Economic Prospects (GEP) report.

Global Economic Prospects (GEP) report:

- GEP is a World Bank Group flagship report.

- It examines global economic developments and prospects, with a special focus on emerging market and developing economies.

- It is issued twice a year, in the months of January and June.

  * The January edition includes in-depth analyses of topical policy challenges.

  * The June edition contains shorter analytical pieces.

Details:

- As per the latest GEP, Global economic output is projected to grow by 4% in 2021 assuming widespread roll-out of a COVID-19 vaccine throughout the year.

  * This projection is still 5% below pre-pandemic levels.

- The global recovery has been dampened by the resurgence of the coronavirus.

- However, the global recovery is expected to strengthen as confidence, trade and consumption start improving, supported by vaccinations.

- Those with the lowest incomes were worst hit by the downturn and would likely take the longest to regain jobs in the post-COVID economy.

- There has been a massive increase in global debt with Emerging market and developing economies' government debt set to increase by 9 percentage points of GDP in 2020.

India:

- India is expected to grow at 5.4% in fiscal year 2021-22 and 5.2% in fiscal 2022-23 after an expected contraction of 9.6% in fiscal 2020-21.

- Owing to a sharp decline in household spending and private investment, it is expected that India's economy would contract in the current fiscal.

  * There was severe income loss in the informal sector which accounts for four-fifths of employment.

- However, recent data indicated that recovery in manufacturing and services was gaining momentum.

- India's government debt is expected to rise by 17 percentage points of GDP.

- Private sector debt is also expected to rise sharply.

Way forward:

- Key elements to the strength of the economic recovery would be investment that embraces the changed economic environment and an ability to reduce inequality.

- The governments, households and firms must respond to the new economic realities such as:

  * Protecting the most vulnerable.

  * Roll out supporting policies that allow capital, labour, skills and innovation to shift to new purposes such as the green sectors.

Economic statistics

22. Trade deficit

Context:

- India's trade deficit widened to $15.71 billion.

Details:

- For many developing countries, a progression from low income to middle and upper middle-income country status rests heavily on successful trade in regional and global markets. However India's current trade deficit stands at $15.71 billion widening by 25.78%.

- The imports have increased and the exports have decreased.
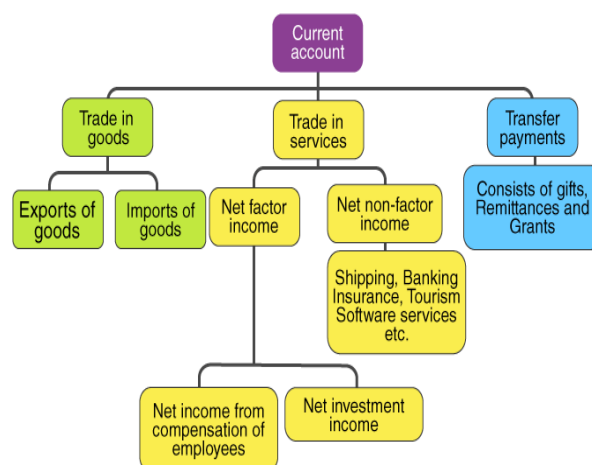
Exports:

- India's Exports in December 2020 stood at $26.89 billion, whereas the corresponding data for December 2019 was $27.11, showing a decline in exports.

- Major commodities which have recorded positive growth in exports during December include oil meals, iron ore, carpets, pharmaceuticals, spices, electronic goods, fruits and vegetables, and chemicals. Other products which witnessed a positive trend in exports include cotton yarn/ fabrics/ made-ups, handloom products, rice , meat, dairy and poultry products , gems and jewellery, tea and engineering goods.

Imports:

- The major commodities which witnessed a positive growth in imports in December 2020 include pulses, gold , vegetable oil , chemicals, electronic goods, machine tools, pearls, precious and semi-precious stones , and fertilisers.

- Sectors which recorded negative growth in December 2020 were silver, newsprint, transport equipment, cotton raw and waste, coal, coke and briquettes

Conclusion:

- The trade deficit at $15.71 billion was highest since July 2020. The country had witnessed a trade surplus in June 2020.

- A widening trade deficit will have detrimental consequences. The ballooning of trade deficit is not a very healthy sign to the Indian economy, as a spiralling trade deficit can trigger inflation, sliding of rupee vis-à-vis dollar, bulge the Capital Account Deficit etc.

- Steps have to be taken to ensure that trade deficit remains in control.

Economic statistics

23. GDP forecast

Context:

- The National Statistical Office has come out with the Advance estimates of India's GDP figures.

Details:

- Advance estimates reveal that India's real Gross Domestic Product is headed towards a contraction of 7.7% in 2020-21 and the GVA (Gross Valued added) shrinking by 7.2%.

- India's economy had expanded 4.2% in 2019-20 but entered a recessionary phase with two successive quarters of sharp contraction triggered by the COVID-19 lockdowns.

- The first quarter of the current fiscal year saw a contraction of up to 23.9%, however, with the gradual lifting of lockdown restrictions and the 'unlocking of the economy' meant that the GDP shrank by 7.5% in the second quarter — leading to a real GDP contraction of 15.7% in the first half of 2020-21.

- The estimates now seem to suggest that the economy will surface in the second half to record near-zero growth, or a mere 0.1% contraction, the estimates suggest.

- This is based on an improved performance under several performance indicators in the past few months, the RBI has revised its GDP projection, now projecting a 7.5% contraction in the year compared to its earlier estimate of a 9.5% decline.

Sector-wise breakup:

- Only two sectors managed to record an expansion in growth in GVA, with agriculture continuing its good performance through the first half of the year into the second half (3.4%) and electricity, gas, water supply and other utility services posting (2.7%).

- The cause for worry came from the steep decline in trade, hotels, transport, communication and services related to broadcasting (-21.4%), followed by construction (-12.6%), mining and quarrying (-12.4%) and manufacturing (-9.4%).

- Public administration, defence and other services are also projected to contract by 3.7%, while financial, real estate and professional services shall record a marginal 0.8% decline year-on-year, as per the advanced estimates.

Conclusion:

- The pandemic which has affected economies around the world will be the chief perpetrator in India witnessing a negative GDP growth rate for the first time after 1979-80.

- The Finance Ministry is of the view that the advanced estimates are indicative of a better economic performance in the third and fourth quarters. A cursory look into the GDP figures paints an optimistic picture, a post lockdown V-shaped recovery of the economy.

- On the demand side, real GDP in 2020-21 has been supported by an estimated increase in Government Consumption Expenditure by 5.8%

Economic statistics

24. India's fiscal deficit

Context:

- Fiscal impact of the COVID-19 pandemic.

Background:

Fiscal Deficit:

- The difference between total revenue and total expenditure of the government is termed as fiscal deficit. It is an indication of the total borrowings needed by the government. While calculating the total revenue, borrowings are not included.

Details:

- India's fiscal deficit for the year ending in March is likely to exceed 7% of gross domestic product according to certain studies.

  * The government at the close of the last fiscal had projected a deficit of 3.5% for the current year.

- The reason for a bulged fiscal deficit has been a shortfall in revenue collections suffered from a lockdown and restrictions to rein in the spread of COVID-19. Government finances are in a poor condition also because of a shortfall in tax receipts.

- The pandemic and the strict combative measures like lockdown impacted Indian economy adversely. The first quarter and second quarter

data attests the poor state of Indian economy, further going forward the economists have estimated GDP is likely to contract by 7.7% in the full fiscal year.

Economic statistics

25. Trade with China

Context:

- India's trade deficit with China narrowed to a five-year low in 2020.

Details:

- India's trade with China declined last year.
- India's imports from China shrank by 10.8% marking the lowest level of inbound shipments since 2016.
- India's exports to China, however, jumped 16%, crossing the $20 billion-mark for the first time to a record high.

What does the trade deficit imply?

- The drop in India's imports from China largely mirrored a decline in overall inbound shipments in 2020 as domestic demand slumped in the wake of the pandemic.
- This makes it difficult to determine whether 2020 is an exception or marks a turn away from the recent pattern of India's trade with China.
- As yet, no evidence exists to suggest that India has replaced its import dependence on China by either sourcing those goods elsewhere or manufacturing them at home.

Miscellaneous

26. USTR slams India's digital tax

- » Prelims: Section 301 countries, India's digital services tax
- » Mains: India- US relations in the economic sphere

Context:

- The USTR's Section 301 has called out India's digital taxation regime, claiming it is not in sync with international tax principles.

Background:

USTR:

- The Office of the United States Trade Representative (USTR) is an agency of professionals dealing with trade issues.
- The Office of the U.S. Trade Representative (USTR) is responsible for developing and coordinating U.S. international trade, commodity, and direct investment policy, and overseeing negotiations with other countries.

- The Section 301 report, a flagship publication of USTR has said that the Digital services taxes adopted by India, Italy and Turkey discriminate against U.S. companies and are inconsistent with international tax principles.

India's Digital Service Tax:

- India's DST imposes a 2% tax on revenue generated from a broad range of digital services offered in India, including digital platform services, digital content sales, digital sales of a company's own goods, data-related services, software-as-a-service, and several other categories of digital services.
- India's DST explicitly exempts Indian companies—only "non-residents" must pay the tax.

Details:

- USTR has concluded the digital taxes imposed by France, India, Italy and Turkey discriminate against big U.S. tech firms, such as Google, Facebook, Apple and Amazon.com.
- The issues of contention are the application of taxation to revenue rather than income, extraterritorial application, and failure to provide tax certainty.

India's defence:

- India has defended the 2% equalisation levy saying that it does not discriminate against U.S. companies as it applies uniformly across all non-resident e-commerce operators.
- The Commerce and Industry Ministry has said the intention imposing such a levy is create an ecosystem that fosters fair competition and reasonableness
- Another reason behind the levy is to exercise the sovereign right of the government to tax businesses that have a close nexus with the Indian market through their digital operations.
- The charge of extraterritorial application is not accurate as it applies only to the revenue generated from India.

Miscellaneous

27. Seventh Trade Policy Review of India

- » Prelims: Trade policy review, WTO mandate and structure
- » Mains: Measures taken by India to facilitate global trade

Context:

- India's seventh Trade Policy Review (TPR) began in January 2021, at the World Trade Organization in Geneva.

Trade Policy Review (TPR):

- The TPR is an important mechanism under the WTO's monitoring function, and involves a comprehensive peer-review of the Member's national trade policies. India's last TPR took place in 2015.

- India's Commerce Secretary stated that since the last TPR, the GOI has taken several measures to reform and transform the entire economic ecosystem to meet the socio-economic aspirations of all Indians.

- Major policy level changes include the introduction of the GST, the Insolvency & Bankruptcy Code, labour reforms, and an investor-friendly FDI policy.

- Various national programmes include Make in India, Digital India, Startup India and Skill India.

- India has improved in the World Bank's Doing Business ranking from 142 in 2015 to 63 in 2019.

- In 2019-20, India received the highest ever FDI inflow of USD 74.39 billion.

WTO Secretariat's Report:

- A comprehensive Report issued by the WTO Secretariat on the occasion, chronicling all major trade and economic initiatives that India took over the last five years, acknowledged India's strong economic growth at 7.4% during the period under review and made a positive note of India's reform efforts during this period.

- The Report noted that strong economic growth led to an improvement in socio-economic indicators, such as per-capita income and life expectancy in India.

- The Secretariat report also commended India for liberalizing its FDI policy, ratifying the Trade Facilitation Agreement and implementing several trade-facilitation measures during the period under review.

Miscellaneous

28. RBI forms working group on digital lending

Context:

- The Reserve Bank of India (RBI) has taken up the initiative to set up a working group on digital lending, encompassing the online platforms and mobile apps

Background:

- Digital lending has come under the scrutiny after a spate of cases of suicides have been witnessed due to harassment by unauthorised digital lending mobile apps

- The proliferation of several unauthorised digital lending platforms/mobile apps has become a cause for concern.

- Several suicides are being reported from Telangana following alleged harassment by personnel of digital lending platform. These platforms have been indulging in high-handed recovery practices that have driven people to take the extreme step.

Why regulation is necessary?

- India, in recent years, has witnessed an embrace of online financial transactions by the people.

- A shift in customer behaviour from offline to online financial transactions has coincided with the rise of fintech companies. With the shift to online lending, there are certain prerequisites for a successful working of the digital mode. There is a need for a regulatory mechanism, financial literacy on behalf of the customers, a code of conduct on the part of digital lending platforms.

- The potential of Digital lending is vast; it can help make access to financial products and services more fair, efficient and inclusive. The financial products and services delivery is being aided tremendously through FinTech led innovations.

- While penetration of digital methods in the financial sector is a welcome development, the benefits and certain downside risks are often interwoven in such endeavours.

What the working group is expected to do?

- The working group will look into the aspects of digital lending activities in the regulated financial sector and the unregulated players. The working group's observations and recommendations will be taken into consideration while putting in place a regulatory mechanism.

- Caution has to be exercised to ensure that regulation does not stifle innovation. A balanced approach needs to be followed so that the regulatory framework and innovation go hand in hand while ensuring data security, privacy, confidentiality and consumer protection.

- The working group is mandated to examine and evaluate digital lending activities and assess the penetration and standards of outsourced digital lending activities in RBI regulated entities.

- The working group will also look to zero-in on the risks posed by unregulated digital lending to financial stability, regulated entities and consumers; and suggest regulatory changes to promote orderly growth of digital lending.

Conclusion:

- The digital lending is an evolving mode of operation still in its nascent stage, thus it will require a regulatory mechanism to provide for a structure to digital lending and also ensure a smooth functioning.
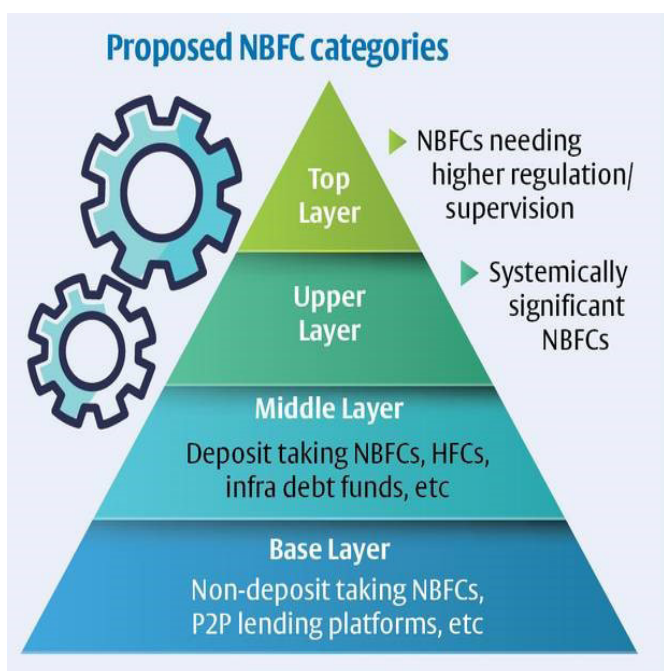
29. RBI NBFC regulations

» Prelims: NBFC-structure and functional provisions

» Mains: Challenges faced by NBFCs in India; their significance to the Indian economy

Context:

• The Reserve Bank of India (RBI) has proposed to introduce a scale-based regulatory framework for non-banking financial companies (NBFC) to segregate larger entities and expose them to a stricter set of "bank-like" rules.

• This is aimed at protecting financial stability while ensuring that smaller NBFCs continue to enjoy light-touch regulations and grow with ease.

Details:

• According to a discussion paper released by the RBI, the NBFCs will be split into four layers—base, middle, upper and top.

    * NBFCs in the lower layer will be known as NBFC-Base Layer (NBFC-BL).

    * NBFCs in the middle layer will be known as NBFC-Middle Layer (NBFC-ML).

    * An NBFC in the Upper Layer will be known as NBFC-Upper Layer (NBFC-UL) and will invite a new regulatory superstructure.

    * There is also a Top Layer, ideally supposed to be empty.

• The classification of the NBFCs, will be based on a host of parameters including size, leverage, interconnectedness, substitutability, complexity and nature of activity, among others.

Proposed NBFC categories

Top Layer ▶ NBFCs needing higher regulation/supervision

Upper Layer ▶ Systemically significant NBFCs

Middle Layer Deposit taking NBFCs, HFCs, infra debt funds, etc

Base Layer Non-deposit taking NBFCs, P2P lending platforms, etc

Base Layer:

• About 9,209 NBFCs will be in the Base Layer (BL), which can consist of NBFCs, currently classified as non-systemically important NBFCs (NBFC-ND/Non-Deposit taking), Peer to Peer lending platforms, Account Aggregators, Non-Operative Financial Holding Company, and NBFCs up to ₹1,000 crore asset size.

• As low entry point norms raise the chances of failure arising from poor governance of non-serious players, the central bank plans to revise these norms for NBFC-BL from ₹2 crore to ₹20 crore.

Middle layer:

• NBFCs in the Middle Layer (ML) can consist of entities, currently classified as NBFC-ND-SI/Non-Deposit taking-Systemically Important, deposit-taking NBFCs, Housing Finance Companies, Infrastructure Finance Companies, Infrastructure Debt Funds, Standalone Primary Dealers and Core Investment Companies

• While no changes are proposed in capital requirements for NBFC-ML, RBI said the linkage of their exposure limits are proposed to be changed from Owned Funds to Tier I capital, as is currently applicable for banks.

• As per the framework, a few restrictions should be extended to NBFCs in ML, including not allowing them to provide loans to companies for buy-back of shares/securities.

Upper Layer:

• This layer can consist of NBFCs which are identified as systemically significant among them and will invite a new regulatory superstructure.

• This layer will be populated by NBFCs which have a large potential of systemic spill-over of risks and can impact financial stability.

• There is no parallel for this layer currently, as this will be a new layer for regulation.

• Since NBFCs lying in the Upper Layer have the ability to cause adverse systemic risks, the regulatory tools can be calibrated on the lines of the private banks; that is, such NBFCs should be subject to the mandatory listing requirement and should follow the consequent Listing Obligations and Disclosures Requirements.

Top Layer:

• Considered supervisory judgment might push some NBFCs out of the upper layer of the systemically significant NBFCs for higher regulation/supervision. These NBFCs will occupy the top of the upper layer as a distinct set.

- Ideally, this top layer of the pyramid will remain empty unless supervisors view specific NBFCs.

- In other words, if certain NBFCs lying in the upper layer are seen to pose extreme risks as per supervisory judgement, they can be put to significantly higher and bespoke regulatory/ supervisory requirements.

INTERNATIONAL RELATIONS

1. Reframing India's foreign policy priorities

» Prelims: NAM, SAARC, RCEP

» Mains: Significance of and challenges to India-Bangladesh ties

Context:

- The global affairs in 2021 will be closely watched, as it is the post COVID-19 era and there are significant changes happening around the world, like the change in guard in the USA presidency, the BREXIT becoming operational, China's ever growing revisionist tendencies, and resurgence of Russia etc.

- India too will have to address its foreign policy changes and will have to bring about some course corrections going forward.

Significant changes in foreign policy:

The rise of China:

- The tail-end of 2019 saw the outbreak of coronavirus in Wuhan, it was gloomy times for China, fast forward to the year 2021, there appears to be a more optimistic picture of the future.

- China is the lone economy to have enjoyed a positive rate of growth at the end of 2020 and is expected to grow at an even healthier rate in the upcoming year.

- Militaristic ambitions of the country did not take a back seat even when it was under the pandemic, the Galwan valley standoff with India showcased its expansionist tendencies.

- The announcement of its third aircraft carrier in 2021 has signalled its intentions to wrest its initiative in the Indo-Pacific Ocean. China has been quite tactful in strengthening its military coordination with Russia.

- China doesn't appear to back down from its claims in issues such as Hong Kong and Uighur issue.

- The political leadership under President Xi is likely to extend his tenure as Party leader and as President during 2021.

Rise of authoritarian leaders:

- The strong authoritarian leaders like the Xi Jinping in China, Vladimir Putin in Russia, and Recep Tayyip Erdoğan in Turkey are expected to remain in power and exert considerable influence on international politics.

Strengthening ties:

- Russia strengthening ties with China and reaching an entente with Turkey, could be a hint at the future, a future that will have less interest devoted to certain countries, including India.

Economy first for Europe:

- Europe is expected to undergo few changes of its own like the BREXIT and the retirement of Germany's Angela Merkel, but these changes are not going to change the conduct of global affairs.

- The 21st century is largely a pragmatist one, this can be witnessed in the China-EU Investment Treaty which saw Europe wilting under China's brandishments, a clear indication that Europe values its economy more than its politics.

West Asia:

- There are some major changes brewing in Eurasia and West Asia which could possibly pave the way to significant shifts. It has been observed that Russia has been paying considerable attention to the affairs of countries in its immediate and extended neighbourhood.

- The Abraham Accords in West Asia with all the hype around it has not reduced the risk of a confrontation between Iran and Israel, deepening the faultlines between the Saudi Bloc and Iran-Turkey.

  * Abraham Accords Peace Agreement refers to a Treaty of Peace, Diplomatic Relations and Full Normalization Between the United Arab Emirates and the State of Israel

- China has not shied away from expressing its interests towards playing a major role in the region, including contemplating a 25-year strategic cooperation agreement with Iran.

- Saudi Arabia could find the going difficult in 2021, with a Biden Administration taking charge in Washington

- There could be further sharpening of hostilities between the Sunni and Shia camps. Given the strategic flux in the region, Iran could well be tempted to use its nuclear capability to enhance its position, confident that the West may be unwilling to challenge it at this juncture.

Challenges for India:

China:

- The stalemate with Beijing on the border issue, the skirmishes on the Line of Actual Control that follow appear to be taking the major attention of the Indian security establishment.

West Asia:

- West Asia is a part of India's extended neighbourhood and an area that is important to India's economy and the security calculus.

- India's West Asia relationship on the interplay among the three poles of the region, those are Iran, Saudi Arabia and Palestine.

- India-Iran relations of today lack warmth, with India, cutting its crude oil supplies from Iran and Tehran leaning towards Beijing.

- India will have to carefully balance its interests in the region.

Afghanistan:

- Afghanistan is one country in the neighbourhood that India managed to garner goodwill through its initiatives, when the world chose to put soldiers, militaries in Afghanistan, India chose to focus on building infrastructural projects like Salma dam, Afghan Parliament and several schools.

- But, of late India has been marginalized as far as the peace process in Afghanistan is concerned.

Pakistan:

- While India's charges against Pakistan of sponsoring terror have had some impact globally, it has further aggravated tensions between the two neighbours, and in the process, also helped Pakistan to cement its relations with China.

Nepal:

- India-Nepal relations have hit the nadir, the relationship has been plunging to greater depths with each passing year, the fall aggravated with incidents like negativity around India's relief operations during the Nepal Earthquake, Madhesi revolt, border issues at t Kalapani etc.

Other Asian neighbours:

- Through a series of diplomatic visits, India has made valiant efforts to improve relations with some of its neighbours such as Bangladesh, Myanmar and Sri Lanka, but as of now worthwhile result is not evident.

- A sea of change has been observed in the attitude of India's neighbours, with India-China relations deteriorating, India's neighbours are not unwilling to taking sides, increasing India's isolation in the region

- India which has greatly curtailed its relations with China since April 2020, (in the wake of Chinese aggression in Eastern Ladakh) will find itself 'out on a limb', with many countries likely to seek closer economic relations with China now.

- India's foreign policy shortcomings have been conspicuous in the immediate neighbourhood and the extended neighbourhood. The actions of India seem to be stem from a combination of misplaced confidence like the stand-off with Nepal and a lack of understanding of the sensitivities of neighbours such as Bangladesh and long-time friends (such as Vietnam and Iran).

Multilateral forums:

- The present situation sees India maintaining distance from two important supranational bodies of which it used to be a founding member, viz., the Non-Aligned Movement (NAM) and the South Asian Association for Regional Cooperation (SAARC).

- NAM and SAARC have become dormant, while NAM represented a foreign policy direction, SAARC represents India's regional outreach.

- Though there have been considerable efforts put to make newer institutions such as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), BBIN in the region has not so far yielded desired results.

- India chose to stay out of the Regional Comprehensive Economic Partnership (RCEP) (a majority of Asian countries are members), and failed to take advantage of the RIC, or the Russia, India and China grouping, even as relations with Russia and China have deteriorated.

One-dimensional approach:

- The foreign policymakers have been accused of cosying up and placing excessive importance to the policy needs and pressures of nations such as the U.S.

Conclusion:

- India aims to utilize its foreign policy to achieve objectives like widening its sphere of influence, strengthening its role across nations, and making its presence felt like an emerging power in an increasingly disruptive global system.

- The need for an ideational restructuring of India's foreign policy is imminent; the renewed foreign policy must exhibit competent statecraft, adoption of prudent policies, the pursuit of realistically achievable objectives, and a demonstration of continuity of policy, irrespective of changes in the nature of the Administration.

- To bring about such reforms cannot happen in a short span of time, it will be time-consuming, but will pave the path for attaining foreign policy objectives in the near future.

International Relations: India's Foreign policy

2. India's UNSC membership

- » Prelims: UNSC structure and powers
- » Mains: UNSC reforms and significance of India's current membership of the UNSC

Context:

- India officially began its two-year term as a non-permanent member of the United Nations Security Council with the beginning of the year 2021.
- The article discusses about the India's two-year non-permanent stint at the UNSC which should be viewed as a once-in-a-decade opportunity to clearly identify and pursue its national interests regionally and globally.

Geopolitical Competition and conflict:

- New Delhi's entry into the UNSC coincides with the emergence of a new world order, one marked by systemic uncertainty, little care for global commons, absence of global leadership, the steady division of the world into rival blocs, and an age marked by unabashed pursuit of narrow national interests, putting even the rhetoric about a value-based global order on the backburner.
- The UNSC has also reached a point wherein its very relevance is in serious doubt

India's Role:

- India is no longer an ardent believer in the fantastical claims about a perfect world at harmony with itself, nor is it a timid bystander in global geopolitics.
- Contemporary India is more self-confident, resolute and wants to be a shaper of geopolitics even though it lacks the material wherewithal, economic heft, and domestic consensus, to action its ambitions.
- But at least its mindset has changed, from being satisfied on the margins to desiring to be at the centre stage.
- Therefore, India's pursuit of its interests at the UNSC should, therefore, reflect its material and geopolitical limitations, and its energies should be focused on a clearly identified agenda.

The China factor:

- India's tenure at the UNSC comes in the wake of its growing military rivalry with Beijing, the impact of which has already started to be felt at the UNSC meetings
- China's opposition to having India chair the Counter-Terrorism Committee (CTC) in 2022 was a precursor to the things to come on the high table.

- If the Biden administration were to continue with Donald Trump's policy of pushing back Chinese aggression including at the UNSC, New Delhi might find itself some useful allies in checking Chinese aggression in the region.
- India's seat at the UNSC is also significant vis-à-vis China because the next two years will be key to ensure checking further Chinese incursions along the Line of Actual Control and building up enough infrastructure and mobilising sufficient forces in the forward areas.

India-Russia ties in a changing world order:

- Greater Indian alignment with the West at the UNSC, an unavoidable outcome, could, however, widen the growing gulf between Russia and India given Russia's increasing dependence on Beijing in more ways than one.
- However unfortunate that may be, it might not be possible for India to sit on the fence anymore; doing so would bring more harm than goodwill in an international system where battlelines are sharpening by the day.

Terror is likely to be a major focus for India at the UNSC:

- External Affairs statement at the UNSC Ministerial Meeting on the 20th Anniversary of Security Council Resolution 1373 and the establishment of the Counter Terrorism Committee has set the stage for New Delhi's approach on the issue: "Terrorists are terrorists; there are no good and bad ones. Those who propagate this distinction have an agenda. And those who cover up for them are just as culpable".
- India assumed the chair of the Taliban sanctions committee which assumes significance given the fast-moving developments in Afghanistan and India's new-found desire to engage with the Taliban.
- The issue of terrorism has been a major theme in the country's national security and foreign policy discourse for decades
- India must, however, formulate its policy towards terrorism with far more diplomatic finesse and political nuance especially given that it is chairing the Taliban sanctions committee while courting the very same Taliban.

Build coalitions among like-minded states:

- India has to set out its priorities for the next decade — from climate change to non-proliferation.
- India should use its bargaining power at the UNSC to pursue its national interests in other forums and domains as well.
- India's UNSC strategy should involve shaping the narrative and global policy engagement with special emphasis on the Indo-Pacific.

Way forward:

- India's pursuit of its national interest at and through the UNSC must also be tempered by the sobering fact that the UNSC is unlikely to admit new members any time soon, if ever at all.

- India's past global engagements and efforts have often been contingent on the hope that it would one day be admitted to the UNSC given its irrefutable claim.

- But a cursory glance at the recent debates on UNSC reforms and the state of the international system should tell us that bending over backwards to please the big five to gain entry into the UNSC will not make a difference.

Conclusion:

- Therefore New Delhi must focus its energies on what it can achieve during the short period that it would be in the UNSC rather than what it wishes happened.

International Relations: Relations between India and neighbouring countries

3. **India's vaccine diplomacy**

   » Prelims: GAVI alliance

   » Mains: Significance of India's vaccine diplomacy and India's neighbourhood first policy

   ## Context:

   - India will begin to ship out doses of the novel coronavirus vaccine to neighbouring countries.

Calling the shots
India is expected to export the first batches of COVID-19 vaccines to its neighbours on Wednesday

Afghanistan
(population 3.8 crore)
• Discussions underway, first shipment to be notified shortly

Nepal
(2.9 crore)
• The first shipment of close to **10 lakh doses** is expected within a few days

Bhutan
(7.6 lakh)
• First shipment awaiting clearance, **10 lakh doses** to be sent

Pakistan
(21.6 crore)
• No requests from Pakistan, nor a decision to supply yet

Bangladesh
16.3 crore)
• The first shipment of **20 lakh doses** to arrive on Wednesday

Maldives
(5.3 lakh)
• The first grant of **1 lakh doses** to arrive on Wednesday

Sri Lanka
(2.2 crore)
• Shipment expected in the next fortnight

- Announcing the shipments, the PM had said that India is deeply honoured to be a long-trusted partner in meeting the healthcare needs of the global community.

- The first batches expected to reach Bhutan and the Maldives among several countries by special planes as a grant or gift.

- Shipments to Bhutan, the Maldives, Bangladesh, Nepal, Myanmar and the Seychelles have been

confirmed, while those to Sri Lanka, Afghanistan and Mauritius are awaiting necessary regulatory clearances.

- The only exception to India's regional vaccine diplomacy is Pakistan, that has neither requested nor is India discussing supplies to it at present.

Significance:

- The release of the shipments is part of the government's "Neighbourhood First" initiative.
- This will make India the first country to reach COVID-19 vaccines in South Asia, ahead of China, the World Health Organization and GAVI's vaccine alliance programme.

International Relations: Relations between India and neighbouring countries

4. **Border issue with China**

   » Prelims: Geography related to India and China

   » Mains: Concerns with respect to border issue with China

Context:

- China has been undertaking development of border villages and resettling new residents along the Line of Actual Control (LAC) that separates India and China.

Details:

- The development of new villages has been part of the Chinese state plan to build moderately well-off villages in border areas. Under the plan, 628 "first line and second line villages" referring to those right on the border and others in remote areas slightly further within would be redeveloped in the prefectures of Ngari, Shigatse, Shannan, and Nyingchi, along China's borders with India, Bhutan and Nepal.
- In some areas, small hamlets, with one or two herding households are being expanded into larger permanent settlements.
- China has been building necessary supportive infrastructure to support the increasing population in these border areas. This includes new houses as well as a hydropower generator and transmission infrastructure that connects the villages to the national grid.

Concerns:

Disputed borders:

- Some of the settlements China builds on the border are in disputed territories. This could have serious consequences for India and Bhutan, which share disputed borders with China.

   * The new village of Pangda, built in 2020 is 2-3 km into what Bhutan sees as its land.

   * Recently another newly built village, barely 30 km from Yumai and 4-5 km into what India sees as its territory in Arunachal, came to light via satellite images.

Chinese unilateralism:

- National security appears to be the abiding priority behind this developmental plan. This seems to be a deliberate policy of the Chinese state to use these settlements as guardians of Chinese territory and boost their national security.
- These civilian settlements would allow China to solidify its territorial claims and effectively settle the dispute unilaterally.

International Relations: Relations between India and neighbouring countries

5. **The Palk Bay conflict**

   » Prelims: Palk bay geography

   » Mains: Issues related to Palk bay conflict and solutions for it

Context:

- In yet another example of the unresolved fisheries conflict in the Palk Bay taking an unacceptable toll of lives, four fishermen from Tamil Nadu have died in the Palk bay area.

Differing claims:

- The fishermen from Tamil Nadu claim that the four were killed in an attack by the Sri Lankan Navy, while the Sri Lankan Navy's communication state that fishermen died as a result of a collision between their trawler and a naval vessel while trying to escape.
- India has let its counterparts from Sri Lanka know of their grievances by lodging a strong protest.
- Sri Lanka has gone ahead and constituted a committee to iron-out a permanent solution to the incursions by Indian fishermen.

The issue:

- Given the proximity of the territorial waters of both countries, especially in the Palk Straits and the Gulf of Mannar, incidents of straying of fishermen from India and Sri Lanka into each other's territory are common.
- Illegal, unreported and unregulated fishing has been a bone of contention between India and Sri Lanka for a long time.
- Sri Lanka has been expressing concerns over illegal fishing being carried out by Indian fishermen.
- The problem mainly emerged only after a maritime agreement was signed between India and Sri Lanka in 1974, wherein, Kachchatheevu

Island was gifted to Sri Lanka; the Indian fishermen have been debarredfrom fishing in the rich fishing grounds around that Island leading to skirmishes and incidents.

- From the Indian fishermen point of view, historically, the contested waters belonged to India and they have every right to fish in the traditional waters.

- India and Sri Lanka have agreed to set up a Joint Working Group (JWG) on Fisheries between the concerned ministries of both the countries as a mechanism to help find a permanent solution to the fishermen issue.

Joint working group:

- When the two sides decided to create a joint working group some years ago, they had agreed that there would be no violence or loss of life in the handling of the fishermen and that a hotline would be established between the respective Coast Guards.

- There were signs of optimism recently with the resumption of talks between the two countries through their Joint Working Group (JWG) after a hiatus of three years.

- India sought the early release of fishermen arrested in Sri Lankan waters along with the return of the boats in Sri Lankan custody. Sri Lanka underscored the need to curb the illegal fishing, which adversely affects the livelihood of its war-affected fishermen.

- The Indian side assured that bottom trawling would be phased out in a graded time-bound manner within a practicable timeframe keeping in mind the capacity building of the fishermen who have to be diversified into deep sea fishing as well as other coastal fisheries activities including mariculture, pearl farming, seaweed culture, etc.

Situation on ground:

- There has been no breakthrough in talks between the fishermen from both countries.

- The sticking point has been a differing approach that is being suggested from both the sides, while Sri Lanka is backing the joint patrolling by both countries, and a ban on unsustainable fishing practices such as bottom trawling. The Indian side wants a more gradual phase-out period and not an immediate one. Political leaders in Tamil Nadu rarely acknowledge that the State's fishermen contribute immensely to the problem by crossing territorial waters.

- The plan to wean away the fishermen from Tamil Nadu from resorting to exploiting the remaining fishery resources on the Sri Lankan side by replacing their trawlers with deep sea fishing vessels has not really taken off.

- The incursion into Sri Lankan waters are largely driven by trawler owners who compel their poor employees to do so and while obeying the orders the poor employees either get killed or arrested.

Proposed solutions:

- Permit licensed Indian fishermen to fish within a designated area (e.g. 5 nautical miles) of SriLankan waters and vice versa.

  * There is precedent in the 1976 boundary agreement, which allowed licensed SriLankan fishermen to fish in the Wadge Bank (a fertile fishing ground located near Kanyakumari) for a period of three years

- Practices like bottom trawling should be immediately banned.

- Indian fishermen point out that unless its government introduced concrete steps to buyback trawlers, it would not be possible to stop trawling operations. The government should implement a buy-back arrangement as soon as possible.

- India must view the Palk Bay region as a common heritage of the two countries and project this vision. We can form a Palk Bay authority, comprising fisheries experts, marine ecologists, fishermen's representatives, strategic specialists, and government officials.

International Relations: India's bilateral relations

6. **India-U.K. ties**

  » Prelims: Multilateral organizations of which both India and UK are members

  » Mains: Significance of and challenges to India-UK ties

Context:

- India's invite to British Prime Minister to be the chief guest at India's Republic Day celebrations and the subsequent decline of the invitation owing to heightened fears of COVID-19 mutations in the U.K.

India –UK relations in the recent past:

- The year 2015 saw Indian Prime Minister visit the U.K, the visit was accompanied with six major agreements signed.

- The agreements ranged from nuclear energy collaboration to cooperation in railways and the setting up of a mechanism for fast-tracking investment. Apart from this, the two countries also set out a bold vision for the UK-India Strategic Partnership.

- The UK is supporting the Skill India Mission through a Centre for Excellence for the automobile sector in Pune. The U.K announced

a commitment of up to £12m to support India's Skill India mission. Technology transfer from the UK will facilitate international training standards in up to 5 sectors including apprenticeships and certification.

New impetus to India-U.K. relationship:

- BREXIT allows both the parties to infuse much-needed dynamism into the relationship.

- From Britain's perspective, India's invitation to its Prime Minister was fortuitous because BREXIT necessitates the U.K to expend every ounce of its energy in trying to seek commercial advantage in Asian countries with high growth rates.

- India and the E.U have been locked in a stalemate over a trade deal for close to 13 years now, with several sticking points.

    * The EU aspired for duty reductions on autos, wines and spirits and wanted India to open up its financial sectors such as banking and insurance, postal, legal, accountancy, maritime and security and retail. India, as always, sought free movement for service professionals.

Challenges in the relation:

- It is very likely that these will be the sticking points between India and the Britain post-BREXIT, because both the countries have a similar export profile, being predominantly services-oriented.

- In response to free movement for professionals under mode-4 of services under the World Trade Organisation, Britain will refer to its new points-based system for immigrants.

- India' reluctance to join the bandwagon of Regional Comprehensive Economic Partnership implies that India is cautious about negotiating any new trade agreement, and is likely to emphasize on issues concerning the country of origin and percentage of value addition in exports.

- Therefore, when the time comes for a discrete agreement with Britain, the two countries would prefer to settle for a limited deal, perhaps covering pharmaceuticals, financial technology, chemicals, defence production, petroleum and food products.

Significance of the relationship:

Diaspora:

- India-U.K. links are significant, close to one and a half million persons of Indian origin reside in Britain, the diaspora has a substantial political representation, having 15 Members of Parliament, three in Cabinet and two holding high office as Finance and Home Ministers.

Tourism:

- In the pre-COVID era, Britain consistently received streams of Indians as tourists. Britain was one of the popular tourist destinations for Indians with half a million tourists from India to Britain annually and twice that figure in the reverse direction.

Education:

- Around 30,000 Indians study in Britain despite restrictive opportunities for post-graduation employment, making it a hub for higher education among Indians.

Investment:

- Britain is among the top investors in India and India is the second-biggest investor and a major job creator in Britain.

- India has a credit balance in total trade of $16 billion, but on the flipside the net magnitude is below India's trade with Switzerland, Germany or Belgium, therefore, the room for improvement is huge.

Scope for collaboration in multilateral forums:

- UN Security Council where Britain has permanent status and India holds a non-permanent seat this year will offer a platform for both countries to work together on global affairs.

- 2021 will see the United Kingdom hosting India as an invitee to the G-7, and the UN Climate Change Conference.

Conclusion:

- India has a shared past with Britain and needs to chart a shared future, now that Britain has left the European Union (EU).

- India and the U.K will have to cross each other's path on multiple platforms and issues, thus it is very important for both of them to have a well-established and a structured relationship.

International Relations: India's bilateral relations

7. **A strong India would act as 'counterbalance' to China: U.S.**

   » Prelims: East Asia Summit, QUAD

   » Mains: Significance of India-US ties

Context:

- The outgoing US President led administration has chosen to declassify a sensitive document on the U.S. strategic framework for the Indo-Pacific' from 2018.

Details:

- The document has details regarding the objectives and strategies with regard to China, North Korea, India and other countries in the Indo-Pacific region.

- The document gives a sneak-peak into the US

foreign policy objectives and what the foreign policy intends to achieve.

- The US foreign policy has in the recent past been excessively focused upon two theatres, i.e, West Asia and the Indo-Pacific.

Indo-Pacific region:

- The Indo-Pacific region has enjoyed growing popularity in the recent years as a geographical and strategic construct in the foreign and security policy discourse in Japan, the United States, Australia, India, France and some Southeast Asian states.

- The document talks about the need to maintaining "U.S. strategic primacy" in the region and promoting a "liberal economic order" while stopping China from establishing "illiberal spheres of influence" is the U.S.'s first national security challenge.

- The US sees China as a strategic competitor bent on circumventing international rules and norms and a key security concern across the Indo-Pacific region. The US-China tussle encompasses several dimensions, beginning from military threat, conflicts in trade policy, political-ideological aspects and competing ideas on regional order.

Complementing India's act-East policy:

- As a matter of strategy, the US seeks to promote a peaceful resolution of disputes and transparent infrastructure-debt practices. The infrastructure-debt practices appear to be an indirect reference to China's maligned 'debt-trap' infrastructure projects.

- It is also a reference to alternatives to financing by China's Belt Road Initiative, which has led put the borrowing countries in precarious positions with regards to debt scenario.

- India's 'Act East' policy is a diplomatic initiative to promote economic, strategic and cultural relations with the vast Asia-Pacific region at different levels. The U.S. aims to support India's "Act East" policy and its aspiration to be a leading global power, highlighting its compatibility with the U.S., Japanese and Australian vision" of the Indo-Pacific.

- A coalition of a strong India and other like-minded countries would act as a counterbalance to China's aggressive manoeuvres.

Indian angle:

- India has emerged as a vital plank in US.'s regional strategy, for the document talks about US.'s pans of partnering India on security issues and about the cooperation of the two countries in the maritime domain to offset any China led preponderance of power.

- The U.S. wants India to play a more proactive role in the region; it looks at India as a net security provider in the region. It also envisages greater leadership roles for India in forums like East Asia Summit and ASEAN Defence Ministers' Meeting Plus.

- The document speaks about solidifying a lasting strategic partnership with India; it mentions that a strong Indian military will be helpful in effectively collaborating the U.S and its regional partners.

- The two powers will have to bring about a synergy through enhanced defence cooperation and interoperability.

- The document throws light on how the US sees India-China dynamics with respect to the territorial claims at the border, in the maritime domain, trade etc. The document talks of offering support to India via military, diplomatic and intelligence channels in a bid to assist India in dealing with issues such as the border dispute with China and access to water, including the Brahmaputra and other rivers facing diversion by China.

- This declassification has come at a very crucial point of time, with India and China involved in exchange along the Line of Actual Control in 2020.

Russia:

- The other challenge include ensuring that Russia does not threaten the U.S. and it's economic leadership globally.

- The document, while referring to Russia, says the country will "remain a marginal player" in the region relative to the U.S., China and India, however, this cannot be definitive.

- Russia has taken decisive steps in the region with port calls by Russian warships in Sri Lanka and Pakistan, and two new naval drills with China taking place off the Cape of Good Hope with South Africa and in the northern Indian Ocean with Iran.

- Apparently, Russia's increasing interest in the Indian Ocean region is driven by the two new frontiers of its foreign policy – the Middle East and Africa.

Conclusion:

- The document outlines what the US strategy appears to be like, however with the change in administration, the US strategy in the future doesn't have to be any similar to what the document reveals.

International Relations: India's bilateral relations

8. **Indo-French Alliance**

   » Prelims: International Solar Alliance

   » Mains: Significance of and challenges to India-

France ties

Context:

- 2021to be marked as the year of Indo-French alliance towards a Greener Planet.

Details:

- The Union Environment Minister, along with his French counterpart, launched the Indo-French Year of the Environment.

- The basic objective is to strengthen Indo-French cooperation in sustainable development, increase the effectiveness of actions in favour of global environment protection and give them greater visibility.

- The Indo-French Year of the Environment over the period 2021-2022 would be based on five main themes:

  * Environmental protection
  * Climate change
  * Biodiversity conservation
  * Sustainable urban development
  * Development of renewable energies and energy efficiency

- It is also a platform for engaging in discussions on critical areas of collaboration relating to environment and allied areas.

International Relations: India's bilateral relations

9. 5th India – Singapore Defence Ministers' Dialogue

» Prelims: SIMBEX

» Mains: Significance of India-Singapore ties

Context:

- The 5th Defence Ministers' Dialogue (DMD) between India and Singapore was successfully held.

Background:

- Defence and security engagements between India and Singapore have broadened significantly in scale and scope across all three Services of the Armed Forces as well as in the areas of defence technology and industry.

- Both countries have also found common ground on multilateral fora and engagements.

- In August 2020, the implementing agreement on Humanitarian Assistance and Disaster Relief (HADR) cooperation was signed for the two Armed Forces to have closer operational collaboration in response to disasters and capacity-building activities of mutual interest.

- The cyber agencies of both armed forces have also stepped up engagements.

Details:

- The Implementing Agreement on Submarine Rescue Support and Cooperation was signed between the navies of India and Singapore.

Military exchanges between India and Singapore:

- Singapore India Maritime Bilateral Exercise (SIMBEX) – annual exercise between the navies.

- SITMEX – Singapore, India, Thailand Maritime Exercise.

International Relations: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

10. Reclaiming SAARC

» Prelims: SAARC membership

» Mains: Concerns with respect to the functioning of SAARC and ways to address these concerns

Context:

- The lower than expected effectiveness of the South Asian Association for Regional Cooperation (SAARC).

Background:

- The SAARC platform has gone quiet ever since India pulled out of the summit in Islamabad in 2016. The future of the platform doesn't appear to be changing anytime soon, with India categorically declaring that India's position on cross-border terrorism from Pakistan that led New Delhi's refusal to attend the SAARC summit in 2016 in Islamabad, has not wavered.

- As a result SAARC had been dysfunctional for the largest period ever since its establishment in 1985. Although the postponement and cancellation of SAARC summits have happened before, this time it took South Asian Heads of Governments nearly six years to sit together under a common platform. Indian Prime Minister Narendra Modi took the charge and convened a virtual SAARC conference over the COVID-19 crisis

Concerns:

- The stalemate in India-Pakistan relations has hijacked the platform, with other meetings of SAARC being impacted as well.

  * India's issues with Pakistan revolve around terrorism, territorial claims and a constant effort from Pakistan's side to hamstring the platform by obstructing SAARC initiatives on connectivity and trade. Given the consensus based functioning of SAARC, each nation enjoys a 'veto' over the entire SAARC process.

- The relations in the region have largely been bilateral with not many regional efforts concerning any particular issue. SAARC is the

biggest regional platform in South Asia, it is crucial towards tackling common challenges brought about by the pandemic COVID-19

- The regional integration has never been this fragile making it easier for member countries, as well as international agencies, to deal with South Asia as a fragmented group rather than a collective group.

Way forward:

- However, if events in 2020 are anything to go by, then India must look towards SAARC as a platform and look towards reviving it.

Vaccine collaboration:

- Having a common platform and a regional strategy is quintessential for the distribution and further trials needed for vaccines, as well as developing cold storage chains for the vast market that South Asia represents.

Addressing economic vulnerabilities:

- The pandemic has put the spotlight on health security, food security, and job security of the population in the region.

- The pandemic's impact on South Asian economies is another area that calls for coordination. The economic outlook of the region doesn't bode well, with the region witnessing a decline in the overall GDP figures, global job cuts which will lead to an estimated 22% fall in revenue for migrant labour and expatriates from South Asian countries, there is an expected loss of about 10.77 million jobs and US$52.32 billion in GDP in the tourism sector alone from the impact of COVID-19.

- World Bank team has studied the impact of the pandemic on the region and also have put forth recommendations to put the economy on a recovery path.

- The suggestion that South Asian countries work as a collective to set standards for labour from the region, and also to look towards promoting a more intra-regional, transnational approach towards tourism.

Greater integration:

- The impact of COVID-19 will be seen in broader, global trends, an increasing rejection for 'globalisation' of trade, travel and migration all of which were seen to have aided the pandemic spread from China, as well as a growing preference for going local, focusing on self-reliance and indigenizing supply chains.

- Though it is not entirely possible for countries to 'disentangle' completely from the global market, the regional initiatives will become a more viable option, a compromise between globalisation and hyper-nationalism.

- India's only regional trading agreement, the South Asian Free Trade Area, or SAFTA (with SAARC countries) will have to be promoted.

- SAFTA provides India with an opportunity to infuse dynamism into the region. The integration of supply chains and markets will have spillover effects as well, it could lead to greater economic interdependence and possibly lead to a more peaceful region.

- Thus India should aim to bring the different countries on boards and chart out a roadmap to increase intra-regional trade and this can begin with reducing the 'negative-list' of items of trade, by bringing in more items under trade.

Conclusion:

- All SAARC leaders have called for a revival of SAARC during their charter day messages recently, underlining the willingness in the region to see the platform back from the wilderness.

International Relations: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

11. U.S.'s climate action

- » Prelims: Paris climate deal provisions
- » Mains: Significance of U.S.'s return to Paris climate deal

Context:

- After assuming office as President of the United States, Joe Biden has signed an order to restore U.S.A's participation in the United Nations Paris Agreement on climate change.

Background:

USA's changing stance on climate change talks:

- The U.S., under George W. Bush, had pulled out of the Kyoto Protocol, in 2001.

- Under President Barack Obama, the U.S. played an active role in climate negotiations. This culminated in the Paris Agreement of 2015 premised on voluntary targets for national emissions cuts.

- The US had withdrawn from the Paris Climate deal under the Donald Trump administration.

  * The withdrawal from the Paris Agreement meant that the U.S. was no longer bound by its national pledge made under the pact: to achieve an economy-wide reduction of its GHG emissions by 26%-28% below the 2005 level in 2025.

  * The U.S. also stopped its contribution to the UN's Green Climate Fund, to which it had pledged $3 billion, after transferring an estimated $1 billion.

Details:

Trump era policies:

- The Trump regime focused on relaxing controls on emissions from fossil fuel-based industries, diluting standards on air quality and vehicular emissions, hydrofluorocarbon leaking and venting from air-conditioning systems.

- It also restrained individual States such as California from setting higher standards, revoking protection for natural habitats, including the Arctic sought by the oil and gas industry, and for individual wildlife species.

- In all, more than 100 environmental rules were tinkered with by the administration. The ability of the Environmental Protection Agency (EPA) to enforce the law was weakened.

Biden regime policies:

- Mr. Biden has formed a high-powered team to lead clean development and has placed climate change among the administration's priorities.

- The current administration has promised an enforcement mechanism to achieve net-zero emissions no later than 2050. The government would incentivize the shift by a planned federal investment that will total $1.7 trillion over ten years, besides private investments.

- The plan also emphasizes on creating around 10 million well-paying clean energy jobs with a focus on solar and wind power. The plan envisages active support for carbon capture, utilisation and storage, and a renaissance in green transport.

Significance:

- There would be profound implications of U.S. President Joe Biden rejoining the Paris climate agreement.

Expected reduction in emission from the US:

- The U.S. accounts for 15% of global GHG emissions and is also the biggest legacy contributor of atmosphere-warming gases.

- Significantly, 10% of U.S. emissions are methane, which has a greater warming effect than CO_2, and 81% is carbon dioxide. The rest is made up of nitrous oxide and fluorinated gases.

- These emissions could be expected to reduce under the new administration.

Impetus for climate action:

- The Plan for Climate Change and Environmental Justice advocated by the Biden camp during the election campaign promises the U.S's strong support for multilateralism. This bodes well for the global climate talks.

- The Plan for Climate Change and Environmental Justice also calls for accountability from other countries, including the top emitter, China, on GHG emissions. Nations that default could face carbon adjustment fees or quotas. This could force all nations to work towards climate action.

- 2021's UN climate conference in Glasgow could see the new administration engaging UNFCCC member-nations to raise global ambition.

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

12. **Brexit**

> » Prelims: Provisions of the trade deal

> » Mains: Significance of and challenges with respect to the deal

Context:

- Britain and the European Union have agreed upon a trade deal that is going to govern the trade ties between the two in the future.

   * The deal sets out the terms for Britain's relationship with the EU after it left the trading bloc on January 31, 2020.

The main features of the agreement:

- The UK-EU Trade and Cooperation Agreement has retained the 'zero tariffs' and quotas trade regime of the past on all imports of goods.

- Northern Ireland will continue to remain within EU jurisdiction, avoiding a hardening of its border with the Republic of Ireland.

- On access for EU fisheries to British seas — a contentious issue — the agreement "recognises U.K. sovereignty over our fishing waters".

- Both sides have reached an understanding that the terms of access to each other's markets would be subject to a unilateral declaration by one party that the regulatory framework of the other was equivalent to its own.

Significance for UK:

- The deal has prevented any potential catastrophic consequences for Britain of leaving the bloc in the absence of any deal. A hard exit (no deal) would have led to levies of 50% and higher and duties on dairy and food products, besides tariffs on manufactured goods, according to World Trade Organization rates.

   * Numerous estimates and analysis by the Office for Budget Responsibility have revealed that the current arrangement could limit the potential economic impact from Brexit to a loss of 4% of the Gross Domestic Product over the medium term, compared to a possible 6% reduction had there been no agreement.

- London has succeeded in breaking free from the jurisdiction of EU law and the European Court of Justice, which U.K. eurosceptics regard as an affront to national sovereignty.

- The U.K. will be independent in forming its own standards on labour laws and environmental protection.

Hurdles to be faced by U.K:

- Britain exiting the EU's single market and customs union would not entirely be without having to bear any costs. The major casualty of the exit is frictionless trade flows, something that was witnessed for almost half a century.

- An exit from the customs union would see the return of customs controls at the U.K. borders and checks on rules of origin to prevent abuse of the zero-tariffs regime. The custom checks invite bureaucratic delays, red-tapism, which could hurt businesses. The millions of customs declarations U.K. businesses will have to complete from now onwards are estimated to cost around £7 billion annually.

- The services sector accounts for the bulk of the U.K economy, i.e, about 80%. The fallout from leaving it outside the ambit of the new accord will be hard. Given London's status as the premier global financial hub, the exclusion of financial services from the agreement is likely to cause uncertainty.

Conclusion:

- Post the referendum to exit the EU in 2016, the European leaders have been steadfast in their opinion that Britain must not be given any concessions and must be dealt strictly as a non-member and not as a former-member. The EU leaders are trying to use the BREXIT as an example to deter any such future exit from the union.

- Britain may have to undertake some compromises to protect the sovereignty and national self-interest.

- Even so, this limited deal is better than a "no-deal" for both parties. It lays the foundation for a future partnership between Brussels and London, based on the stringent terms imposed on Britain under the 2019 U.K. withdrawal agreement.

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

13. Al-Ula summit

- » Prelims: Al-Ula, GCC

- » Mains: Possible realignments in the middle-east and the impact on India's interests

Context:

Cut ties with Qatar

Gulf Co-operation Council - UAE, Bahrain, Saudia Arabia, Oman, Kuwait, Qatar

BBC

Background:

- Qatar was expelled from the GCC in 2017 over a failure to agree to demands put forth by a combination of Saudi Arabia, United Arab Emirates and Bahrain.

- The dispute revolved around allegations that Qatar supported Islamist militants, including the Muslim Brotherhood, which has been designated a terrorist organisation by Saudi Arabia, the UAE and Egypt. Qatar denied supporting terrorism and said that the Arab countries wanted to control its foreign policy.

- Some of the conditions placed on Qatar included:

  * Curbing diplomatic ties with Iran and close its diplomatic missions

  * Having to shut down Al Jazeera and other Qatar-funded news outlets

  * Close a Turkish military base and halt joint military co-operation inside Qatar. Turkey, a strong regional player led by an Islamist party, became Qatar's strategic partner and

even challenged Saudi regional leadership on doctrinal and political bases.

* End interference in other sovereign countries' internal affairs

* Align with other Arab countries militarily, politically, socially and economically.

- Qatar rejected these demands on the grounds that the Saudi-led coalition was trying to strong arm Qatar in its foreign policy decisions, this led to the boycott of Qatar.

Details:

- The meeting was held to end the dispute and arrive at an amicable solution. Now, three and a half years later, the boycott has ended.

Possible re-alignments:

- The reconciliation does not entirely come up as a surprise, with the swearing-in of new President fast approaching the region could be in for some major realignment.

- It is expected that, besides reviving the nuclear agreement with Iran and easing sanctions, Joe Biden could turn his attention towards Saudi Arabia's dismal human rights record and the war in Yemen. Thus, the Saudi Crown Prince Mohammed bin Salman played his cards early to seek are conciliation with Qatar.

- The reconciliation is not without drama, the other players who were part of the boycott, UAE, Egypt and Bahrain have not shifted stance has evoked no enthusiasm from the other sponsors of the boycott. The UAE and Egypt feel particularly threatened by the Brotherhood; they sent low-level delegations to Al-Ula. The trio has made it clear that the future ties with Qatar will depend on the way Qatar conducts itself.

- The UAE has its own reasons for hostility towards Qatar. It has far greater concerns relating to the threat from the Brotherhood than other GCC members due to the influence of its domestic Brotherhood-affiliated Al Islah party. Again, its leaders are also keen to emerge as major players in regional affairs on the back of close links with the U.S. They, therefore, see Qatar as a rival hindering their aspirations.

Conclusion:

- The Al-Ula conclave could possibly lead to some major changes in the regional alignments. There could be a nascent Saudi-UAE competition, with the UAE playing second fiddle to U.S. interests in the region and supporting its interests in diverse theatres – Yemen, the Horn of Africa and the western Indian Ocean.

- Turkey and Qatar, possibly with Iran, could then seize the opportunity to re-engage with Saudi Arabia and Egypt, thus shaping an alternative regional coalition that would perhaps be closer to Russia and China than to the U.S.

- The change of guard in the US will also bring in changes in the region, the Al-Ula conclave could trigger the emergence of a new regional order in West Asia.

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

14. Biden govt. to review U.S.-Taliban deal

» Prelims: Doha deal

» Mains: Impact on India's interests in Afghanistan

Context:

- The new US administration under President Joe Biden has expressed its intention to review the landmark U.S. deal with the Taliban.

Background:

The US Taliban peace deal:

- The US had struck a deal with the Taliban in Qatar in late 2020, to begin withdrawing its troops in return for security guarantees from the Taliban.

- The Taliban had committed to cut ties with terrorist groups, to reduce violence in Afghanistan, and to engage in meaningful negotiations with the Afghan government and other stakeholders in a bid to kick start peace talks with the Afghan government.

- The deal envisaged a peace process with a robust and regional diplomatic effort, to help achieve a durable and just political settlement and permanent ceasefire in Afghanistan.

Post deal scenario:

- There has been recent progress made on women and minority groups' rights as part of the peace process.

- However, violence across Afghanistan has surged despite the ongoing negotiations. Deadly attacks and high-profile assassinations have increased in recent months, particularly in Kabul where several journalists, activists, judges and politicians have been murdered. Though the Taliban has denied responsibility for these killings, but Afghan and U.S. officials have blamed the group for the attacks. This has led to accusations of the Taliban not living up to its commitments.

Details:

- The newly appointed US National Security Adviser has stated that the US wants to ascertain if the Taliban is living up to its commitments agreed as part of the deal.

Afghan government's response:

- The US's move to review the deal has been

welcomed by the Afghan government, given the speculation surrounding the new US administration's Afghan policy.

- The Afghan government has been stating that the agreement had failed to achieve its stated goals given the Taliban's failure to live up to its commitments under the deal.

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

15. U.S.'s Iran policy

- » Prelims: JCPOA, IAEA
- » Mains: Possible changes in U.S.'s Iran policy and its impact on India's interests

Context:

- With the change of guard in the US, the new President's approach in handling Iran will be closely looked at.

Background:

Trump era policy:

- 2016 saw the coming of Donald Trump to the white house as the new President of the US.

- Donald Trump was very vocal in his criticism of the Iranian regime, singled out Iran for numerous incidents in the Middle-east. Donald Trump went as far as pulling out of JCPAO and imposing strict sanctions on Iran.

- The US argued that the time-frame of 15-years on Iran's nuclear programme was insufficient and that Iran must give up on its right to enrich uranium.

- Some of the demands or conditionalities from the Trump administration was that a moratorium be imposed on Iran's ballistic missile programme and that Tehran withdraw its support to regional allies and proxies opposed to U.S. policies.

- The US pullout came even after the United Nations acknowledging that Iran was compliant with the terms of the agreement. Thus pulling out of the JCPOA and re-imposing severe sanctions meant that Iran was backed into a corner

- He referred to his policy as 'Maximum Pressure', he was hoping that the US and its allies would pressurize Iran to return to the negotiating table and it would be a perfect opportunity for the US to dictate terms to Iran; this was welcomed by Israel and Saudi Arabia.

- The US actions meant that Israel got the opening it was eyeing to carry out its numerous covert and overt operations against Iran. This was very evident when Israeli agents carried out an audacious operation to steal the documents pertaining to Iran's nuclear programme from a warehouse in Iran.

- Iran's nuclear scientists came under attack as seen in the recent assassination of Mohsen Fakhrizadeh, Iranian military personnel in Syria also suffered at the hands of Israeli bombing.

Counterproductive move from the US:

- The other parties to the agreement failed to persuade the US administration to honour the JCPOA, this gave Iran a 'green-signal' to breach the limit for uranium enrichment imposed by the JCPOA.

- Iran also began raising its stockpile of enriched uranium beyond the amount permitted under the agreement.

- The International Atomic Energy Agency (IAEA) estimates have revealed that current Iran's stockpile of low-enriched uranium had reached more than 2,442 kilograms, eight times the limit permitted by the JCPOA.

- These developments indicated that Mr Trump's policy of exerting maximum pressure was counterproductive, bringing Iran closer to nuclear weaponization.

New U.S. administration foreign policy:

- The new U.S. President Joe Biden will have a number of foreign policy issues in hand, ranging from relations with China, Russia and the need for reconciliation with key European allies who have been disillusioned with some of the decisions of the previous U.S. President Donald Trump.

- However, one of the key foreign policy challenges would be the Iran policy.

- One promising factor going in favour of Biden is that many of his top appointees in the foreign policy and security arenas were involved in the negotiations with Iran under the Obama regime that finally led to the nuclear deal of 2015.

- Mr Biden's team has reaffirmed Mr Biden's stance about willingness to return to the JCPOA if Tehran does the same. The new policy appears to be indicative of U.S.'s willingness to engage with Iran and not isolate it.

Complexities:

Lack of consensus on broad parameters of a deal:

- Returning to the JCPOA won't be an easy task as it does not appear to be an alignment with what Washington expects and to what Iran can commit to.

  * The U.S. sees a return to the JCPOA as an agreement that encompasses a wide number of issues, thereby thinking that

via JCPOA, the US can limit Iran's missile programme and also Iran's regional ambitions that often come in conflict with the U.S. and its allies, especially Israel and Saudi Arabia.

* However, Iran considers the JCPOA as a stand-alone agreement having jurisdiction over Iran's nuclear programme only. Iran, on several occasions, has hinted that issues such as Iran's missile programme and its regional policy would have to be dealt with independently and cannot be linked or clubbed with the nuclear deal.

Trust deficit:

- The faultlines between the two have grown deeper, with both the countries feeling that the other is not meeting them at the half-way line. The U.S. feels that Iran has been steadfast on its regional policy that often challenges US' interests in the region.

  * Iran's Islamic Revolutionary Guard Corps has trained proxy militias that have played a pivotal role in helping the Assad regime in Syria to combat the U.S.-supported opposition forces.

  * Iran is a chief financier of anti-Israeli Lebanese Hezbollah and is the principal supporter of the Houthis in Yemen. Houthis have been able to stonewall Saudi's efforts in Yemen and also have gone on the offensive by attacking major Saudi oil facilities with Iranian-supplied drones and missiles.

  * Iran trains and arms Shia militias in neighbouring Iraq.

Domestic pressure:

- The leadership in both countries face a considerable challenge in securing domestic support to go ahead with the deal.

  * The unilateral decision on behalf of the US to withdraw from the U.S. JCPOA has fuelled the voices in Iranto not go back to the JCPOA.The recent parliamentary elections have stacked up the Iranian legislature with the hardline conservative faction known as the 'principlists'. The situation gets murkier even in the event of Biden and Rouhani administrations coming to an understanding about returning to the JCPOA, as the hardliners who dominate the Iranian Parliament are likely to insist that the renewed agreement must include a clause that would prevent a signatory from unilaterally abandoning the JCPOA.

  * One can also expect a great deal of opposition in the U.S. Congress, particularly in the delicately balanced Senate, to a return to the JCPOA without the imposition

of some restraint on Iran's ballistic missile programme and a perceptible indication of a change in its adversarial policy in West Asia.

Conclusion:

- Leaders of both countries need to display statesmanship and use the diplomatic capital to assuage each other's concerns.

- Both the countries will have to meet the other at half-way, by making some concessions wherever possible without endangering the process and this is where statesmanship is required and any attempts to bully the other will only be counterproductive

Organization/Institutions/summits in news

16. International Energy Agency

  » Prelims: IEA structure and mandate

  » Mains: Significance of IEA's membership for India

Context:

- The Framework for Strategic Partnership between the International Energy Agency (IEA) members and the Government of India was signed in January 2021 to strengthen mutual trust and cooperation & enhance global energy security, stability and sustainability.

Details:

- This partnership is expected to lead to an extensive exchange of knowledge and would be a stepping stone towards India becoming a full member of the IEA.

- The contents of the Strategic Partnership will be jointly decided by the IEA Members and India.

- This includes a phased increase in benefits and responsibilities for India as an IEA Strategic Partner; Building on existing areas of work within Association and the Clean Energy Transitions Programme (CETP), such as energy security, clean & sustainable energy, energy efficiency, enhancing petroleum storage capacity in India, expansion of gas-based economy in India, etc.

Organization/Institutions/summits in news

17. Davos Dialogue

  » Prelims: WEF, Davos summit

Context:

- PM to address World Economic Forum's Davos Dialogue.

World Economic Forum (WEF):

- The WEF is an international NGO founded in 1971 and based in Cologny, Switzerland.

- Earlier known as the European Management Forum, it changed its name to its current one in 1987.

- The WEF states its mission as "committed to improving the state of the world by engaging business, political, academic, and other leaders of society to shape global, regional, and industry agendas".

- The WEF hosts an annual meeting at the end of January in Davos, Switzerland. The meeting brings together some 3,000 business leaders, international political leaders, economists, celebrities and journalists for up to five days to discuss global issues, across 500 sessions.

- The Davos Dialogues agenda marks the launch of the World Economic Forum's Great Reset Initiative in the post COVID world.

Organization/Institutions/summits in news

18. **World Health Organization**

- » Prelims: GOARN, Solidarity Trials

- » Mains: Systemic issues with respect to WHO

Context:

- The World Health Organisation which has been leading the fight against the COVID-19 pandemic from the front has been subject to both appreciation and criticism

World Health Organisation:

- World Health Organisation was established in the year 1948 with 61 members on board. The goals of WHO was to promote health, keep the world safe, and serve the vulnerable.

- The WHO got off on a positive note, with the organization playing a pivotal role in eliminating smallpox from the world. WHO's work on malaria and neglected tropical diseases, among others, is well appreciated.

- It is funded by a large number of countries, philanthropic organisations, United Nations organisations etc. The countries or member states pay their assessed contributions (countries' membership dues), and voluntary contributions from member states and other partners.

- WHO vision is to promote health, keep the world safe, and serve the vulnerable. Its goal is to ensure that a billion more people have universal health coverage, to protect a billion more people from health emergencies, and provide a further billion people with better health and well-being.

- Universal health coverage and health emergencies continue to be its two-pronged focus areas. The WHO works through its country offices that report to six regional offices.

COVID-19:

- The WHO has seen a lot of ups and downs ever since it came into existence and faced a lot of criticism, the scrutiny it has been subjected to has been intense during the COVID-19 era.

- The focus of attention was on the World Health Organization (WHO) and its efforts to tackle the global health crisis with the onset of COVID-19 pandemic.

- Global organizations are often at the mercy of the constituent countries, it cannot be more powerful than what the funding countries would allow it to be. Case in point being the former US President Donald Trump announcement to halt the funding the US provides to WHO, he reasoned it by saying the WHO was mismanaging the pandemic spread.

- However, its relevance is underscored when it is consistently called upon by countries to help tide over the pandemic. WHO possess an army of specialists and access to information and best practices across the world.

Significant role played by WHO:

- WHO enjoyed considerable success in overseeing smallpox elimination and that was based on its efforts to intensify the immunisation campaign globally. Edward Jenner had developed a vaccine way back in 1796, but vaccination received a boost with the WHO prioritising immunisation.

  - * Smallpox, a disease caused by a virus, was one of the most devastating diseases known to humanity before it was eradicated.

- Smallpox is an example that underlines the importance of the organization in furthering global health.

- The failure of WHO to anticipate and identify Ebola in the 1990s, and delayed response to HIV/AIDS, prompted the WHO to roll out the Global Public Health Intelligence Network in 1997, to predict potential epidemics using the information on the Internet, and function as an early warning alert.

- With the growing use of the Internet, such a system gains better traction, and in 2000, it was supplemented with the Global Outbreak Alert Response Network (GOARN).

Criticism of WHO:

- The criticism that has been meted out to WHO with regards handling of COVID-19 has been on incidences, like the WHO's Director-General saying that it was early to declare a public health emergency of international concern and then a week later, the WHO declared a public health emergency of international concern, the highest level of alarm. The world had at that point of time had 98 cases and with no casualties in 18

countries outside China. Four countries had evidence (eight cases) of human-to-human transmission outside China.

- Another incident was the WHO going on record saying that it does not recommend any broader restrictions on travel or trade and just recommend exit screening at airports as part of a comprehensive set of containment measures.

- And the WHO Director General's lavish praise for China in handling the crisis also came in for criticism, especially when Wuhan was the epicentre of the crisis and yet it took so long for China to report it and it still was not very transparent about the disease and its spread.

- Later, changing statements on the use of masks, hydroxychloroquine and even the mode of transmission, by the WHO, has raised questions about their competency.

Systemic issues faced by WHO:

- The WHO works with information shared with it by nations, China, in this case. It is bound by these limitations, as also its innate inability to police nations or have them conform with recommendations.

- Representatives of the WHO also repeatedly mentioned, in their defence, that they were guided by scientific principles, backed by solid evidence, and in an evolving epidemic, instructions must necessarily be dynamic.

Solidarity trial:

- The WHO and its partners launched the SOLIDARITY trial, an international clinical trial that aims to generate robust data from around the world to find the most effective treatments for COVID-19.

- It was designed to accelerate the process of conducting randomised clinical trials which normally take years to design, conduct, and see the results of.

- The organisation also worked with the European Commission and multiple partners to launch the ACT Accelerator, to ensure that once a vaccine is available, it's available to everyone — especially those who are at the greatest risk.

Conclusion:

- The battle against COVID-19 is still ongoing, while vaccination has begun, challenges continue in monitoring this massive immunisation exercise, and ensuring that everyone has access to the recommended doses.

- The WHO will also have the responsibility to counter the fatigue that has set in after prolonged efforts to test, quarantine and treat COVID-19.

Miscellaneous

19. After U.S., Russia pulls out of Open Skies treaty

» Prelims: Open Skies Treaty

Context:

- Russia has announced that it is pulling out of the Open Skies treaty (OST).

Background:

Open Skies Treaty:

- The Open Skies Treaty was signed in 1992 and came into effect in 2002.

- The agreement allows its 34 signatories to conduct unarmed reconnaissance flights over the territory of treaty countries to monitor signatories' arms development activities.

Details:

- Russia said that that the pact, which allows unarmed surveillance flights over member countries, had been seriously compromised by the withdrawal of the United States.

  * The United States left the Open Skies arms control and verification treaty in November 2020, accusing Russia of violating it.

- Russia said in a statement that Moscow had made specific proposals to other members to mitigate against the impact of the U.S. exit but that those proposals were not backed by Washington's allies.

- It has raised concerns that despite leaving the treaty Washington could potentially retain access to over flight intelligence gathered by allies who remain members in the treaty.

Concerns:

- Arms control tensions have been rising between Moscow and Washington.

New start treaty:

- The New Start Treaty is set to expire in February 2021.

  * New Start Treaty is an agreement that caps Russian and U.S. nuclear arsenal.

- U.S.'s exit from the Intermediate-Range Nuclear Forces (INF) treaty and its departure from the OST have raised the strong possibility that the U.S. administration may not renew the New Start Treaty.

China angle:

- The U.S. administration has been worried that extending New Start without including China would help China increase its nuclear arsenal.

- The U.S. intends to establish a new arms control regime which would include China.

20. Russia gives nod to extend START treaty

» Prelims: New START Treaty

Context:

- Russian lawmakers have approved the extension of the New START treaty for five years.

New Start Treaty:

- New Start Treaty is an agreement that caps Russian and U.S. nuclear arsenal.It is a bilateral treaty between USA and the USSR on the reduction and limitation of strategic offensive arms.

- The treaty was first signed in 1991 and entered into force in 1994.The treaty barred its signatories from deploying more than 6,000 nuclear warheads and a total of 1,600 inter-continental ballistic missiles (ICBMs) and bombers.

- Its implementation in 2001 resulted in the removal of about 80% of all strategic nuclear weapons then in existence.

- It was renamed START I after negotiations began on the second START treaty. The START I treaty expired in 2009. In 2010, the replacement New START treaty was signed by U.S. President Barack Obama and Russian President Dmitry Medvedev. The New Start Treaty is set to expire in February 2021.

  * The New START treaty is one of the last remaining Russia-U.S. nuclear arms control treaty.

- The duration of the New START Treaty is ten years and can be extended for a period of no more than five years at a time.

ART AND CULTURE

Art and Culture-Festivals

1. Gangasagar Festival

» Prelims: Important regional festivals

- The globally acclaimed spiritual and cultural event of the nation, Gangasagar festival is celebrated at the Sagar island (West Bengal) located at the confluence of river Ganga and the Bay of Bengal.

- This confluence is also called Gangasagar. The Kapil Muni Temple is located near the confluence.

- The festival is also known as Gangasagar Mela 2020 or Ganga Sagar Yatra or Ganga Snan.

- Every year on the day of Makar Sankranti, Hindu pilgrims gather to take a holy dip at the confluence.

- The Gangasagar pilgrimage and fair is said to be the second largest congregation of mankind after the triennial ritual bathing of Kumbha Mela.

Art and Culture-Festivals

2. Harvest Festival

» Prelims: Harvest festivals in India

- The Magh Bihu or the Bhogaali Bihu celebrates the culmination of the harvesting period. Similarly, Makar Sankranti is a Hindu festival that is dedicated to express gratitude to the Sun God (Surya).

- This is observed in the second week of January every year. People thank the nature for its abundant resources and good produce during the winter harvest festival.

- The festival, celebrated in different parts of the country in diverse ways, denotes the entry of the sun into the zodiac sign of Makara (Capricorn) as it travels on its celestial path.

- This harvesting festival is known by various names across India:

  * Lohri by north Indian Hindus and Sikhs

  * Maghi in Punjab

  * Sukarat in central India

  * Magh Bihu by Assamese

  * Pongal by Tamilians

  * Uttarayan in Gujarat

  * Sakraat in Delhi and Haryana and many neighbouring states

  * Saaji in Shimla District of Himachal Pradesh, Makara Sankranti is known as Magha Saaji. It is the Pahari word for Sakranti, start of the new month.

Art and Culture-Cultural places of interest

3. Foundation stone laid for 'New Anubhava Mantapa'

» Prelims: Basaveshwara, Anubhava Mantapa, Chalukya style of architecture features

Context:

- Karnataka Chief Minister laid the foundation stone for the 'New Anubhava Mantapa' in Basavakalyan.

Details:

- Basavakalyan is an important pilgrim centre for Lingayats, the place where 12th-century poet-philosopher Basaveshwara lived for most of his life.

- The project aiming to highlight the teachings of Basaveshwara (an icon of the Veerashaiva-Lingayat community) was first proposed back in 2016.

- The new structure will exhibit the 12th Century Anubhava Mantapa (often referred to as the "first Parliament of the world") established by Basaveshwara in Basavakalyan.

  * The Anubhava Mantapa housed numerous discussions, deliberations and debates amongst several philosophers and social reformers.

- The building will adopt the Kalyana Chalukya style of architecture.

Art and Culture-Cultural practices

4. Jallikattu

» Prelims: Jallikattu

- Jallikattu is a sport conducted as part of Mattu Pongal.
  * The Mattu Pongal is the 3rd day of the four-day-long festival Pongal.
- Jallikattu is also known as Manju Virattu or Eru Thazhuvuthal.
- Jallikattu is an ancient sport aimed to embrace the bull.
- The sport involves a natively reared stud that is set free inside an arena filled with young participants.
- The challenge lies in taming the bull with bare hands.

Art and Culture- Martial art/performing arts of India

5. Kalaripayattu academy

» Prelims: Important martial art forms in India

Context:

- The Kerala state government has decided to establish an academy at Thiruvananthapuram for Kalaripayattu.

Kalaripayattu:

- Kalaripayattu is a traditional martial art technique in Kerala.
- The martial art is believed to have a legacy in excess of 3,000 years. It is considered one of the most ancient martial arts in the world.
- The fighting form indigenous to the Gods Own Country is popularly known as the mother of martial arts.
- The term Kalaripayattu is derived from two words – "Kalari" meaning place of exercise or gymnasium and "payattu" meaning to fight or exercise.

Art and Culture-Government initiatives

6. Bharat Parv 2021

» Prelims: Bharat Parv

Context:

- Inauguration of Bharat Parv 2021

About Bharat Parv 2021:

- It is a virtual national festival showcasing the country's diverse culture, cuisines and handicrafts.
- It is being organised for about six days in January 2021 by the Tourism Ministry in collaboration with other ministries.
- The programme showcases the spirit of 'Ek Bharat Shreshtha Bharat'.
- Various Central Ministries and other organizations such as Ministry of Culture, Ministry of Ayush, Ministry of Consumer Affairs, Ministry of Railways, Ministry of Civil Aviation, Development Commissioner Handlooms, Development Commissioner Handicrafts, Lalit Kala Academy, Archaeological Survey of India, National Museum, National Gallery of Modern Arts, media units of I&B Ministry , Khadi & Village Industries Commission (KVIC), etc. display handicrafts, handlooms, music, dance, paintings , literary material and other features from all over India during the celebration.
- This virtual Bharat Parv 2021 will showcase multiple videos/films, images, brochures and other information of various organizations.

Art and Culture-Archaeological studies

7. Ekamra Kshetra

» Prelims: Ekamra Kshetra and important temples and archaeological sites in the region

Context:

- Union Petroleum and Natural Gas Minister has urged the Centre to send an Archaeological Survey of India (ASI) team to carry out a detailed study and excavation at the "Ekamra Kshetra".

Details:

- Ekamra Kshetra comprises the area of the old city of Bhubaneswar, considered a Hindu holy city.

- As per Ekamra Purana, a 13th-century Sanskrit treatise, it is believed that this sacred kshetra was a Panchakrosa (10 miles) in circumference bordered by Khandagiri hills in the west, Kundalesvara temple in the east, Balhadevi Temple on the north and Bahirangesvara temple near Dhauli on the south, with Lingaraj Temple as its centre.

- The Ekamra Kshetra has the unique cultural heritage of having Buddhist sites at Dhauli, Jain sites at Khandagiri-Udayagiri and Hindu temples in and around the Old Bhubaneswar area.

SCIENCE AND TECHNOLOGY

1. Smellicopter

  » Prelims: Smellicopter

Context:

  • Researchers at the University of Washington and the University of Maryland have developed an autonomous drone that uses live antennae from a moth to smell and avoid obstacles as it travels in the air.

Details:

  • Smellicopter is a bio¬hybrid odour-¬guided autonomous palm-¬sized air vehicle.

  • Smellicopter is a combination of both the sensitivity of a biological organism on a robotic platform where its motion can be controlled. The smellicopter uses antennae from the Manduca sexta hawkmoth. Moths can use their antennae to sense chemicals in the environment.

  • Incorporating a live antenna from a moth as a sensor makes this drone tune and search in rescue operations. It also helps navigate an area with unexploded devices.

  • It was developed in association with the Air Force Center of Excellence on NatureInspired Flight Technologies and Ideas (NIFTI).

Science and Technology-Developments and their applications and effects in everyday life

2. New technology useful in water transportation

  » Prelims: Wettability

Context:

  • Scientists develop gold microstructure substrate with tunable wettability useful in water transportation & self-cleaning technology.

Details:

  • Scientists have developed a gold microstructure substrate with the ability to repel water as well as bubbles with tunable wettability, which can be used in designing microfluidic devices, biosensors and this technology will also be useful in water transportation and self-cleaning.

  • A scientist and his group from the Centre for Nano and Soft Matter Sciences (CeNS), an autonomous institute of the Department of Science and Technology (DST), have developed a substrate exhibiting morphological gradient that helps one to tune the wettability because of surface energy change.

  * The morphological gradient in the substrate ranges from domes to elliptical holes.

What is wettability?

  • Wettability, or the ability of a liquid to maintain contact with a solid surface, is an important property in surface and interface science.

  • Its influence is seen in many biochemical processes, sensing, microfluidics, water transportation, self-cleaning, industrial processes.

  • Tunable wettability results from tunability in surface energy of the substrate, which can be utilized to regulate the direction of flow in water transportation and self-cleaning applications.

Science and Technology-Achievements of Indians in science and technology; indigenization of technology and developing new technology

3. C. Subramaniam

  » Mains: Contributions by C. Subramaniam.

Context:

  • January 30, is the birth anniversary of Mr. C. Subramaniam.

Contributions of C. Subramaniam:

  • Mr. Subramaniam championed the cause of science and technology to solve societal problems. He was one of the architects of modern India and relied on evidence-based approaches in decision making.

  • India is still benefitting from the long-term impacts of C. Subramaniam's several contributions to education, agriculture, science and technology to name a few.

Green Revolution:

  • Mr. Subramaniam was concerned about the problem of food security in India.

  • He sowed the seeds of the Green Revolution in Indian agriculture.

    * In the 1960's when India faced scarcity of food grains, a goal to make India self-sufficient in food in five years was set. The goal was realised and has been sustained since then.

Investments in Science:

  • Mr. Subramaniam also championed the cause of planned public investments in science.

  • The blueprint for linking science and technology

to the development path of India was cast by Mr. Subramaniam even before the formation of the dedicated Science and Technology Ministry.

- CS had an abiding trust in science and believed that technology alone could offer solutions to the problems faced by society.

- He called for the practice of science celebrated not only by other scientists but also by citizens and humanity.

The agro foundation:

- He realised that the economic freedom of every citizen of India was heavily reliant on the 4Es: Education, Environment, Economy and Empowerment of our farmers.

- The National Agro Foundation (NAF) was his brainchild.

- NAF, in its journey of 21 years, has lived up to his ideals. It institutionalised his will through farmer-centric programmes.

Conclusion:

- Mr. C. Subramaniam's call for "science for [the] economic freedom of humanity" and his voice for pro-poor technology must be worked upon.

Awareness in the field of Quantum technology

4. Quantum Technology

  » Prelims: Quantum technology principles, Micius satellite.

  » Mains: Applications of quantum technology

Context:

- National Mission on Quantum Technologies & Applications (NM-QTA).

  * The NM-QTA is an inter-ministerial mission, and the Department of Science and Technology is the nodal department.

Quantum technology:

- Quantum Technology is based on the principles of Quantum mechanics developed in the early 20th century to describe nature at the scale of atoms and elementary particles.

- 'Quantum technology' revolves around exploiting the properties of an individual, or a few fundamental particles, to achieve revolutionary changes in technology. One example is the property known as entanglement.

- Quantum entanglement is a quantum mechanical phenomenon in which the quantum states of two or more objects have to be described with reference to each other, even though the individual objects may be spatially separated. This leads to correlations between observable physical properties of the systems.

- When two objects, say two particles of light, also called photons, are in an entangled state, any changes made to the state of one, for example, its spin, are reflected in the other particle, however far they move from each other without breaking the entanglement. If developed, this property can be used to transmit a message at a very high level of secrecy from one point to another.

  * China has recently demonstrated quantum communication technology using the satellite Micius, by conducting a secret conference between two ground stations about 1,120 km apart. They used the satellite not to transmit the entire communication, but to simultaneously send a pair of secret keys to the two ground stations. Each secret key is one of two strings of entangled photons.

Potential applications:

- The several areas in which this technology can be applied include quantum communication, quantum encryption and quantum metrology.

- The potential applications that can be derived from the development of quantum technology are manifold, the communication sector will witness a landscape changes with quantum technology development and deployment.

- The ranges of potential applications are vast ranging from secure communication, fast computers that established quantum supremacy, sensors and quantum-inspired devices.

- Using quantum superposition, a set of unbreakable codes or super-speedy information processing, quantum computers are able to mimic several classical computers working in parallel

- Knowledge of quantum mechanics is a very important component of the rapidly evolving electronics industry.

Government initiatives:

- The previous budget session saw the proposal to earmark Rs. 8,000 crores for the development of quantum science and technology.

- The proposal was soon followed by a detailed project report for a National Mission on Quantum Technology and Applications (NM-QTA), and this report may in near future secure approval.

- The importance of quantum technology was recognized and the Department of Science and Technology of the Government of India had initiated a programme called QuEST to explore the possibilities and engage with the researchers.

Progress made:

- India has been witnessing progress in the development of quantum technology, quantum communication, particularly in free space as well as in fibre. Prototypes have been developed and protocols are in place.

- The availability of satellite-based transponders would make way for a demonstration of free-space communication.

- The fibre front, stretching beyond 150 km is being worked out. This includes the development of repeaters so that signals could be boosted at every 150 km so that the desired communication can go for long distances.

Conclusion:

- Quantum based products have been witnessing a surge in investments in the international arena, this investment is borne by both the state agencies and the private sector players. The interest and investment in the sector are largely accompanied by the urge to secure a first-mover advantage.

Awareness in the field of Space

5. **How neutrinos aid in the death of massive stars**

   » Prelims: Neutrino particle properties

   » Mains: Application of neutrinos

Context:

- A team from IIT Guwahati has come up with some critical observations as to how the neutrinos play a role in the death of massive stars.

Supernova explosion:

- The burning of nuclear fuel in their cores to produce energy is a process that is similar to all-stars.

- The process of burning generates internal pressure which pushes outwards, thus preventing the star from collapsing inward under the weight of its own gravity.

- However, as the star ages and runs out of fuel to burn, its interior begins to cool, this contributes to its internal pressure dropping down and therefore the impact of the force of gravity, the star starts to collapse inwards.

- The sudden nature of the process contributes towards building up of shock waves. This phenomenon is usually observed in stars of gigantic proportions. The stars end their evolutions in massive cosmic explosions known as supernovae.

- These massive explosions send their outer layers shooting into the surrounding space.

- Most of the energy from the explosions associated with the supernova is carried away by neutrinos.

Neutrino:

- A neutrino is a subatomic particle that is very similar to an electron but has no electrical charge and a very small mass, which might even be zero.

- Neutrinos are one of the most abundant particles in the universe. Because they have very little interaction with matter, however, they are incredibly difficult to detect.

Three flavours:

- Neutrinos can be classified into three 'flavours', and each flavour is associated with a light elementary particle.

- For instance, the electron-neutrino is associated with the electron; the muon-neutrino with the muon and the tau-neutrino with the tau particle.

- The supernova is associated with large explosion and the energy is carried over by neutrinos. The neutrinos, while doing so can change from one flavour to another in a process known as neutrino oscillations.

- Since the phase of the wave changes, this phenomenon is called neutrino oscillation.

Details of the study:

- The researchers have noted that the fast oscillations are important as they can decide the flavour information of the supernova neutrinos.

- Understanding this is important when one wants to measure the influence of neutrinos and their oscillations on supernova mechanism and heavy element synthesis in stellar environments.

Awareness in the field of biology and medicine

6. **Angiogenesis**

   » Prelims: Angiogenesis

   » Mains: Advancement in cancer treatment

Context:

- Angiogenesis is the physiological process through which new blood vessels form from pre-existing vessels; formed in the earlier stage of vasculogenesis.

- Angiogenesis is a normal and vital process in growth and development, as well as in wound healing and in the formation of granulation tissue.

- However, it is also a fundamental step in the transition of tumours from a benign state to a malignant one.

- This has led to the use of angiogenesis inhibitors in the treatment of cancer.

In cancer treatment:

- The essential role of angiogenesis in tumour growth was first proposed in 1971 by Judah Folkman.

- Angiogenesis is critical in the growth of cancer because tumours need blood supply to grow. Tumours trigger the growth of blood cells by giving off chemical signals that stimulate angiogenesis.

- Deregulation of angiogenesis is the main reason for tumour growth and progression.

- Inhibition of tumour angiogenesis has become a popular anti-cancer strategy after chemotherapy.

- However, the clinically approved anti-angiogenic drugs are ineffective due to parallel activation of various compensatory mechanisms involving a cascade of molecules, which aids tumour angiogenesis.

- Investigation of these mechanisms is essential for developing anti-angiogenic therapies.

Context:

- An INSPIRE faculty from Chennai and his team are working to develop transgenic zebrafish model to further study the compensatory angiogenesis mechanism in the tumour microenvironment.

- The transgenic or CRISPR/Cas9 edited Zebrafish platform (TZP) can be used for studying the efficacy of a drug as anti or pro-angiogenesis in the next phase of the project.

- The researcher has already found that nitric oxide (NO) plays a key role in switching off angiogenesis under tumour microenvironment and that the melatonin hormone suppresses tumour angiogenesis.

Initiatives in news

7. National Innovation Portal

» Prelims: National innovation portal

» Mains: significance of innovation in a society and governmental measures

Context:

- Dedication of the National Innovation Portal to the nation.

What is the National Innovation Portal?

- The portal is a database of innovations and traditional knowledge by the people, for the people and of the people.

- It is currently home to about 1.15 lakh innovations scouted from common people of the country, covering engineering, agriculture, veterinary and human health.

- In terms of domain areas, currently, the innovations cover energy, mechanical, automobile, electrical, electronics, household, chemical, civil, textiles, farm/cultivation practice, storage practice, plant variety, plant protection, poultry, livestock management, nutraceuticals, etc.

- The portal has been developed by the National Innovation Foundation (NIF) – India, an autonomous body of the Department of Science and Technology (DST), Government of India.

National Innovation Foundation (NIF):

- An autonomous body under the DST, the NIF was established in 2000.

- It is India's national initiative to strengthen the grassroots technological innovations and outstanding traditional knowledge.

- Its mission is to help India become a creative and knowledge-based society by expanding policy and institutional space for grassroots technological innovators.

- NIF scouts, supports and spawns grassroots innovations developed by individuals and local communities in any technological field, helping in human survival without any help from formal sector.

- NIF helps grassroots innovators and outstanding traditional knowledge holders get due recognition, respect and reward for their innovations.

- It also tries to ensure that such innovations diffuse widely through commercial and/or non-commercial channels, generating material or non-material incentives for them and others involved in the value chain.

- NIF Mission: To help India become inventive and creative, and to become a global leader in sustainable technologies without social and economic handicaps affecting the evolution and diffusion of green grassroots innovations.

Initiatives in news

8. MEITY Quantum Computing Applications Lab

» Prelims: Quantum computing

What's in News?

- The Ministry of Electronics and Information Technology will establish a Quantum Computing Applications Lab in the country.

Purpose of the Lab:

- To accelerate quantum computing-led research and development and enable new scientific discoveries.

Significance:

- The MEITY Quantum Computing Applications Lab will provide quantum computing as a service to government ministries and departments, researchers, scientists, academia, and developers, to enable advances in areas such as manufacturing, healthcare, agriculture, and aerospace engineering.

- This MeitY initiative will provide scientific, academic, and developer communities access to a quantum computing development environment aligned with the government's science and technology priorities.

Background:

- Quantum computing is an emerging field that harnesses the laws of quantum mechanics to build powerful tools to process information.

- It has the potential to solve computational problems that are beyond the reach of classical computers, and lead to new breakthroughs that can transform chemical engineering, material science, drug discovery, financial portfolio optimization, machine learning, and more.

- The initiative is expected to boost India's ongoing efforts in developing Quantum Computing Applications.

- This is in line with one of the core missions of MEITY which is to identify and deploy technologies to promote innovation and discovery to help India advance and achieve a more sustainable future.

Initiatives in news

9. CSIR's Traditional Knowledge Digital Library (TKDL)

- » Prelims: Traditional Knowledge Digital Library
- » Mains: Significance of Traditional Knowledge Digital Library

Context:

- CSIR's Traditional Knowledge Digital Library (TKDL) completes 20 years.

What is the Traditional Knowledge Digital Library (TKDL)?

- The Traditional Knowledge Digital Library (TKDL) is an Indian digital knowledge repository of traditional knowledge, especially about medicinal plants and formulations used in Indian systems of medicine.

- It was set up in 2001 by the Ministry of Ayush in collaboration with the Council of Scientific and Industrial Research (CSIR).

- The objective of the library is to protect the ancient and traditional knowledge of the country from exploitation through biopiracy and unethical patents, by documenting it electronically and classifying it as per international patent classification systems.

- It also serves to foster modern research based on traditional knowledge, as it simplifies access to this vast knowledge of remedies or practices.

- TKRC has structured and classified the Indian Traditional Medicine System in approximately 25,000 subgroups for Ayurveda, Unani, Siddha and Yoga.

Defence Technology

10. Asmi

- » Prelims: Asmi
- » Mains: Indigenization of defence technology

Context:

- India's first indigenous 9mm Machine Pistol has been jointly developed by DRDO and Indian Army. The weapon has been named 'Asmi'.

Details:

- The Asmi machine pistol fires the in-service 9 mm ammunition and has an upper receiver made from aircraft-grade aluminium and lower receiver from carbon fibre.

- The weapon has huge potential in the Armed forces as personal weapon for heavy weapon detachments, commanders, tank and aircraft crews, drivers/dispatch riders, radio/radar operators, Closed Quarter Battle, counter insurgency and counter terrorism operations, etc.

- This is also likely to find huge use with the central and state police organizations as well as VIP protection duties and policing.

- According to the government press release, the Machine Pistol is likely to have production cost under rupees 50000 each and has potential for exports.

Who developed Asmi?

- Armament Research & Development Establishment (ARDE), which is the Pune-based facility of the Defence Research and Development Organisation (DRDO) and the Indian Army's Mhow-based Infantry School have jointly developed Asmi.

What are Machine Pistols?

- Machine pistols are primarily self-loading versions of pistols which are either fully automatic or can also fire bursts of bullets.

Defence Technology

11. Smart Anti Airfield Weapon (SAAW)

- » Prelims: SAAW
- » Mains: Indigenization of defence technology

Context:

- Successful Flight Test of indigenously developed Smart Anti Airfield Weapon.

Details:

- Smart Anti Airfield Weapon is smart weapon, capable of engaging ground enemy airfield assets such as radars, bunkers, taxi tracks, and runways, etc. up to a range of 100 kms.

- The high precision guided bomb is light weight as compared to weapon systems of the same class.
- SAAW is indigenously designed and developed by DRDO.

Defence Technology

12. Army inks $20 mn deal with ideaForge for UAV

» Prelims: SWITCH UAV

Context:

- The Indian Army has signed a $20-million contract with ideaForge, to procure high-altitude variant of SWITCH UAV.

Details:

- SWITCH UAV is an indigenous system used in surveillance operations.
- The fixed-wing vertical take-off and landing UAV can be deployed at high altitudes and under harsh environments for day and night surveillance.
- ideaForge has been awarded this one-year contract marking a strategic shift in the Indian defence procurement process.
  * ideaForge is a player in unmanned aerial vehicle (UAV) technology.

Terms in News

13. Magneto-telluric (MT) Method

» Prelims: Magneto-telluric (MT) method

- Magneto-telluric (MT) is a geophysical method which uses natural time variation of the Earth's magnetic and electric fields to understand geological (underground) structure and processes.
- It is now widely used to image the electrical resistivity distribution inside the Earth in various application fields ranging in scale from the shallow crust to the lithosphere.
- The MT method utilizes naturally occurring, broadband electromagnetic waves over the Earth's surface to image subsurface resistivity structure.
- MT survey is also used in the assessment of seismic hazard.

Terms in News

14. Spintronics

» Prelims: Spintronics and associated terminology, Rashba effect

» Mains: Potential applications

Spintronics:

- Spintronic, also known as spin electronics, is the study of the intrinsic spin of the electron and its associated magnetic moment, in addition to its fundamental electronic charge, in solid-state devices.
- Spintronics fundamentally differs from traditional electronics in that, in addition to charge state, electron spins are exploited as a further degree of freedom, with implications in the efficiency of data storage and transfer.
- The field of spintronics emerged because of the need for attaining new functionalities in modern electronic devices which has led to the manipulation of the property of an electron called spin degree of freedom along with its charge.
- A phenomenon called the 'Rashba effect', which consists of splitting of spin-bands in an electronic system, might play a key role in spintronic devices.

Context:

- Scientists at the Institute of Nano Science and Technology (INST), Mohali (Punjab) have produced an ultra-high mobility 2d-electron gas (2DEG) at the interface of two insulating oxide layers.

Benefits:

- Due to the high mobility of the electron gas, electrons do not collide inside the medium for a long distance and hence do not lose the memory and information.
- Hence, such a system can easily remember and transfer its memory for a long time and distance.
- In addition, since they collide less during their flow, their resistance is very low, and hence they don't dissipate energy as heat.
- So, such devices do not heat up easily and need less input energy to operate.
- The realization of large Rashba-effect at such oxide interfaces containing highly mobile electron gas may open up a new field of device physics, especially in the field of quantum technology applicable for next-generation data storage media and quantum computers.

Rashba Effect:

- The Rashba effect, or Rashba-Dresselhaus effect, is a momentum-dependent splitting of spin bands in two-dimensional condensed matter systems.
- Discovered in 1959, the phenomenon continues to supply fertile ground for fundamental research and applications.

- It provided the basis for the proposal of the spin transistor by Datta and Das in 1990, which has largely inspired the broad and dynamic field of spintronics.

- More recent developments include new materials for the Rashba effect such as metal surfaces, interfaces and bulk materials.

Miscellaneous

15. Amendments to the Patent Rules, 2020

  » Prelims: Major provisions of the amendments

  » Mains: significance and concerns associated

Context

- The recent amendment to the Patent Rules, 2020.

Background:

Patents Act, 1970:

- India's patent legislation grants an exclusive privilege of a 20-year patent monopoly to an inventor.

- The central idea behind granting patents itself is to ensure innovation and public interests are well balanced.

- In an event of failing to comply by the patent rules, a compulsory licensing is issued or revocation of the patent under the Patents Act, 1970 is possible.

Form 27:

- India's patent law imposes an obligation on the patentee to commercially work the invention in India to ensure that its benefits reach the public.

- Section 146(2), a provision not common among patent legislations of other countries, requires every patentee and licensee to submit to the Patent Office an annual statement explaining the extent to which they have worked the invention in India.

- The information about the extent of the working of the invention in India is important for checking abuse of patent monopoly (e.g. excessive pricing or scare supply of the invention) and to serve the public interest.

- The disclosure is to be made in the Form 27 format as per the Patent Rules, 2003. This statement will help the Patent Office, potential competitors, etc. to determine whether the patentee has worked the invention in India and made it sufficiently available to the public at reasonable prices.

- However, the patentees and licensees along with the Patent Office have overtly ignored this statutory requirement and to add to this, there has been considerable persuasion from the multinational corporations and the United States government to quash the requirement.

- The courts have witnessed numerous interim injunctions in cases alleging infringement of a patent which has not been worked in India.

Details:

- The Central Government, in exercise of the powers conferred upon it under the Patents Act, 1970 has passed the Patents (Amendment) Rules of 2020.

- The Rules amend Form 27 of the Act through which statements regarding the working of the patented invention on a commercial scale in India have to be filed by Patentees or Licensees.

  * The amendment means that the statement with respect to the workings of the Patent has to be filed every financial year, within six months from the expiry of such financial year.

  * A single Form 27 can now be filed for multiple patents, but this provision is applicable only when all the patents are inter-related and all such patents are under the same patentee or licensee.

  * The amendment has eliminated the need to publicly disclose under Form 27 the nature of commercial usage of the patented inventions in the country.

The PIL:

- The recent amendment to the form was made in pursuance to a PIL filed in the Delhi High Court in 2015.

- The PIL revealed the rampant non-filing and defective filing of Form 27 by patentees/licensees and sought a direction to the government to strictly enforce the patent working disclosure rules and take action against the violators.

- The PIL also called for a reform of Form 27, arguing that the information it sought was not adequate to examine the extent of the working of the patent.

Lacunae in the recent amendments:

Dilution of disclosure provisions:

- The new amendments seem to be watering down the disclosure format, thereby disregarding the Delhi High Court directions.

- The government's stance of choosing to weaken Form 27 by removing the requirement of submitting important information, goes against the essence of the patent working requirement under the patents law of 1970.

- The form now requires the patentees and licensees to provide only the following information:

  * whether the patent has been worked or not;

  * if the invention has been worked,

* the revenue or value accrued in India from manufacturing and importing the invention into India; and

* If it has not been worked, reasons for the same and the steps being taken towards working.

- They are no longer required to provide any information in respect of the quantum of the invention manufactured/imported into India, the licenses and sub-licenses granted during the year and the meeting of public requirement at a reasonable price.

Inadequate criteria:

- The data on merely the revenue/value accrued from manufacturing/importing the invention is not sufficient to ascertain the extent to which the patent has been worked and to verify if the all-important public interest is being served.

- The key data that is required for assessing the working of the invention in the country is the total units of the invention manufactured/imported in India. It is the disclosure of this data by Bayer in Form 27 that played a pivotal role in the grant of India's first compulsory license to Natco for the anti-cancer drug Sorafenib/Nexavar.

- The exclusion of data regarding the disclosure of details such as the price of the invention, its estimated demand, the extent to which the demand has been met, details of any special schemes or steps undertaken by the patentee to satisfy the demand, etc., as recommended in the PIL, makes it extremely difficult to ascertain whether the invention has been made available to the public in sufficient quantity and at an affordable price.

Possible impact:

- The amendment to patent rules has considerably weakened the intellectual property regime in India.

- The patent law obligated the patentees/licensees to disclose patent working information, to ensure that patents serve public interests and not serve the sole interests of the inventor.

- The provision of compulsory licensing will be a casualty in the absence of disclosure information.

- The amendment rules pave the way for patent abuse, monopoly of usage and make innovations inaccessible to people.

- The lack of accessibility of patented medicines, life-saving drugs could result in undesirable consequences for public health of the country.

Conclusion:

- The government must reconsider its amendments and use the PIL recommendations as its guiding spirit.

Miscellaneous

16. ### India Innovation Index 2020

   » Prelims: India Innovation Index 2020

   » Mains: Significance

Context:

- NITI Aayog launched the second edition of the India Innovation Index 2020.

Details:

Objective:

- The study examines the innovation ecosystem of Indian states and union territories.

- The aim is to create a holistic tool which can be used by policymakers across the country to identify the challenges to be addressed and strengths to build on when designing the economic growth policies for their regions.

- The idea behind this index came from recognizing the role of innovation as a key driver of growth and prosperity for India.

- The study is an outcome of extensive research and analysis, which looks holistically at the innovation landscape of India by examining the innovation capabilities and performance of Indian states and union territories.

Classification:

- The states have been classified into three categories: major states, north-east, and hill states, and union territories/city states/small states.

Evaluation:

- The index attempts to create an extensive framework for the continual evaluation of the innovation environment of states and union territories in India and intends to perform the following three functions

   * Ranking of states and UTs based on their index scores

   * Recognizing opportunities and challenges

   * Assisting in tailoring governmental policies to foster innovation

- The index is calculated as the average of the scores of its two dimensions:

   * Enablers: These are the factors that underpin innovative capacities, grouped in five pillars:

      » Human Capital

      » Investment

      » Knowledge Workers

      » Business Environment

      » Safety and Legal Environment

   * Performers: This dimension captures

benefits that a nation derives from the inputs, divided in two pillars:

- » Knowledge Output
- » Knowledge Diffusion

India Innovation Index 2020 Report:

- Karnataka retained its leadership position in the major States category in the second edition, followed by Maharashtra, which moved past Tamil Nadu to occupy the second place.

  * Karnataka's rank is attributable to its substantive number of venture capital deals, registered Geographical Indications and information and communications technology exports.

  * Karnataka's high Foreign Direct Investment (FDI) inflow has also enhanced the innovation capabilities of the State.

- Other States in the top 10 are Telangana, Kerala, Haryana, Andhra Pradesh, Gujarat, Uttar Pradesh and Punjab.

  * Barring Maharashtra, all other States in the top five are in the south.

- Jharkhand, Chhattisgarh and Bihar scored the lowest on the index, which put them at the bottom in the major States category.

- Delhi topped among Union Territories, and Himachal Pradesh among North-Eastern and Hill States.

Significance:

- The India Innovation Index aims to create an extensive framework for a continual evaluation of India's innovation environment.

- The index aims to rank States and UTs based on their scores, recognise opportunities and challenges, and assist in tailoring government policies to foster innovation.

- The India Innovation Index will create synergies between different stakeholders in the innovation ecosystem, thus enabling India to shift to competitive good governance.

Miscellaneous

17. India's Arctic policy

- » Prelims: India's arctic stations
- » Mains: Significance of arctic region for India

Context:

- India has unveiled a new draft 'Arctic' policy.

Background:

- India launched its first scientific expedition to the Arctic Ocean in 2007 and opened a research base named "Himadri" at the International Arctic Research Base at Svalbard, Norway in July 2008 for carrying out studies in disciplines like Glaciology, Atmospheric sciences & Biological sciences.

Details:

- The new policy commits to expanding scientific research, sustainable tourism and mineral oil and gas exploration in the Arctic region.

- India expects the Goa-based National Centre for Polar and Ocean Research to lead scientific research and act as a nodal body to coordinate among various scientific bodies to promote domestic scientific research capacities by expanding "earth sciences, biological sciences, geosciences, climate change and space related programmes."

Significance:

- The document notes that Arctic research will help India's scientific community to study melting rates of the Himalayan glaciers, which are endowed with the largest freshwater reserves in the world outside the geographic poles.

Miscellaneous

18. Indian scientific expedition to Antarctica

- » Prelims: India's Antarctic stations
- » Mains: Significance of scientific research in the antarctica

Context:

- 40th Indian scientific expedition to Antarctica launched.

Details:

- The 40th expedition journey will be flagged off from Goa.

- The chartered ice-class vessel MV Vasiliy Golovnin will make this journey and will reach Antarctica in 30 days.

- The focus is to support the ongoing scientific projects on climate change, geology, ocean observations, electric and magnetic flux measurements, environmental monitoring; resupplying of food, fuel, provisions and spare; and accomplishing the return of the winter crew.

Indian Antarctic Programme:

- The Indian Antarctic expeditions began in 1981.

- After a humble beginning, the Indian Antarctic programme has built three permanent research base stations in Antarctica—named Dakshin Gangotri, Maitri, and Bharati.

- As of today, India has two operational research

stations in Antarctica named Maitri and Bharati.

- The National Centre for Polar and Ocean Research (NCPOR), Goa, manages the entire Indian Antarctic program.

SECURITY AND DEFENCE

1. Deepfakes

» Prelims: Deepfakes

» Mains: The threat posed by deepfakes and addressing the challenge posed by them

Context:

• The protest at the Capitol Hill in the US was largely driven by misinformation and disinformation regarding the US Presidential elections.

Background:

Deepfakes:

• Deepfakes — synthetic media, meaning media (including images, audio and video) that are either manipulated or wholly generated. In deepfakes a person in an existing image or video is replaced with someone else's likeness.

• While the act of faking content is not new, deepfakes leverage powerful techniques from machine learning and artificial intelligence to manipulate or generate visual and audio content with a high potential to deceive.

Concerns:

• Deepfakes are an emerging challenge to the cyberworld, Artificial Intelligence (AI) is used for fabricating audios, videos and texts to portray real people saying and doing things they never did, or creating new images and videos, these are done so convincingly that it is difficult to separate the real from the fake ones.

• Deepfakes has immense potential to target anyone, anywhere, they are used to tarnish reputations, create mistrust, question facts, and spread propaganda. Deepfakes have the potential to create false opinions, disrupt social harmony, threaten political systems, incite violence etc.

• The all-pervading social media platforms have created a medium for the spread of misinformation at speed and scale.

Indian scenario:

• The increasing internet penetration and smartphone usage have meant that close to 700 million in India are internet users, thus the deepfake problem is a problem that needs to be addressed.

• Hitherto, there is no explicit legislation that deals with deepfakes, though there are some provisions in the Indian Penal Code that criminalise certain forms of online/social media content manipulation.

* Cybercrimes fall under the ambit of The Information Technology Act, 2000, but this law and the Information Technology Intermediary Guidelines (Amendment) Rules, 2018 are not capable to tackle manipulation of content on digital platforms.

• The Information Technology Intermediary Guidelines (Amendment) Rules, 2018 calls for the social media platforms to take up the responsibility to take down illegal content, the guidelines require the social platforms to exercise due diligence in dealing with illegal content.

• In 2018, the government proposed rules to curtail the misuse of social networks. Social media companies voluntarily took it upon themselves to take action against any violations during the 17th Lok Sabha elections in 2019.

• The Election Commission of India issued instructions on social media use during election campaigns.

* It is widely known how the political parties through their IT cells have used social media platforms like WhatsApp for pushing fake news and propaganda.

Way forward:

Appropriate legislation:

• There is a need to look into the prospect of drafting new legislation to tackle the emerging challenges in the cyber world as the old laws are inadequate.

Use of technology:

• There is a need to develop AI-backed technological tools to detect deepfakes. Only AI-generated tools can be effective in detection. As deepfakes evolve, AI-backed technological tools to detect and prevent them must also evolve to combat the threat it poses to the world.As innovation in deepfakes gets better, AI-based automated tools must be invented accordingly.

• Blockchains offer a robust mechanism against many security threats and can be deployed to digitally sign and affirm the validity of a video or document.

Increasing awareness:

• Even with the advancement of AI tools to tackle deepfakes, there is a need to educate media users about the claptraps of deepfakes.

2. Boosting India's maritime domain awareness

» Prelims: GSAT-7A, Information Fusion Centre, Regional Maritime Information Fusion Centre (RMIFC)

» Mains: Significance of maritime domain awareness for India

Context:

• India's confrontation with China over territorial disputes on the border is pressing India to look at other possible avenues to respond.

• The naval arena is one such theatre where India can proactively look to counter China's threat.

Maritime domain:

• The modern era has seen warfare evolve and become more complex.

• The maritime domain has become a theatre for seeking dominance, this can be seen in the case of the Indian Ocean, where the world's largest navies are deployed. Vital shipping routes pass through the Indian Ocean and is central to connecting markets in Europe.

• The maritime domain is not a theatre for only state actors, it is increasingly witnessing the presence of non-state actors like terrorists, pirates, criminals or sea-robbers.

Maritime domain awareness:

• Law enforcement agencies find it difficult to protect the mainland from threats emanating from maritime areas, therefore there is a case for the law enforcement authorities to be more vigilant, depending on high-grade sensors and communication networks that will help in real-time tracking of doubtful and mistrustful movements.

• Maritime domain awareness is defined by several security experts as having alertness and awareness to identify the threat and nullify before it can threaten national security.

Recent measures taken:

• Recent times have seen the Indian Navy embarking on the strengthening of its domain awareness in the Indian Ocean.

• The Indian Navy hitherto has installed radar stations in the littoral states of the Indian Ocean such as Mauritius, Seychelles and Sri Lanka and this coastal radar chain network is now being extended to other countries like Maldives, Myanmar and Bangladesh.

• The launching of India's military satellite (GSAT-7A) will soon pave way for a real-time sharing of data on maritime areas with partners.

• India has White shipping agreements with 21 countries in the Indian Ocean enabling a comprehensive picture of maritime traffic, even as efforts are underway to help smaller island states build capacity to combat regional threats.

Neighbourhood synergies:

• The maritime domain awareness is not just an exclusive domain of one country, thus attempts at improving maritime domain awareness have been contributing towards cooperative synergies in the neighbourhood.

• Some of the reports have hinted that the seven Indian Ocean countries — Bangladesh, Myanmar, Indonesia, Sri Lanka, the Maldives, Mauritius and Seychelles —have expressed their willingness to deploy Liaison Officers at the Indian Navy's Information Fusion Centre-Indian Ocean Region in Gurugram.

International collaboration:

• There has been active interest taken by the western powers, such as, France, who have already posted an officer at the IFC, and the four other Indo-Pacific navies namely Australia, Japan, the U.K and the U.S. have also agreed to position officers at the centre. This active interest expressed by these countries shows the significance of the information hub.

• India has taken active steps towards raising its engagement in the Western Indian Ocean by positioning a Liaison Officer at the Regional Maritime Information Fusion Centre (RMIFC) at Madagascar.

  * The Regional Maritime Information Fusion Centre (RMIFC) was established under the auspices of the Indian Ocean Commission that India joined recently as an 'observer'. The RMIFC is a key centre of maritime information in the Western Indian Ocean.

• India has also posted an officer at the European Maritime Awareness in the Strait of Hormuz (EMASOH) in Abu Dhabi to assist in the monitoring of maritime activity in the Persian Gulf and the Strait of Hormuz.

Collaboration with the French:

• France, a permanent member at the United Nations Security Council has aided and supported Delhi's moves in the Western and South-Western littorals, indicative of France's interests in the Indian Ocean, and that it is a critical partner for India in the region.

• India and France are both committed to the logistics agreement signed in 2019; Paris is keen for a stronger partnership in the maritime commons.

- France had been instrumental in pushing for India's candidature for the observer status at the Indian Ocean Commission and is nudging India for enhanced participation in security initiatives in the Western Indian Ocean.

Chinese threat:

- India has been proactive post the Galwan valley skirmishes to carry out deep surveillance of the ocean's waters for any presence of Chinese submarines. India's P-8I aircraft has been deployed along with the Indian naval ships to patrol the Andaman Seas and eastern chokepoints to nip any Beijing threat in its bud.

- The strengthening of maritime domain awareness has been largely directed towards keeping an eye on Chinese activity in the Eastern Indian Ocean, in the seas around the Andaman and Nicobar Islands.

  * The clashes with China's People's Liberation Army during the month of June last year has alerted India's security experts about the possibility of a greater Chinese presence in the eastern littorals.

- A cause for concern for the Indian security establishment has been the future technological sophistication of China's submarines that will make it difficult to detect them in the Indian backyard.

- The Chinese achieved a breakthrough in submarine propulsion by successfully testing shaftless rim-driven pump-jets; analysts fear that the next generation of PLAN nuclear submarines could be stealthier than ever, capable of beating adversary surveillance.

- The recent discovery of a Chinese unmanned underwater vehicle close to a southern Indonesian island is indicative of Chinese attempts to map the undersea terrain of the Indian Ocean region.

India's navy arsenal:

- India has not taken China's threat lying down, instead, it has chosen to be on its toes and has moved to expand its underwater detection capabilities in the Eastern chokepoints. India went ahead to acquire two Sea Guardian drones on lease from the United States for better surveillance.

- Indian navy capabilities are bolstered by an additional nine operational P-8I aircraft to be inducted. Currently, the Navy's coverage of the Bay of Bengal littoral is adequate.

- Speculation abounds that New Delhi might also partner Japan in installing an array of undersea sensors near the Andaman Islands to help detect Chinese submarines.

Way forward:

- The maritime domain response of India is largely driven by Chinese threat but it also takes into consideration the emerging transnational threats in the littorals and the need to combat it.

- India's maritime initiative vis-à-vis the littoral states of the Indian Ocean Region is guided by Security and Growth for All in the Region (SAGAR), it seeks to put forth the idea of India as a 'security provider' and 'preferred partner' in the Indo-Pacific region.

- Cooperation, collaboration in information sharing will allow for collective action in dealing with threats in the region.

- India must ensure seamless information flow, generating operational synergy with partners, and aim to expand collaborative endeavours in shared spaces. That would be the real test of the maritime domain awareness 'game-changing' potential.

Military exercises

3. **Sea Vigil-21**

   » Prelims: Sea vigil exercise

Context:

- The second edition of the biennial pan-India coastal defence exercise 'Sea Vigil-21' will be conducted for two days in January 2021.

About Ex Sea Vigil:

- The exercise is conducted by the Indian Navy and involves maritime stakeholders, including the Coast Guard, Customs, fisheries, fishing and coastal communities in all the 13 coastal states and UTs of India.

- The exercise was first held in 2019.

- It was started after the entire coastal defence set-up of the country was reorganised after the 26/11 Mumbai terror attacks (launched via the sea route).

- Ex Sea Vigil is also a build-up towards the major exercise TROPEX which the Navy conducts every two years.

  * TROPEX stands for Theatre Level Operational Readiness Exercise. It is an inter-service military exercise involving the participation of the Indian Army, Air Force, Navy and the Coast Guard.

- While smaller scale exercises are conducted in coastal states regularly, including combined exercises amongst adjoining states, the conduct of a security exercise at the national-level is aimed to serve a larger purpose. It provides opportunity, at the apex level, to assess the nation's preparedness in the domain of maritime security and coastal defence.

- Exercise 'Sea Vigil 21' will help provide a realistic assessment of India's strengths and weaknesses and thus will help in further strengthening maritime and national security.

Military exercises

4. Exercise Kavach

» Prelims: Exercise kavach

Context:

- The three wings of the Indian armed forces will be holding a massive joint military exercise 'Excercise Kavach'.

About Exercise Kavach:

- The exercise would involve participation of Indian Army, Indian Air Force and Indian Navy.

- It will be conducted under the aegis of Andaman and Nicobar Command (ANC), which is the only Joint Forces Command of the country.

- The joint military exercise will enhance and fine-tune joint war-fighting capabilities of the tri-services and SOPs towards enhancing operational synergy.

- During the exercise, the Army's Amphibious Brigade, Special Forces of Navy, Armour/ Mechanised components, naval ships comprising destroyers, ASW Corvettes and Landing Ships with ship-borne helicopters will be deployed.

- The IAF will display its firepower with Jaguar Maritime Strike and transport aircraft.

- The Indian Coast Guard will also be included in the large scale joint military exercise.

- The tri-services exercise involves synergised application of maritime surveillance assets, coordinated air and maritime strikes, air defence, submarine and landing operations.

- During the exercise, Army, Navy and Air Force would execute multi-domain, high-intensity offensive and defensive manoeuvres in the Andaman Sea and Bay of Bengal and carry out amphibious landing operations, air landed operation, helicopters-borne insertion of Special Forces from sea culminating in tactical follow-on operations on land.

Military exercises

5. Exercise Desert Knight-21

» Prelims: Desert Knight exercise

- The India-France air exercise Desert Knight 2021 concluded recently.

- A first-of-its-kind bilateral exercise, Rafale aircraft from both sides along with Su-30 MKI and Mirage 2000 aircraft of the IAF undertook joint missions.

Background:

- As part of Indo-French defence cooperation, Indian Air Force and French Air and Space Force have held six editions of Air Exercises named 'Garuda', the latest being in 2019 at Air Force Base Mont-de-Marsan, France.

- As measures to further the existing cooperation, the two forces have been gainfully utilising available opportunities to conduct 'hop-exercises'.

Miscellaneous

6. Cambridge Analytica case

» Prelims: Data Mining

Context:

- The Central Bureau of Investigation has booked Cambridge Analytica (U.K.) Limited and Global Science Research Limited (U.K.) for alleged illegal harvesting of personal data of about 5.62 lakh Indian users on Facebook through an application.

Details:

- The FIR names Global Science Research Limited (GSRL) and Cambridge Analytic as accused.

- The FIR has been filed under various sections of the Information Technology Act and accused them of criminal conspiracy under the IPC.

- It stems from a preliminary enquiry launched by CBI in July 2018 on a complaint from the Ministry of Electronics and Information Technology (MeitY) following media reports alleging the illegal harvesting of personal data.

Concerns:

- One of the big issues with the Cambridge Analytica controversy centers on how the data was collected.

- The data mining firm has been accused of harvesting personal information from Facebook illegally to influence polls in several countries.

- Although Facebook has claimed to have destroyed the data collected by the two firms in 2016-2017, the CBI investigation did not find any evidence to support these claims.

What is Data Mining?

- Data Mining is a process of finding potentially useful patterns from huge data sets. Data Mining is about discovering hidden, unsuspected, and previously unknown yet valid relationships amongst the data.

- It is a multi-disciplinary skill that uses machine learning, statistics, and AI to extract information to evaluate future events probability.

- The insights derived from Data Mining are used for marketing, fraud detection, scientific discovery, etc.

ENVIRONMENT AND ECOLOGY

Environmental Pollution and degradation

1. SC takes cognisance of contamination of rivers

- » Prelims: Right to Life under Article 21 of the constitution
- » Mains: River water pollution- factors responsible and remedial measures

Context:

- The Supreme Court of India has taken up the issue of river contamination and its effect on public health.

Background:

- The Bench was hearing a petition filed by the Delhi Jal Board (DJB) to "immediately stop" Haryana from discharging pollutants into the Yamuna, which is causing an alarming increase in ammonia levels in the water.
- The Board said the increased ammonia levels have impaired its water treatment plants and a drinking water crisis looms large in Delhi.
  - * Ammonia and chlorine can cause cancer.
- The petition triggered the court to step in to protect rivers in similar peril as the Yamuna.
- It also sought response from Uttarakhand, Himachal Pradesh, Haryana, Delhi and Uttar Pradesh.

Details:

- The Supreme Court took cognisance of the contamination of rivers by sewage effluents.
- The untreated sewage effluents are major culprits in river contamination, the SC noted while condoning the lapses of the municipal bodies in carrying out their duties.

'Right to life':

- Access to clean, potable water is essential to lead a dignified living and also to ensure a healthy population. The deterioration of the quality of freshwater will have dire consequences on public health.
- The Right to Life under Article 21 of the constitution encompasses the right to clean environment, and further, pollution-free water.

Conclusion:

- Open surface water resources including rivers are the lifeline of human civilization, thus attention has to be given on factors that are aiding deterioration of water quality in rivers.

Conservation Efforts

2. Advisory for managing human-wildlife conflict

- » Prelims: National Board of Wildlife, Wild Life (Protection) Act, 1972.
- » Mains: Human-wildlife conflict-issues and remedial measures

Context:

- The Standing Committee of National Board of Wildlife (SC-NBWL) has approved the advisory for management of Human-Wildlife Conflict (HWC) in the country.

Details:

- The advisory makes important prescriptions for the States/Union Territories for dealing with human-wildlife conflict situations and seeks expedited inter-departmental coordinated and effective actions.
- It envisages empowering gram panchayats in dealing with the problematic wild animals as per Section 11 (1) (b) of Wild Life (Protection) Act, 1972.
- It also envisages using the add-on coverage under the Pradhan Mantri Fasal Bima Yojana for crop compensation against crop damage due to HWC and augmenting fodder and water sources within the forest areas.
- Payment of a portion of ex-gratia as interim relief within 24 hours of the incident to the victim/family is also provided for.
- The advisory also talks about prescribing inter-departmental committees at local/state level, adoption of early warning systems, creation of barriers, dedicated circle wise Control Rooms with toll free hotline numbers which could be operated on 24X7 basis, identification of hotspots and formulation and implementation of special plans for improved stall-fed farm animal, etc.

Conservation Efforts

3. National Marine Turtle Action Plan

- » Prelims: Marine flora and fauna of India
- » Mains: Threats to marine flora and fauna and remedial measures

Context:

- The Union Minister for Environment, Forest and Climate Change launched the National Marine Turtle Action Plan and also released the Marine Mega Fauna Stranding Guidelines.

Background:

- India has rich marine biodiversity along a vast coastline of over 7,500 km. From colourful fish, sharks, including whale sharks, turtles and big mammals like whales, dolphins and dugongs to bright corals, marine habitats not only harbour diverse species but also provide resources essential for human wellbeing.

- Millions of people depend on these resources ranging from maritime trade and transport, food, mineral resources, cultural traditions, spiritual values and inspiration that draw tourists from around the world.

- Despite the immense economic, ecological and cultural values of marine habitats in India, marine mega fauna species and marine turtles face a wide variety of challenges including stranding and entanglement.

- Managing such challenging situations requires coordination, action and people's participation which would help in the long-term conservation of marine species and their habitats.

Details:

- The documents contain ways and means to not only promote inter-sectoral action for conservation but also guide improved coordination amongst the government, civil society and all relevant stakeholders on the response to cases of stranding, entanglement, injury or mortality of marine mammals and also conservation of marine turtles.

- These two documents highlight actions to be taken for handling stranded animals on shore, stranded or entangled animals in the sea or on a boat, management actions for improved coordination, reducing threats to marine species and their habitats, rehabilitation of degraded habitats, enhancing people's participation, advance scientific research and exchange of information on marine mammals and marine turtles and their habitats.

Environmental conservation efforts

4. Rajasthan's M-sand policy

- » Prelims: M-sand policy
- » Mains: Threat posed by river sand mining, remedial measures

Context:

- The Rajasthan government has brought a policy on manufactured sand (M-sand).

Background:

- Due to fast growing construction industry, the demand for sand has increased tremendously, leading to shortage of suitable river sand in most parts of the world.

- The Supreme Court had banned illegal mining on riverbeds in 2017.

Details:

- Sufficient quantity of sand for construction is not available in Rajasthan in the wake of judicial orders and environment-related procedures. Hence the Rajasthan government has come out with a M-sand policy.

  * M-sand is produced by crushing of hard granite stone.

- Due to the depletion of good quality river sand for the use of construction, the use of manufactured sand has been increasing. Manufactured sand (M-sand) is a viable substitute for river sand in the construction industry.

- Another reason for use of M-Sand is its availability and transportation cost.

Significance:

- The new policy will ensure availability of M-sand as a long-term alternative to river sand. M-sand will reduce over-exploitation of river beds.

- It will enable the investors to set up M-sand units by utilising the incentives offered by the State government.

  * The policy gives industry status to the units producing it for construction work.

- It would help create employment opportunities through new units and resolve the issue of huge quantities of waste generated in the mining areas

- It will also help in environmental protection and generate faith among the public in the efficacy of M-sand for construction works.

Environmental Pollution and degradation

5. Gujarat rivers remain highly polluted

- » Prelims: COD, BOD, DO; Map based location questions.
- » Mains: Issue of river pollution-threat and remedial measures required

Context:

- The unchecked flow of untreated industrial effluent into rivers in Gujarat has led to increasing pollution in the Sabarmati, Mahisagar, Narmada, Vishwamitri and Bhadar.

Details:

- Pollution in rivers has emerged as a major threat in the last few years, largely because of the callous approach of the authorities, this attitude has emboldened the industries to discharge untreated effluents into flowing rivers without any punitive measures.

- There have been numerous cases of treated and untreated effluent being released into the estuary of the Mahisagar and Gulf of Cambay, flouting the guidelines of the Central Pollution Control Board (CPCB).

- As per the official parameters, if the chemical oxygen demand (COD), which indicates organic pollutant load, is higher than 250 mg per litre, then it should not be released into the rivers.

    * Most of the Gujarat rivers where the effluents are dumped into, the COD level is in the range of 700 to 1000 mg per litre.

- While Dissolved Oxygen (DO) level parameter, which is an indicator of the health of a river in perennial rivers like Mahisgar should be in the range of 6 to 8 mg per litre, it is actually below 2.9 mg per litre.

River Sabarmati:

- The Ministry of Environment and Forest (MoEF) data suggests that the Sabarmati river is among the most polluted rivers in the country.

- Gujarat is ranked fourth among the top five States with highly polluted rivers, with as many as 20 rivers in the critically polluted category.

Efforts taken by the authorities:

- The Gujarat State government has come with a proposal of a Rs. 2,300 crore project for a deep-sea effluent disposal pipeline to cater to nearly 4,500 industrial units. The project will serve four highly industrialised districts (Ahmedabad, Vadodara, Kheda and Rajkot), which are the main sources of pollution.

- The Gujarat Pollution Control Board (GPCB) has constituted a high-level committee to study the rising level of pollution in the river.

Conclusion:

- While effluents continue to be dumped in Sabarmati and Mahisagar, there is a need to enforce effluent standards by the local authorities as untreated hazardous effluents will threaten the survival of the river and its associated biodiversity, on a long term, it will have consequences on human health as well.

Species in news-Fauna

6. Caracals

  » Prelims: Caracal in India-Range, distribution, conservation status, Development of Wildlife Habitat scheme

Context:

- The National Board for Wildlife also approved inclusion of the caracal into the list of critically endangered species for taking up conservation efforts with financial support under the centrally sponsored Scheme – Development of Wildlife Habitat.

    * This makes the total number of 'critically endangered' wildlife species under the recovery programme for critically endangered species to 22.

Details:

- Caracal is a medium-sized wild cat that roams the savannas, deserts, and forests of much of Africa and parts of the Middle East. They are also found in Central Asia and India.

- They are great hunters, and chiefly preys on birds, rodents, mongoose, hyraxes, and even small monkeys.

- Scientific name of caracal: Caracal caracal

- Its IUCN status is Least Concern (LC).

- Even though its status is LC, it faces threats in varying habitats across the globe.

    * It is believed to be close to extinction in North Africa.

    * It is frequently killed by people in order to protect livestock, and also in some countries in road accidents.

- African caracal populations are listed under CITES Appendix II, while Asian populations come under CITES Appendix I.

- In ancient Egyptian culture, caracals were considered to have a religious significance.

Caracals in India:

- In India, caracal hunting is prohibited.

- It is a rare species in India.

- The sub-species Caracal caracal schmitzi is found in India and this sub-species are presumed to be distributed from Arabia to Central India.

- In India, caracals are mostly found in the tropical dry deciduous and tropical thorn and shrub forests of Central and Western India.

- A recent study in 2016 concluded that caracals have most likely become extinct in Madhya Pradesh.

- These cats are seen occasionally in Rajasthan and Gujarat states though not common in either of the states.

Species in news-Fauna

7. New ant species discovered from Kerala

  » Prelims: Periyar Tiger Reserve

Context:

- Two new species of a rare ant genus have been discovered in India.

Details:

- The newly discovered species of the ant genus

Ooceraea found in Kerala, and Tamil Nadu adds to the diversity of this rare genus.

- One of them, found in the Periyar Tiger Reserve of Kerala, has been named Ooceraea joshii.

Species in news-Flora

8. Nendran Banana

» Prelims: GI Tags for Kerala

Context:

- Scientists at the CSIR-National Institute for Interdisciplinary Science and Technology (NIIST) in Kerala have come up with a new product, banana grit or granules, developed from raw Nendran bananas.

Background:

- Changalikodan Nendran Banana is a banana variety originated and cultivated in Chengazhikodu village of Thrissur District in the Kerala state of India.
- Changalikodan Nendran Banana is also known as Chengazhikode Banana.
- The Nendran banana has a GI Tag.

Additional information:

Varieties of banana across the country having GI tag:

- Nanjangud banana of Karnataka got GI tag in 2005.
- Two varieties of banana in Tamil Nadu: Virupakshi Hill banana and Sirumalai Hill banana got GI tags in 2008.
- Jalgaon banana of Maharashtra got GI tag in 2014.

Places in news

9. Deepor Beel

» Prelims: Map based location questions

» Mains: Lake pollution issue

Context:

- The Kamrup district administration authorities have banned community fishing in Deepor Beel.

Background:

Deepor Beel:

- Deepor Beel is a wetland on the south-western edge of Guwahati and is Assam's only Ramsar site.
- Ramsar site tag was given to Deepor Beel in 2002 for sustaining a range of aquatic life forms besides 219 species of birds.

* A Ramsar site is a wetland designated to be of international importance under the Convention on Wetlands.

Threats to Deepor Beel habitat:

- According to hydrological experts, the area of the wetland was about 6,000 hectares in the late 1980s. Satellite imagery has revealed that its area has shrunk by at least 35% since 1991.
- Losing connectivity with small rivers such as Kalmoni, Khonajan and Basistha that used to flow via the Mora Bharalu channel through Guwahati has contributed significantly to the shrinkage.
- Expansion of the city, encroachment upon the natural channels through Guwahati and from the hills around, and a municipal waste dump at Boragaon almost on the edge of the wetland constitute major threat to the Deepor Beel habitat.

Details:

- The authorities took recourse under Section 144 of the Cr. P.C to issue prohibition orders.
- The ban is expected to continue beyond the mid-January Magh or Bhogali Bihu that is preceded by mass fishing in many parts of the State.
- Some people from the villages around and adjoining Deepor Beel Wildlife Sanctuary, in tandem with people from various fringe parts of Guwahati city have been involved in community fishing for some time now.
- The move is aimed to prevent over-exploitation of fish stock of Deepor Beel and preserve the only Ramsar site of Assam.
- The order was justified by the authorities to prevent the wetland from shrinking further. The order will prevent fishing, excavation and construction in and around the wetland that will help in the survival of the wetland.

Conclusion:

- While the proactive step taken by the district administration to protect the Ramsar site, Deepor Beel, from overexploitation due to excessive fishing has to be lauded, this has to be followed by identifying the factors that have caused its shrinkage and adequate steps have to be taken to address the threats.

Places in news

10. Dzukou Valley

» Prelims: Map based location questions

Context:

- The wildfire at Dzukou Valley has been doused after it raged for two weeks.

Dzukou Valley:

- The Dzukou Valley, situated at an average altitude of 2,452 metres, is a popular trekking destination known for its exotic flowers.

- It is located at the borders of the states of Nagaland and Manipur in Northeast India.

Places in news

11. Harike Wetland

» Prelims: Map based location question

Context:

- Winter migratory water birds using the central Asian flyway have started arriving at the Harike wetland of Punjab.

Details:

- Harike wetland has been host to birds such as the Eurasian coot, greylag goose, bar-headed goose, gadwall and the northern shoveler. Among others species, common pochard, spot-billed duck, little cormorant, pied avocet, great cormorant, ferruginous pochard and common teal have been spotted with regularity.

- However, the number of some species, including northern lapwing, Pacific golden plover, black-bellied tern and cotton pygmy goose, has witnessed a decline.

Places in news

12. Sunderbans

» Prelims: Map based location questions

» Mains: Avifauna of India

Context:

- "Birds of the Sundarban Biosphere Reserve" publication has been released by Zoological Survey of India (ZSI).

Details:

- The publication documents the avifauna of the Sunderbans.

- According to the publication, the Indian Sunderbans, which is part of the largest mangrove forest in the world, is home to 428 species of birds.

  * India has over 1,300 species of birds and if 428 species of birds are from the Sunderbans, it means that one in every three birds in the country is found in the unique ecosystem.

  * Of the 428 birds listed, some, like the masked finfoot and the Buffy fish owl, are recorded only from the Sunderbans.

* The area is home to nine out of 12 species of kingfishers found in the country as well rare species such as the Goliath heron and the spoon-billed sandpiper.

Indian Sundarbans:

- The Indian Sundarbans, covers 4,200 sq. km, and includes the Sunderban Tiger Reserve of 2,585 sq. km.

  * The tiger reserve is home to about 96 royal Bengal tigers (census 2020).

  * It is a world heritage site and a Ramsar site (a wetland site designated to be of international importance).

Organizations/Institutions in News

13. Commission for Air Quality Management (CAQM)

» Prelims: Environmental Pollution (Prevention and Control) Authority and CAQM

Context:

- Air Quality Commission ropes in top technical institutions to set up a Decision Support System.

About the Commission for Air Quality Management (CAQM):

- The Commission for Air Quality Management was formed by an ordinance in October 2020; through the "Commission for Air Quality Management (CAQM) in National Capital Region and Adjoining Areas Ordinance 2020".

- The commission was envisaged to be a super commission that subsumed practically every other law and agency dealing with air pollution in this region (Delhi – NCR).

- The central government had instituted this 'permanent' body for the region effectively replacing the Environmental Pollution (Prevention and Control) Authority (EPCA).

- The CAQM has the power to:

  * Formulate rules and set emission standards

  * Impose fines up to Rs. 1 Crore or send violators to prison for up to five years

- It is headed by a former secretary to the Government of India or a chief secretary to a state government.

- The ex-officio members comprise chief secretaries or secretaries dealing with the subject of environment in the states of Delhi, Haryana, Punjab, Rajasthan and Uttar Pradesh and non-governmental organisations.

Functions of CAQM:

- Implement in Delhi NCR and adjoining areas, the National Clean Air Programme, the National Air Quality Monitoring Programme, and the National Ambient Air Quality Standards.

- It lays down the parameters for various aspects of air quality including emission parameters and discharge of environmental pollutants from various sources.

- The Commission has the right to prohibit activities that are likely to cause or increase air pollution in the NCR.

- It can take up matters suo motu or on the basis of complaints from individuals and

- The annual report that the Commission submits to the government will be laid before both Houses of the Parliament. Also, the various orders and regulations brought forth by the CAQM will also be placed before the Parliament.

- The Commission would specifically monitor measures taken by the states to prevent factors causing air pollution like stubble burning, industrial emissions, road dust, vehicular pollution, construction activities, biomass burning and other major sources of air pollution

Organizations/Institutions in News

14. Wildlife Crime Control Bureau (WCCB)

- » Prelims: Wild Life (Protection) Act, 1972, WCCB and CITES

Context:

- Wildlife Crime Control Bureau busts wildlife trafficking syndicates in Jammu & Kashmir.

About the Wildlife Crime Control Bureau:

- It is a statutory multi-disciplinary body established by the Government of India under the Ministry of Environment and Forests, to combat organized wildlife crime in the country.

- It is headquartered in New Delhi with regional, sub-regional offices and border units.

- Under Section 38 (Z) of the Wild Life (Protection) Act, 1972, it is mandated to:

  * Collect and collate intelligence related to organized wildlife crime activities

  * Disseminate the same to State and other enforcement agencies for immediate action so as to apprehend the criminals

  * Establish a centralized wildlife crime data bank

  * Coordinate actions by various agencies in connection with the enforcement of the provisions of the Act

  * Assist foreign authorities and international organization concerned to facilitate coordination and universal action for wildlife crime control

  * Capacity building of the wildlife crime enforcement agencies for a scientific and professional investigation into wildlife crimes and assist State Governments to ensure success in prosecutions related to wildlife crimes

  * Advise the Government of India on issues relating to wildlife crimes having national and international ramifications, relevant policy and laws

- It also assists and advises the Customs authorities in inspection of the consignments of flora & fauna as per the provisions of Wild Life Protection Act, CITES and EXIM Policy governing such an item.

- The GOI notified the Board's formation in 2007 and it became operational in 2008. It was created based on the recommendations of the Committee on "Prevention of Illegal Trade in Wildlife and Wildlife Products" (1994) headed by Dr. S. Subramaniam.

Organizations/Institutions in News

15. Special Tiger Protection Force

- » Prelims: Special Tiger Protection Force, Tiger reserves in India

- In 2008, the Govt of India announced the establishment of the 'Special Tiger Protection Force' at the state level.

- The National Tiger Conservation Authority (NTCA) in 2009-10 advised important tiger states to recruit and train special police personnel for patrolling the tiger reserves to protect the tigers, co-predators and prey animals as well as to protect habitats.

- Based on the one time grant of Rs. 50 crore provided to the National Tiger Conservation Authority (NTCA) for raising, arming and deploying a Special Tiger Protection Force, the proposal for the said force was approved by the competent authority for 13 tiger reserves.

- The STPF has been made operational in the States of Karnataka (Bandipur), Maharashtra (Pench, Tadoba-Andhari, Nawegaon-Nagzira, Melghat), Rajasthan (Ranthambhore), Odisha (Similipal) and Assam (Kaziranga), out of 13 initially selected tiger reserves, with 60% central assistance under the ongoing Centrally Sponsored Scheme of Project Tiger.

Initiatives in News

16. **SAKSHAM**

» Prelims: SAKSHAM initiative

Context:

- PCRA launches a month-long mass awareness campaign 'SAKSHAM' to spread awareness about 'Green and Clean Energy'.

About SAKSHAM:

- Saksham (Sanrakshan Kshamta Mahotsav) is a campaign organised by Petroleum Conservation Research Association (PCRA) to sensitize the masses about conservation and efficient use of petroleum products which will lead towards better health and environment.

- The campaign is aimed at creating awareness about the adverse health and environmental impacts of increasing carbon footprints.

- The idea behind the initiative is to convince consumers to switch to cleaner fuels and bring in behavioural change to use fossil fuel intelligently.

- The campaign through various pan-India activities such as cyclothon, farmer workshops, seminars, painting competition, CNG vehicle driving contest, etc. will spread awareness among masses about the advantages of using clean fuels.

- The key drivers of the initiative include moving towards a gas-based economy, cleaner use of fossil fuels, greater reliance on domestic sources to drive bio-fuels, achieving renewable targets with the set deadlines, increased use of electric vehicles to decarbonize mobility, increased use of cleaner fuels like hydrogen, and digital innovation across all energy systems.

About the Petroleum Conservation Research Association (PCRA):

- PCRA is a registered society set up under the aegis of the Ministry of Petroleum & Natural Gas, Government of India.

- As a non-profit organization, PCRA is a national government agency engaged in promoting energy efficiency in various sectors of the economy.

- It helps the government in proposing policies and strategies for petroleum conservation, aimed at reducing excessive dependence of the country on oil requirement.

Miscellaneous

17. **Prevention of Cruelty to Animals (Care and Maintenance of Case Property Animals) Rules, 2017**

» Prelims: Prevention of Cruelty to Animals Act, 1960.

Context:

- The Supreme Court has asked the Centre to "delete" its three-year-old law which allowed seizure and subsequent confiscation in 'gaushalas' of livestock from people, who depended on these animals for a livelihood, even before they were found guilty of cruelty towards them.

Background:

- The rules were framed under the Prevention of Cruelty to Animals Act, 1960.

- The 2017 Rules allow a Magistrate to forfeit the cattle of an owner facing trial under the Prevention of Cruelty to Animals Act.

- The animals are then sent to infirmaries, 'gaushalas', 'pinjarapole', etc. These authorities can further give such animals for "adoption".

Details:

- A Bench led by Chief Justice of India warned the government that it would "stay" the implementation of a 2017 law which allowed authorities to seize cattle on a mere suspicion that they suffered cruel treatment at the hands of their owners or were being primed for slaughter.

- It said the 2017 Rules are plainly contrary to Section 29 of Prevention of Cruelty to Animals Act, under which only a person convicted of cruelty can lose his animal.

Issues with the rules:

- A farmer, a livestock owner or a cattle trader loses his animals before being found guilty of the charge of cruelty.

Government's stand:

- The government said the Rules were in consonance with the Prevention of Cruelty to Animals Act of 1960.

- "The Rules prevent owners and transporters from causing animals' unnecessary pain and suffering... Animals are sentient beings. They are capable of experiencing pain, sorrow, suffering and discomfort... Article 51A (g) of the Constitution enjoins upon every citizen to have compassion for living animals"

Miscellaneous

18. Asian Water bird Census

- » Prelims: Ramsar Sites, Important Bird and Biodiversity Areas

Context:

- The two-day Asian Water bird Census-2020 commenced in Andhra Pradesh under the aegis of experts from the Bombay Natural History Society (BNHS).

- The Asian Water bird Census 2020coverd at least two dozen sites, including Coringa Wildlife Sanctuary, Kolleru Lake and Krishna Sanctuary.

Asian Water bird Census:

- The Asian Water bird Census is part of the global International Water bird Census carried out each January as a voluntary activity.

- The AWC was initiated in 1987 in the Indian subcontinent and since has grown rapidly to cover major region of Asia, from Afghanistan eastwards to Japan, Southeast Asia and Australasia.

- The AWC is an integral part of the global Water bird monitoring programme, the International Water bird Census (IWC) coordinated by Wetlands International.

- It runs in parallel with other regional programmes of the International Water bird Census in Africa, Europe West Asia, the Neotropics and the Caribbean.

- The survey would help understand
  - * The changes to wetland systems,
  - * Change in migratory pattern of birds,
  - * Impact of climate change.

- The information would be used to promote the designation and management of protected areas, Ramsar Sites, Important Bird and Biodiversity Areas etc.

Miscellaneous

19. Management Effectiveness Evaluation (MEE)

- » Prelims: Important WLS and NP, MEE
- » Mains: Conservation efforts being taken and their significance

Context:

- Environment Minister releases Management Effectiveness Evaluation (MEE) of 146 National Parks and Wildlife Sanctuaries (2018 – 19).

What is Management Effectiveness Evaluation (MEE)?

- MEE is the assessment of how well protected areas such as national parks, wildlife sanctuaries, conservation reserves, community reserves and tiger reserves are being managed and their effectiveness in conserving target flora and fauna.

- MEE is a global framework to evaluate the performance of protected areas.

- Management Effectiveness Evaluation (MEE) of Protected Areas (PAs) has emerged as a key tool for PA managers and is increasingly being used by governments and international bodies to understand the strengths and weaknesses of the protected area management systems.

MEE in India:

- India is among the select countries in the world that has institutionalized the MEE process for its network of protected areas.

- A new framework for MEE of Marine Protected Areas has been also jointly prepared by the Wildlife Institute of India (WII) and the Environment Ministry and it will be a very useful document to implement.

- The Ministry has also launched the Management Effectiveness Evaluation of Indian Zoos (MEE-ZOO) framework which proposes guidelines, criteria and indicators for evaluation of zoos of the country through Management Effectiveness Evaluation Process (MEE-ZOO) in a manner which is discrete, holistic and independent.

- The first MEE in India was done in 2006 when the management effectiveness assessment of 28 tiger reserves was carried out.

Current MEE Report (2018 – 19):

- As per the report, West Bengal's Jaldapara National Park and Raiganj Wildlife Sanctuary, Himachal Pradesh's Sainj and Tirthan wildlife sanctuaries as well as the Great Himalayan National Park have been declared as top-five national parks and wildlife sanctuaries in India.

- Two wildlife sanctuaries in UP – Turtle WLS and Jai Prakash Narayan Bird Sanctuary — and one each in Haryana, Assam and Rajasthan have been listed among the bottom five.

HEALTH ISSUES

Diseases in news

1. Avian Influenza

» Prelims: Virus causing Avian influenza.

» Mains: Economic and health impact of avian influenza, Strategy for containing avian influenza.

What is avian influenza or bird flu?

- It is a highly contagious viral disease caused by Influenza Type A viruses which generally affects poultry birds such as chickens and turkeys.

  * It is reported mostly in birds, but has the potential to affect humans and other animals.

- The most common strain of the virus that causes severe respiratory disease in birds is H5N1; various other strains like H7, H8 too, cause infection.

- The virus was first reported in geese in China in 1996. Since then, outbreaks have been reported periodically across the world.

How does the bird flu spread?

- Wild aquatic birds such as ducks and geese are the natural reservoir of Influenza A viruses and the central players in the ecology of these viruses.

- Many birds carry the flu without developing sickness, and shed it in their droppings.

- From water birds, many of whom migrate and travel long distances, the viruses are thus further spread to poultry and terrestrial birds. Sometimes, the virus jumps over to mammals such as pigs, horses, cats and dogs.

Human transmission:

- The H5N1 virus can jump species and infect humans from the infected bird. The first case of H5N1 infection in humans was reported in Hong Kong in 1997, when a poultry farm worker caught the infection from infected birds.

- The high mortality rate in humans — almost 60 per cent — is the main cause of concern about the spread of bird flu.

- Generally, people coming in close contact with infected alive or dead birds have contracted the H5N1 bird flu, and it does not usually spread from person to person, as per the WHO.

- There is also no evidence, the WHO says, that the disease can be spread to people through properly prepared and cooked poultry food. The virus is sensitive to heat, and dies in cooking temperatures.

Bird flu: What are its symptoms and treatment?

- Unlike in birds, where it generally infects the gut, the avian influenza attacks the respiratory tract of humans and may cause severe respiratory illnesses such as pneumonia or Acute Respiratory Distress Syndrome (ARDS).

- Its early symptoms include fever, cough, sore throat, and sometimes abdominal pain and diarrhoea.

- Antiviral drugs, especially oseltamivir, improve the prospects of survival in humans, according to the Union health ministry. The ministry advises people working with poultry to use PPEs and follow hand hygiene.

Context:

- Avian influenza, popularly known as bird flu, has been reported from Kerala, Rajasthan, Madhya Pradesh, Himachal Pradesh, Haryana, Gujarat and Uttar Pradesh.

Why does bird flu recur?

- One, experts say preventing bird flu is not possible as little research has been done on the virus-carrying capability of migratory birds

- Two, periodic outbreaks may occur due to local bird-keeping conditions.

  * After the unprecedented outbreak in 2006 in Asia, experts who met at an international conference in New Delhi under the aegis of WHO felt that continuous growth in poultry farming under poor sanitary conditions was sustaining the virus, with multiple susceptible species living in the same area.

Did the major outbreaks not help form strategies?

- The Delhi Declaration passed at the summit resolved on a common framework for countries to build local strategies, but it did not lay emphasis on preserving the natural environment, which is key to helping wild birds move safely in an unspoilt habitat and stop transmission of viruses to domestic fowl, which threatens humans with infections and a potential pandemic due to mutating viruses.

Measures:

- The government has asked states to strengthen the biosecurity of poultry farms, disinfect the affected areas, and properly dispose of dead birds and carcasses.

- The animal husbandry ministry has also asked states for timely collection and submission of samples for confirmation and further surveillance and intensification of surveillance plan.

- Among poultry birds, vaccination strategies advised by the World Organisation for Animal Health can be used to prevent the flu, and the Organisation recommends eradicating the Highly Pathogenic Avian Influenza (HPAI) at its source to decrease the disease in avian species and further human infections.

Biosecurity:

- "Bio" means life. "Security" means protection.

- Biosecurity is a set of measures designed to prevent the spread of disease

- Biosecurity planning is a proactive approach to safeguarding the health and productivity of the flock.

- It will thus reduce the risk of the introduction and spread of disease agents

The three principle elements of biosecurity are:

- Segregation: The creation and maintenance of barriers to limit the potential opportunities for infected animals and contaminated materials to enter an uninfected site. This step, properly applied, will prevent most infections.

- Cleaning Materials (e.g. vehicles, equipment) that have to enter (or leave) a site must be thoroughly cleaned to remove visible dirt. This will remove most of the virus that is contaminating the materials.

- Disinfection: Properly applied, disinfection will inactivate any virus that is present on materials that have already been thoroughly cleaned.

Culling:

- Mass slaughter of domestic poultry birds, such as chickens and ducks, to contain the spread of bird flu is called culling. During culling operations, all domestic birds in an infected area, i.e., an area in which a case of bird flu has been detected, are slaughtered and their remains buried.

- In India, culling is done in a radius one kilometre from the site of infection, which is called the 'infected zone'. This means all domestic birds present in commercial farms, backyard farms or live bird markets in the infected zone are culled.

What is the economic impact of bird flu?

- India consumes 30 crore poultry birds and 900 crore eggs per month on average.

- India's poultry sector, according to the Ministry of Agriculture and Farmers Welfare, is worth ₹80,000 crore, of which the organised sector represents 80%, and the rest is distributed among unorganised sectors, including backyard poultry-keeping which is crucial for income and nutritional security.

- Exports, mainly focused on West Asia, neighbouring countries and East Asia, were valued at ₹532 crore in 2017, with an emphasis on processed products such as egg powder, yolk powder, pharma ingredients, and chicken products.

- Avian flu is seen as a threat to the further growth of the sector as a whole.

Conclusion:

- Conservation and protection of migratory birds and their sites are covered under the Convention for Conservation of Migratory Species of Animals (CMS) but their health aspects are not.

- The United Nations and WHO should work with countries in the Central Asian Flyway (CAF) region for disease surveillance of the migratory birds and India should do more sample checks at the wintering sites to catch the disease early.

Diseases in news - COVID19

2. **India approves two COVID-19 vaccines for emergency use**

   » Prelims: CDSCO, Vaccines approved for COVID-19.

   » Mains: Challenges in vaccination, associated concerns.

Context:

- The Central Drugs and Standards Committee (CDSCO) has formally approved the COVID-19 vaccines by Bharat Biotech and the Serum Institute of India (SII) for restricted use under emergency conditions.

   * Central Drugs and Standards Control Organisation is the apex regulator of drug and vaccine trials.

Details:

- The approval allows the vaccines — Covishield by SII based on the Oxford AstraZeneca vaccine, and Covaxin by Bharat Biotech — to be offered to healthcare workers and frontline workers in India.

   * The Health Ministry had stated that 3 crore such healthcare personnel, considered at the highest risk for COVID-19, would be given the vaccine for free.

- The approval is based on a recommendation by a Subject Expert Committee consisting of domain knowledge experts.

Covaxin:

- Covaxin is India's first indigenous COVID vaccine.
- It is being developed by the vaccine manufacturer-Bharat Biotech.
- It has been developed based on an inactivated SARS-CoV-2 strain cultured at the National Institute of Virology, an ICMR body.
- This vaccine is developed on the Vero cell platform, which has a well-established track record of safety and efficacy in the country & globally.

Covishield:

- Covishield has been developed by the UK's University of Oxford and pharmaceutical giant-AstraZeneca.
- The Pune-based Serum Institute of India (SII) has made a collaboration with the University of Oxford and AstraZeneca to manufacture the Covishield vaccine.
- SII is the world's largest vaccine manufacturer.

Emergency Use Authorization (EUA):

- There is no explicit mention of EUA in India, however, there is a provision under the New Drugs and Clinical Trials, 2019.
- New Drugs and Clinical Trials, 2019 mentions an 'accelerated approval process', depending on the severity, urgency and lack of alternatives.
- In the event of the above-mentioned grounds, the regulator can overrule the need to have local clinical trials if the drug has been approved elsewhere.
- Under exceptional circumstances such as
  * It is a 'Rare Disease'
  * Massive disease outbreak
  * No proven vaccine or drug available
  * Evidence of a drug or vaccine that is tested in a country and has yielded desired results
  * A country neither has the financial resources nor the personnel to conduct solid clinical trials to a drug/vaccine that has undergone thorough clinical trials in another country
- The above-mentioned circumstances allow health regulators to issue accelerated approvals under EUA.

Concerns:

- The rollout of COVID-19 vaccine in India has raised fears over the safety and efficacy of the vaccine.

Lack of phase-3 trials:

- The key step of establishing the vaccine's efficacy in the Indian population before rollout has been bypassed. Neither Covishield nor Covaxin has completed the crucial Phase-3 trials, under which a vaccine candidate is administered to volunteers at multiple locations across the country.
- A double-blinded phase-3 trial is one in which neither the participants nor the experimenters know who is receiving a particular treatment. This procedure is utilized to prevent bias in research results. Double-blind studies are particularly useful for preventing bias due to demand characteristics or the placebo, this method is among the foundations of evidence-based medicine.
- The SII because of its agreement with AstraZeneca has furnished data from a phase-3 trial in the U.K. and Brazil, but the data regarding the vaccination impact on 1,600 volunteers from India have not yet been made public.
- Bharat Biotech, which is conducting such a phase-3 trial in India, has not so far submitted similar data as it has not been able to complete recruiting the required number of volunteers.
- All of the leading vaccine candidates — Pfizer, Moderna and AstraZeneca, made public at least partial results of the vaccine's abilities in their own populations before these were given a formal clearance by the respective regulators.

Lack of data on efficacy of vaccine:

- The Indian data furnished by the companies only certify the vaccine's safety and it's evoking some immune response. However, the experiences from the pandemic suggest that the therapies and interventions, like for example the convalescent plasma therapy, the antivirals that work well under idealised lab conditions do not always yield the same results in real-world hospital conditions.

Conclusion:

- Hurried approval process and opacity in the government's decision making can create a feeling of distrust among the people of the country, which could give way to vaccine hesitancy.
- Transparency is vital for people to trust and embrace the vaccine, the regulator and the government must follow the accepted safety protocols before giving the nod to the vaccine.

Diseases in news-COVID19

3. Co-WIN platform gets upgrade

» Prelims: CoWIN platform, eVIN.

CoWIN:

- COVID Vaccine Intelligence Network (CoWIN) system is a digitalised platform to be used to effectively roll out and scale up the mechanism for COVID Vaccine Distribution System, nationally.

- It is a digital platform launched by the Ministry of Health and Family Welfare to help agencies keep a track of Covid-19 vaccination and allow Indians to apply for vaccine.

- It is a repurposed version of Electronic Vaccine Intelligence Network (eVIN).

Diseases in news-COVID19

4. Nasal SARS-CoV-2 vaccine

» Prelims: Nasal vaccine- benefits.

» Mains: Strategies to deal with the COVID-19 pandemic

Context:

- Recently, the Central Drugs Standard Control Organisation recommended granting permission for phase 1 human clinical trials for Bharat Biotech's nasal COVID-19 vaccine, BBV154.

Details:

- An intranasal vaccine delivers a vaccine through a spritz through the nostrils.

- Previous trials with nasal vaccines, like the one developed by scientists at Washington University School of Medicine has been found effective in preventing infection in mice susceptible to the novel coronavirus.

- The nasal delivery approach has several advantages over the injection and oral forms.

Benefits:

Better immune response:

- The nasal route holds immense potential for vaccination due to the organised immune systems of the nasal mucosa. Intranasal candidates have shown good potential for protection in animal studies conducted thus far.

- Studies have shown that the nasal route of vaccine delivery elicited robust antibodies and T-cell responses that were enough to be able to neutralise SARS-CoV-2.

Better targeted:

- Studies have shown that targeting the immune response to the upper respiratory tract provides critical protection, and intranasal vaccination induces protective mucosal immunity against the SARS-CoV-2.

- Given that the SARS-CoV-2 virus shows a proclivity to dwell in the upper respiratory tract for a prolonged period of time, a safe and efficacious nasal vaccine is well-placed to target the literal entry point of the virus into the body.

Will help reduce transmission of the virus:

- While the currently available injectable COVID-19 vaccines have been able to induce an immune

response that prevented pneumonia, it did not prevent infection in the nose and lungs. Such a vaccine might reduce the severity of COVID-19, but it could not prevent infected individuals from spreading the virus. Thus intranasal vaccines hold an upper hand in this respect.

Easy to administer:

- The intranasal vaccines are easier to give. This will help ensure faster vaccination. Hence this method comes with the guarantee of better compliance and the advantage of lower costs.

Concerns:

- So far, intranasal vaccination is being used only for influenza.

- The intranasal vaccines cannot be used on certain groups of people, particularly those who have compromised immune systems.

Conclusion:

- The nasal route can be used to deliver the safe antigen against which an immunological response would happen. But only further clinical trials can help determine whether such a vaccine with an easy delivery mechanism can be efficacious too.

- If it does work, it can be a game-changer in the fight against the pandemic.

Issues relating to health

5. Trans Fat

» Prelims: Transfat-sources and associated concerns, FSSAI

» Mains: Tackling non communicable diseases/ lifestyle diseases

Fat:

- It is an essential nutrient that the body needs to function fully. Fats in the diet help the body absorb vitamins and minerals and serve other vital roles.

- Fat stored in body tissues is critical for:

  * energy storage and metabolism

  * body temperature regulation

  * insulation of the vital organs

Saturated fat:

- These fats have single bonds between their molecules and are "saturated" with hydrogen molecules. They tend to be solid at room temperature.

- Food sources that contain high levels of saturated fat include meat and dairy products, such as:

  * cheese

* butter

Unsaturated fat:

- Unsaturated fats contain one or more double or triple bonds between the molecules. These fats are liquid at room temperature in oil form. They also occur in solid foods.

    * olives and olive oil

    * peanut butter and peanut oil

    * vegetable oils, such as sunflower, corn, or canola

Trans fats or trans-fatty acids:

- They are a form of unsaturated fat.

- They come in both natural and artificial forms.

- Natural Trans Fats occur in the meat and dairy from ruminant animals, such as cattle, sheep, and goats. They form naturally when bacteria in these animals' stomachs digest grass.

- However, Artificial Trans Fats — otherwise known as industrial trans fats or partially hydrogenated fats — are hazardous to health.

    * These fats occur when vegetable oils are chemically altered to stay solid at room temperature, which gives them a much longer shelf life

    * Artificial trans fats, which are considered harmful, are created in an industrial process that adds hydrogen to liquid vegetable oils to make them more solid, and for use as an adulterant as they are cheap.

Where are they found?

- The major sources of artificial TFAs are the partially hydrogenated vegetable oils (PHVO)/ vanaspati/ margarine.

- They are commonly found in fried foods, chips, crackers and baked goods.

Health Issues:

- Approximately 540,000 deaths each year can be attributed to intake of industrially produced trans-fatty acids

- As per FSSAI, about 77,000 deaths take place annually in India due to TFAs.

- It poses a higher risk of heart disease than saturated fats.

- Saturated fats raise total cholesterol levels; TFAs not only raise total cholesterol levels but also reduce the good cholesterol (HDL).

Context:

- The Food Safety and Standards Authority of India (FSSAI) has capped the amount of trans fatty acids (TFA) in oils and fats to 3% for 2021 and 2% by 2022 from the current permissible limit of 5% through an amendment to the Food Safety and Standards (Prohibition and Restriction on Sales) Regulations.

Significance:

- The FSSAI rule comes at the time of a pandemic where the burden of non-communicable diseases has risen. Cardiovascular diseases, along with diabetes, are proving fatal for COVID-19 patients.

Recommendations:

- With India having the highest number of coronary heart disease cases in the world, efforts must be taken to completely eliminate or at least significantly reduce trans fats in food, in accordance with the World Health Organization guidelines.

    * The WHO has also called for the global elimination of trans-fats by 2023.

- Bakeries, sweet shops and other food business operators can voluntarily display 'trans fat free' logo on food products and in their outlets, according to the food safety regulator FSSAI.

- Additionally, FSSAI calls for declaring quantity of salt, added sugar, saturated fats and trans fats and mentioning serving size, the number of servings and per serve percentage contribution of a particular nutrient to the recommended dietary allowance (RDA) must be strictly adhered to.

Miscellaneous

6. **'A global challenge to deliver vaccine'**

    » Prelims: Immunization Agenda 2030, COVAX facility

    » Mains: Global collaboration and co-operation

Context:

- Union Health Minister Harsh Vardhan, chaired the 148th session of the Executive Board of the World Health Organization.

Details:

- The Board welcomed the Immunisation Agenda 2030 and was unanimous in recognising the central role played by immunisation programmes in safeguarding public health globally.

- The member-states also called for early and equitable availability of COVID-19 vaccines, including through the COVAX facility.

Immunization Agenda 2030- A Global Strategy to Leave No One Behind:

- It is an initiative of the World Health Organisation.

- Immunisation Agenda 2030 envisions a world where everyone, everywhere, at every age, fully

benefits from vaccines to improve health and well-being.

- Immunization is critical to SDG3 – 'to ensure healthy lives and promote well-being for all at all ages'.

- The Immunisation Agenda 2030 strategy is based on the following four core principles:

  * It is people centred.

  * It is led by countries.

  * It is implemented through broad partnerships.

  * It is data guided

Conclusion:

- Immunisation has been a singularly successful global programme in preventing vaccine-preventable morbidity and mortality and the WHO must continue providing evidence-based and scientific advocacy to support member-states in effectively implementing the Immunisation Agenda.

- Vaccine coverage must continue to improve, particularly to reach vulnerable sections and reduce inequities.

SOCIAL ISSUES

Social Issues-Related to Women

1. Recognizing domestic work

» Prelims: UN CEDAW

» Mains: Challenges based by women in the social and economic spheres

Context

- There has been a revival of the debate on the recognition of domestic work as work and the need to appreciate and monetize women work.

Historical perspective:

- Historically home and market for centuries are considered to be two distinct entities. The demarcation of the market as a male sphere and home as a female sphere was done without any sound logic, what was worrying was the glorification of 'domestication of women', it was projected that the by limiting the women to household chores, they were being protected from the struggles of the market sphere.

- It should be noted that the moral elevation of the home was accompanied by the economic devaluation of the work performed there, thus making women economically dependent.

- The concept of "separate spheres" was justified as a basis to reinforce the legal ordering of family life and justify a husband's control of family assets.

The burden on women:

- The 2011 Census reveals that, while 159.85 million women stated household work as their main occupation, a mere 5.79 men referred to it as their main occupation.

- In a recent judgement in the Kirti and Another v. Oriental Insurance Company, there was a reference made to the following data from the 'Time Use in India-2019 Report' of the National Statistical Office. The data revealed that on an average Indian woman spend close to five hours a day on unpaid domestic services for household members and in comparison, the men spend just 97 minutes and also the women spend a further 134 minutes in a day providing unpaid care-giving services for household members.

- The 'Women's Economic Contribution through their Unpaid Work: A Case Study of India' (2009) had estimated the economic value of services by women to be to the tune of a whopping $612.8 billion annually.

- The household work by wives is not taken into consideration while determining national income.

Suggestions:

- The time has come to insist that the work women perform for the family should be valued equally with men's work during the continuance of marriage.

  * The United Nations' Committee on the Elimination of Discrimination Against Women, in 1991, had recommended measurement and quantification of unremunerated domestic activities of women and their recognition in GDP so that the de facto economic contribution of women is highlighted.

  * The Third National Women's Liberation Conference, in England in 1972, for the first time, explicitly demanded payment of wages for the household work.

- A radical solution that could be looked at would be the prospects of a prenuptial marriage agreement, which can easily solve this problem with the insertion of the clause on wives' right in husband's earnings and properties being included in such agreements.

Social Issues - Rising inequality

2. The Inequality virus

» Mains: Challenges posed by inequitable growth pattern and measures required to address it.

Context

- The latest Oxfam report titled, "The Inequality virus".

Background:

- The COVID-19 pandemic sent shockwaves across the globe, it disrupted the economic activities as countries went into a lockdown to combat the spread of the virus.

- The global economy is on the path of slowly recovering from the ill-effects caused by the COVID-19 pandemic, but there is a long way to go.

Details:

- As per the new Oxfam report, the 1,000 richest people on the planet recouped their COVID-19 losses within just nine months, but it could take more than a decade for the world's poorest to recover from the economic impacts of the pandemic.

- The recovery is uneven among countries, and within countries, but the emerging universal truth is that economic inequality is rising sharply in all countries.

- Oxfam's report shows the skewed nature of the economic system.

  * Notably, the world's ten richest men have witnessed their combined wealth increase by half a trillion dollars since the onset of COVID-19, more than enough to pay for a COVID-19 vaccine for everyone and to ensure no one is pushed into poverty by the pandemic.

  * On the contrary the pandemic has ushered in the worst job crisis in over 90 years with hundreds of millions of people now underemployed or out of work.

- The report throws light on how the pandemic is deepening long-standing economic, racial and gender divides.

  * Inequality is not a new phenomenon, the levels of inequality were already at an alarmingly high level and were found to be destabilising social and political order across the world in the pre-pandemic era itself.

Indian scenario:

- The pandemic driven inequality impacts certain section more disproportionately than others, this is due to discrimination based on gender, caste and other factors. The poorer people went through hard times during the lockdown, this was evident in high unemployment levels, migrants walking thousands of kilometres to their hometowns etc.

- Inequality in India has risen to levels last seen while it was under the British colonial regime.

  * The additional wealth acquired by India's 100 billionaires since the imposition of nationwide lockdown is humongous. On the contrary an unskilled worker in India would take three years to earn what the country's richest person earned in one second last year.

- Rigged economies are funnelling wealth to a rich elite who are making the most out of the pandemic, while those on the frontline of the pandemic shop assistants, healthcare workers, and market vendors are struggling to pay the bills and put food on the table.

Underlying concerns:

- There is now a consensus that has emerged among economists worldwide that the dynamics of the distribution of new wealth between capital and labour has become very skewed in favour of the rich, the growing inequality is putting the workers on a slippery slope.

- This has social and political consequences as upheavals in democratic societies around the world show.

- The environmental costs of a development model that hinges on higher and higher growth are also obvious, and the neglect of environmental concerns often gives way to natural and man-made disasters that impact the poor disproportionately, thus widening the gulf further.

- The magnitude of the growing inequality hasn't been grasped well by the policymakers and politicians, their excessive focus on growth has led to a tacit acceptance that rising inequality as inevitable for decades. Inequality is sometimes wrongly misconstrued as a benign outcome of economic growth that led to the reduction of absolute poverty.

Way forward

- The government must invest in public services to create millions of new jobs and ensure everyone has access to a decent education, health, and social care, and they must ensure the richest individuals and corporations contribute their fair share of tax to pay for it.

- These measures must not be viewed as a stop-gap measure reserved exclusively for desperate times but should be seen as an intrinsic part of future plans.

- Extreme inequality is not inevitable, but a policy choice. Governments must try to make use of this pandemic as an opportunity to build a more equal, more inclusive economies that end poverty and protect the planet.

- The fight against inequality must be at the centre of efforts to rebuild the economy in the post-pandemic era.

Social Issues - Related to Women

3. **Women farmers**

  » Mains: issues faced by women farmers

Context

- The impact of the new farm laws on the women farmers.

Background:

- Women play a significant role in the Indian agrarian setup, but there has not been commensurate recognition of their contribution.

- Farming in India has been seen as synonymous with men, however this view is not based on objective data and reasoning.

Challenges:

- Despite their large contribution to the agricultural sector, women farmers have been reduced to a marginal section making them vulnerable to

exploitation due to the following reasons.

Lack of land ownership:

- The agricultural census reveals that 73.2% of rural women are engaged in farming activities but only 12.8% own landholdings.

- This is a very serious issue, since close to three-fourth of rural women own only around one-tenth of landholdings; the ownership pattern is skewed in favour of men.

- There are several reasons for this skewed distribution of ownership – cultural, social and religious forces have combined to deny women their rightful possession. There is also a perception issue, seeing farming as a man's profession.

- The India Human Development Survey reports that 83% of agricultural land in the country is inherited by male members of the family and a meagre less than 2% by their female counterparts.

- Thus, women are mostly left without any title of land in their names and are excluded from the definition of farmers.

Nomenclature:

- Women have had to suffer from non-recognition and the legal framework conveniently labelling them as 'cultivators' or 'agricultural labourers' but not 'farmers'.

- Bereft of recognition, women find themselves systematically excluded from securing the benefits of government schemes.

- Women are not guaranteed the rights which they would otherwise be given if they were recognised as farmers, in matters of loans for cultivation, loan waivers, crop insurance, subsidies or even compensation to their families in cases where they commit suicide; women are left behind.

Lack of accessibility:

- Women have unequal access to rights over land, water and forests. Gender plays an important role in providing access to support systems such as storage facilities, transportation costs, and cash for new investments or for paying off old dues or for other services related to agricultural credit. There is also gendered access to inputs and markets.

Impact of the new farm laws:

- The recent farm laws enacted by the Union Government have witnessed protests from farmers and several farmer unions over issues like the continuation of Minimum Support Price, Agricultural Market Produce Committees, contract farming, etc., but the impact these laws are going to have on women has received little or no attention. The gender impact of the new farm laws has not been dealt with.

- * The non-committal nature of the laws over the MSP has aggravated fears among women farmers, as the MSP prevented them from exploitation.

- * Another issue that has been flagged is the lack of bargaining power with the increasing corporatization of Indian agriculture. Women farmers in India's agrarian setup are not empowered agents who can understand and negotiate (written) agreements with traders and corporate entities on an even keel.

- * The corporatization threatens women's future in agriculture, where corporates will decide the price with no safety net or adequate redressal mechanism for the farmers. Consequently, the small, marginal and medium farmers will be forced to sell their land to big agro-businesses and become wage labourers.

- Women farmers fear that the farm laws will further deepen gender inequality in the sector.

Conclusion:

- There is a need to bring in reforms which address the role of women in agriculture. These reforms have to deal with the ownership issues, the nomenclature, the access to various resources to women and also the recently enacted farm laws.

Population and associated issues

4. **LASI India Report**

- » Prelims: LASI report
- » Mains: Policy measures needed to address the rising trend of ageing being observed in India.

Context

- Union Health Minister releases the Longitudinal Ageing Study of India (LASI) Wave-1, India Report.

What is LASI?

- LASI is a full–scale national survey of scientific investigation of the health, economic, and social determinants and consequences of population ageing in India.

- The LASI, Wave 1 covered a baseline sample of 72,250 individuals aged 45 and above and their spouses including 31,464 elderly persons aged 60 and above and 6,749 aged 75 and above from all States and Union Territories (UTs) of India (excluding Sikkim).

Who conducted LASI?

- It has been undertaken by the National Programme for Health Care of Elderly (Ministry of Health & Family Welfare) through the International Institute for Population Sciences

(IIPS, Mumbai) in collaboration with Harvard School of Public Health, University of Southern California, United Nations Population Fund (UNFPA) and National Institute on Ageing.

Significance:

- It is India's first and the world's largest-ever survey that provides a longitudinal database for designing policies and programmes for the older population in the broad domains of social, health, and economic well-being.

- The evidence from LASI will be used to further strengthen and broaden the scope of the National Programme for Health Care of the Elderly and also help in establishing a range of preventive and health care programmes for the older population.

- It is important because the 60+ population accounted for 8.6% of India's population according to the 2011 Census.

- Growing at around 3% annually, the number of elderly age population will rise to 319 million in 2050, and around 75% of them suffer from one or the other chronic disease.

HISTORY

Ancient India-Important personalities

1. Sushruta

» Prelims: Sushruta and Charaka

» Mains: Science and technology in the ancient Indian period

Who was Sushruta?

• Sushruta was a physician in ancient India known today as the "Father of Indian Medicine" and "Father of Plastic Surgery" for inventing and developing surgical procedures.

• His work on the subject, the Sushruta Samhita (Sushruta's Compendium) is considered the oldest text in the world on plastic surgery and is highly regarded as one of the Great Trilogy of Ayurvedic Medicine (the other two being the Charaka Samhita, which preceded it, and the Astanga Hridaya, which followed it).

• Sushruta is believed to have lived in Kashi.

Contributions of Sushruta:

• The Sushruta Samhita documented the aetiology of more than 1,100 diseases, the use of hundreds of medicinal plants, and instructions for performing scores of surgical procedures – including three types of skin grafts and reconstruction of the nose.

• Sushruta's treatise provides the first written record of a forehead flap rhinoplasty, a technique still used today to reconstruct a nose.

• He was one of the first people in human history to suggest that a student of surgery should learn about the human body and its organs by dissecting a dead body.

• In the eighth century CE, Sushruta Samhita was translated into Arabic as 'Kitab Shah Shun al-Hindi' and 'Kitab-I-Susurud.'

• The first European translation of Sushruta Samhita was published by Hessler in Latin and in German by Muller in the early 19th century; the complete English literature was done by Kaviraj Kunja Lal Bhishagratna in three volumes in 1907 in Calcutta.

Medieval India-Important personalities

2. Guru Gobind Singh ji

» Prelims: Sikhism related personalities

Context:

• Sri Guru Gobind Singh Ji's Parkash Purab.

Details:

• The tenth Sikh Guru, Guru Gobind Singh was born in December 1666.

• His birthday falls either in December or January in the Gregorian calendar.

• The day is marked as Guru Gobind Singh Jayanti or Parkash Purab.

Modern India-Important personalities from Freedom struggle phase

3. Mannathu Padmanabhan

» Prelims: Important personalities associated with the Freedom struggle from southern Indian states, Vaikom satyagraha

Context:

• PM pays tribute to Sri Mannathu Padmanabhan on his Jayanti.

About Mannathu Padmanabhan:

• Mannathu Padmanabhan (1878 – 1970) was an Indian social reformer and freedom fighter from Kerala.

• He took part in anti-untouchability agitations and advocated opening temples for people of all castes.

• He also participated in the Vaikom Satyagraha.

• He is also known for his founding of the Nair Service Society (NSS).

Post Independence India-Important events

4. Muktijoddhas

» Prelims: 1971 war and Bangladesh liberation war

Context:

• A 122-member tri-service contingent of Bangladesh marched on Rajpath at the Republic Day parade in India as both the countries celebrate the 50th anniversary of the 1971 Liberation War.

Details:

• India is currently celebrating the Swarnim Vijay Varsh, the Golden Jubilee year, commemorating the country's victory over Pakistan in the 1971 war that led to the creation of Bangladesh.

- The legendary Muktijoddhas of Bangladesh, fought against oppression, mass atrocities by tyrannical forces and for the freedom of Bangladesh.

  * "Muktijoddhas" are freedom fighters of Bangladesh.

- It is these fraternal ties between India and Bangladesh that make the relations transcend even a strategic partnership.

Miscellaneous

5. Prabuddha Bharata

» Prelims: Prabuddha Bharata

Context:

- 125th anniversary celebrations of 'Prabuddha Bharata'

About Prabuddha Bharata:

- Prabuddha Bharata is a monthly journal of the Ramakrishna Order, started by Swami Vivekananda in 1896.

- The journal 'Prabuddha Bharata' has been an important medium for spreading the message of India's ancient spiritual wisdom.

- Its publication was started from Chennai (erstwhile Madras), where it continued to be published for two years, after which it was published from Almora.

- Later, in April 1899, the place of publication of the Journal was shifted to Advaita Ashrama (Mayavati, Uttarakhand) and it has been continuously published from there since then.

- Luminaries like Netaji Subhas Chandra Bose, Bal Gangadhar Tilak, Sister Nivedita, Sri Aurobindo, former President Sarvepalli Radhakrishnan, Carl Jung, among others, have contributed to the Journal over the years.

Miscellaneous

6. Parakram Divas

» Prelims: Important events associated with Subhas Chandra Bose

» Mains: Contributions by Subhas Chandra Bose to the Indian freedom struggle

Context:

- The Union Culture Ministry announced that January 23rd, the birth anniversary of Subhas Chandra Bose, would be celebrated as "Parakram Divas"- day of courage, every year.

Details:

- In a notification, the Ministry said the government had decided to celebrate the 125th birth anniversary year starting from January 23, 2021 in a befitting manner at national and international level.

DISASTER MANAGEMENT

Disaster Management-Natural disasters

1. More flash droughts in India by end of century

» Prelims: El Nino Southern Oscillation

» Mains: Threat posed by flash droughts, mitigation and prevention measures

Context:

• A new study has pointed out that India could experience increasing number of flash droughts by the end of this century.

Background:

Flash droughts:

• Flash droughts are those that occur very quickly, with soil moisture depleting rapidly. Normally, developing drought conditions take months, but the flash droughts happen within a week or two. This increases the vulnerability of the human beings by lessening the time available to react to the developing drought.

• Several factors including atmospheric anomalies, anthropogenic greenhouse gas emissions play an important role in the occurrence of flash droughts.

Flash droughts in India:

• The top five flash droughts based on the overall severity score occurred in 1979 followed by 2009, 1951, 1986 and 2005.

• In 1979, India faced a severe flash drought, affecting about 40% of the country and taking a toll on agriculture. Big agricultural production states like Uttar Pradesh and Andhra were affected, and the country suffered a loss of about ₹5,000 crores.

Details:

• The study sought to predict the future flash droughts using a Community Earth System Model which simulates the summer monsoon precipitation, sea surface temperature, role of El Nino Southern Oscillation, and air temperature over India.

• The study also examined the role of greenhouse gas emissions, industrial aerosols, and land-use/land-cover change in the advent of flash droughts.

Concerns:

Increased risk:

• The ongoing climate change has caused a significant increase in global temperature and this can lead to more and more flash droughts in the coming years.

• The duration, intensity, and area vulnerable to the flash drought are expected to rise.

• The study showed a considerable rise in the frequency of extremely dry and hot years in the coming three decades. The frequency of concurrent hot and dry extremes is projected to rise by about five-fold, causing an approximately seven-fold increase in flash droughts like 1979 by the end of the 21st century.

Impact on human life:

• The increased frequency of flash droughts can have deleterious implications for crop production, irrigation demands and groundwater abstraction in India.

Way forward:

GHG mitigation:

• By meeting the 'Paris Agreement' goals and limiting global warming to well below 2 degrees C, the numbers and frequency of the projected flash droughts may go down.

Predicting flash droughts:

• Flash-drought prediction ahead of time using operational meteorological forecasts will help manage irrigation water demands and avoid considerable losses in agriculture.

EDUCATION

1. A safety net for education sector

> » Mains: Impact of the pandemic on the education sector

Context:

- To avert a large drop-out crisis in the education sector, the states have been directed by the Union Education Ministry to launch a programme that would address the issue.

Background:

Schooling in COVID-19 times:

- The COVID-19 pandemic spread meant that India had to go into a lockdown and consequently schools had to be closed. Schools remained shut for over nine months due to the coronavirus outbreak.

- According to the rough estimates of UNESCO, worldwide close to 320 million students were locked out of school by the end of the year 2020.

- The regions of South and West Asia are among the regions where students face the highest risk of not returning to schools and tertiary institutions, along with sub-Saharan Africa.

- The coronavirus pandemic ensured a major shift in how schooling was carried out, the lockdown meant that the schools had to shift to online mode, while this in itself was a challenge, considering the socio-economic status of people in India. There have been numerous incidences where the students who did not have access to smartphones, laptop, the internet had to suffer.

Challenges:

- A brief assessment of the status of school education revealed that though India was making progress towards increased enrolment, the issue of dropouts was not completely addressed. The reasons that were briefly outlined for dropping out were poverty, economic reasons, and ill-health.

- The economic distress has become prevalent with high job losses, wage cuts, reduced economic activities post the onset of a pandemic, while the digital divide witnessed in online education also created a new imbalance.

- The Indian education setup is a gigantic structure with vast administrative resources at its disposal. The Indian school education system remains top-down in making policy, which may not advance educational reform.

Way forward:

Preparing a database:

- The education authorities must carry out a door-to-door survey to identify and enumerate students who are not in a position to return to classes when schools reopen.

- They must prioritise the door-to-door surveys needed to identify students who are not in a position to return to classes when schools restart, and whose economic circumstances have changed due to the pandemic's impact on their families.

- The door-to-door survey will enable setting up a database, which will assist in drawing up plans to prevent students from dropping out owing to COVID-19 induced problems.

Reforms in the sector:

- The governments have to explore options such as no-detention policy, tweaking the examination pattern, directing adequate finance to the education sector, this will go a long way in keeping children in school despite the hardships of the pandemic.

No detention policy:

- The role of examinations has come under the scanner, it has been argued for several years that the rigid nature of the Indian examination structure does not assess the students of their capabilities.

- The removal of no-detention policy last year has created stress among the students and their parents. The pandemic and the lockdown has affected certain sections far more deeply than others, thus the asymmetries among groups of students are more pronounced than ever, and any detention would not be logical or a sound policy.

- Measures such as relaxation of the detention policy will go a long way in alleviating the anxiety of millions of students about their academic prospects.

Government initiatives in the education sector

2. STARS Project

> » Prelims: STARS project

Context:

- Agreement for financial support to STARS project signed between Department of Economic Affairs (DEA) and World Bank.

Details:

- Agreement for the financial support of the implementation of Strengthening Teaching-Learning and Results for States (STARS) project of the Ministry of Education was signed between the Department of Economic Affairs (DEA) and World Bank along with the Ministry of Education.

About STARS Project:

- The STARS project would be implemented as a new Centrally Sponsored Scheme under the Department of School Education and Literacy (DoSEL), MOE.

- The project covers 6 States namely, Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha. The identified States will be supported for various interventions for improving the quality of education.

GEOGRAPHY

1. **Meteorites**

   » Prelims: OSIRIS-REx and Hayabusa mission

   » Mains: Significance of the study of astronomical objects

   Context

   • The meteorite fall near Jaipur in the year 2017.

   Background:

   • A meteorite is a term given to a piece of a comet or asteroid that falls into the earth's atmosphere and survives to hit the surface.

   • Meteorites are broadly classified into three groups – stony (silicate-rich), iron (Fe–Ni alloy), and stony-iron (mixed silicate–iron alloy).

Classification of meteorites

Meteorites –nickel-iron alloys, silicates, sulfides, and several other minor phases

Irons	Stony-irons	Stony
Characterized by two nickel-iron alloy metals: kamacite and taenite.	Consist of almost equal amounts of nickel-iron alloy and silicate minerals	-Most abundant of the three meteorite groups. - Closest to resembling earth rocks in their appearance and composition. -Major portion of these meteorites consists: silicate minerals olivine, pyroxene, and plagioclase feldspars. -Aside from being the most abundant meteorite type, stony meteorites have the greatest variety in composition, color, and structure.

• Classification is made base on:
  ↳ the ratio of metal to silicate present in the various compositions.

• No two meteorites are completely alike.
  ↳ specific compositional and structural features give a particular meteorite its unique identity.

Details:

- The Geological Survey of India has been carrying out investigation on the remnants of the meteorite to discover vital information about the solar system.

- The meteorite was named Mukundpura CM2 and was classified to be a carbonaceous chondrite.

- The meteorite has been said to have belonged to a section of primitive, meteorites.

- The Mukundpura CM2 has a stony exterior and is believed to be a remnant of the first solid bodies to accrete in the solar system. The composition of carbonaceous chondrites is also similar to the Sun.

- Chondrites are silicate-droplet-bearing meteorites, and this Mukundpura chondrite is the fifth carbonaceous meteorite known to fall in India.

Significance of the study:

- Meteorites are representative of asteroids. Asteroids are the remnant debris of the inner solar system formation process and thus offer vital information about the building blocks of the planets. Undertaking studies of meteorites in the laboratory and asteroids by exploration and sample return mission will give a better sneak-peak into the formation of the solar system.

- Also, asteroids are often rich in volatiles and other minerals and thus will provide information that will be crucial for planning future planetary explorations.

- The studies concerning Mukundpura CM2 are relevant to the surface composition of near-Earth asteroids Ryugu and Bennu.

  * NASA's OSIRIS-REx mission collected samples from Bennu during 2020 and is expected to reach planet earth by 2023.

  * Japan's Hayabusa-2 mission returned back to Earth after collecting from Ryugu.

- Infrared spectroscopy results have indicated that the spectral properties of the surface of these asteroids are consistent with CM carbonaceous meteorites. Therefore, a better understanding of the nature and evolution of such meteorites that have been aqueously altered will help considerably in the interpretation of the results of these missions.

Geography-Mineral distribution in India

2. Arunachal harbours a vanadium source

» Prelims: GSI, Vanadium distribution in India

Context

- Exploration activities being carried out by the Geological Survey of India (GSI) in Arunachal Pradesh. The exploration has thrown up the chances of finding vanadium deposits in Arunachal Pradesh.

Background:

Vanadium:

- Vanadium is a hard, silvery-grey, malleable transition metal.

- It is a high-value metal used in strengthening steel and titanium.

- The elemental metal is rarely found in nature. It is recovered as a by-product from the slag collected from the processing of vanadiferous magnetite ores (iron ore).

- The largest deposits of vanadium of the world are in China, followed by Russia and South Africa. China, which produces 57% of the world's vanadium, consumed 44% of the metal in 2017.

- India is a significant consumer of vanadium, but is not a primary producer of the strategic metal. According to data provided by the GSI, India consumed 4% of about 84,000 tonnes of vanadium produced across the globe in 2017.

Details:

- Promising concentrations of vanadium have been found in the palaeo-proterozoic carbonaceous phyllite rocks in the Depo and Tamang areas of Papum Pare district in Arunachal Pradesh.

- This was the first report of a primary deposit of vanadium in India, with an average grade of 0.76% vanadium pentoxide.

- The expected grade of vanadium mineralisation in Arunachal Pradesh is comparable to the important vanadium deposits of the world. Vanadium mineralisation in Arunachal Pradesh is geologically similar to the stone coal vanadium deposits of China hosted in carbonaceous shale.

- Arunachal Pradesh, considered a sleeping hydropower giant, is likely to become India's prime producer of vanadium.

Geography-Climatology

3. Climate of India in 2020

» Prelims: Cyclones, Temperature and rainfall trends in India

» Mains: Effect of Climate change in India

Context

- IMD issues a statement on Climate of India during 2020.

Highlights of IMD's Statement:

- The year 2020 was the eighth warmest year on record since nation-wide records commenced in 1901. However, this is substantially lower than

the highest warming observed over India during 2016. The monsoon and post-monsoon seasons with mean temperature anomalies mainly contributed to this warming.

- The monsoon season rainfall over the country as a whole was above normal. The 2020 annual rainfall over the country as a whole was 109% of its Long Period Average (LPA) based on the data of 1961-2010.

- During 2020, 5 cyclones formed over the North Indian Ocean. These are Super cyclonic Storm AMPHAN, Very Severe Cyclonic Storms NIVAR & GATI, Severe Cyclonic Storm NISARGA, and Cyclonic Storm 'BUREVI'.

- The country also experienced other high impact weather events like, extremely heavy rainfall, floods, landslide, thunderstorm, lightning, cold waves, etc.

Loss of human life to natural disasters:

- Bihar & Uttar Pradesh were the most adversely affected states during the year which reportedly claimed more than 350 deaths from each state mainly due to thunderstorm, lightning & cold wave events.

- Heavy rainfall & flood related incidents reportedly claimed over 600 lives from different parts of the country during pre-monsoon, monsoon & post-monsoon seasons.

Geography-Climatology

4. ACROSS Scheme

» Prelims: ACROSS scheme

» Mains: Significance of weather forecasting

Details:

- ACROSS stands for Atmospheric and Climate Research-Modelling Observing Systems and Services (ACROSS)

- ACROSS scheme pertains to the atmospheric science programs of the Ministry of Earth Sciences (MoES).

- It addresses different aspects of weather and climate services, which includes warnings for cyclone, storm surges, heatwaves, thunderstorms, etc.

- The ACROSS scheme consists of nine sub-programmes which are multi-disciplinary and multi-institutional in nature and will be implemented in an integrated manner.

- As the objective of the ACROSS scheme is to provide reliable weather and climate forecast for the betterment of society, the scheme aims at improving the skill of weather and climate forecast through sustained observations and intensive R & D.

- The scheme provides improved weather, climate and ocean forecast and services, thereby ensuring the transfer of commensurate benefits to the various services.

Geography-Climatology

5. New monsoon forecast models

» Prelims: Monsoon pattern in India; temporal and spatial variation of monsoons over India

» Mains: Significance of Monsoon forecasting

Context

- The India Meteorological Department (IMD) may introduce new monsoon models this year to better forecast changes in rainfall.

Background:

Need for new models:

- The monsoon that concluded in 2020 was unique, in that with monsoon 2019, it was only the third time in a century that India saw back-to-back years of above normal rainfall. Monsoon 2019 was a 25-year high.

- The IMD failed to forecast the magnitude of the excess and only indicated that the monsoon would be above normal.

Details:

- The accuracy of the existing models, emerging weather models and their strengths and weaknesses in capturing the vagaries of the monsoon and the extent to which they were effective, over varying time-scales, in forecasting heavy rain or an extended dry patch needs to be analyzed.

- Keeping the above factors in mind, two dynamical models and a statistical model could be tested in 2021.

  * In the dynamical models, the climate on any particular day is simulated on supercomputers and meteorologists observe the changing daily output.

  * The traditional statistical model would equate relationships of physical parameters, such as sea surface temperatures, snowfall, the temperature of landmass, with the actual observed rainfall in the past.

GOVERNANCE

1. Incentivizing electric mobility

» Prelims: NEMMP, FAME scheme, Lithium- global distribution.

» Mains: Measures taken by the government to incentivize electric mobility

Context:

• To meet its global commitment on climate action and mitigate the adverse impact of the automobiles, the Government is keen to shift automobile sector towards electric vehicles.

Significance of electric mobility:

• The progression to electric vehicles is important for India because such vehicles are sustainable and profitable in the long term.

• The shift to electric vehicles will have benefits in multiple ways, such as help in reducing crude oil imports and building domestic energy independence while also helping reduce carbon emissions.

• Out of the 15 most polluted cities in the world in terms of PM 2.5 concentration, 14 are in India. The country will stand to benefit with embracing electric mobility as it will lead to a substantial reduction in vehicular emissions.

• Embracing electric vehicles is an economically and environmentally viable option.

• Shift to electric mobility will be a long-term solution to clean our cities, build new markets, and skill people for new jobs towards an 'Atmanirbhar Bharat'.

Impact on India's foreign policy:

• The shift to electric vehicles will also have a definitive impact on the conduct of India's foreign policy as our energy security dependence will shift from West Asia to Latin America.

* India imported 228.6 MT of crude oil worth $120 billion in 2018–19, which made it the third-largest oil importer in the world in terms of value.

• At present, India's biggest trading partners in Latin America are Brazil, Mexico, and Venezuela, and the majority of trade is concentrated on crude oil which includes 14%-20% of India's total crude oil imports. However, this may soon shift to lithium and cobalt. The impetus on developing domestic battery manufacturing will need a fundamental change in India's relationship with resource-rich Latin America as the government plans to buy overseas lithium reserves.

* The lithium and cobalt industry will have to grow domestically to support the switch to electric vehicles. The last two years have seen a surge in the appetite for lithium-ion batteries, and consequently, lithium imports have tripled from $384 mn to $1.2 bn.

• The opportunity to tap into Latin America's famous lithium triangle that encompasses lithium deposits under the salt flats of northwest Argentina, northern Chile, and southwest Bolivia will be extremely important.

* The three countries hold about 80% of the explored lithium of the world

Government initiatives:

The National Electric Mobility Mission Plan (NEMMP) 2020:

• It is the national Mission providing the vision and the roadmap for the faster adoption of electric vehicles and their manufacturing in the country.

• This plan has been designed to enhance national fuel security, to provide affordable and environmentally friendly transportation and to enable the Indian automotive industry to achieve global manufacturing leadership.

- Under the NEMMP 2020, there is an ambitious target to achieve 6-7 million sales of hybrid and electric vehicles by the year 2020.

Faster Adoption and Manufacturing of Hybrid and Electric Vehicles:

FAME-I:

- The government adopted the Faster Adoption and Manufacturing of Hybrid and EV (FAME) scheme in 2015 with an outlay of INR 8.95 billion (USD 130 million), which provided subsidies for electric 2- and 3-wheelers, hybrid and e-cars and buses.

FAME-II:

- Government has approved Phase-II of FAME Scheme with an outlay of Rs. 10,000 Crore for a period of 3 years commencing from 1st April 2019. Out of total budgetary support, about 86 per cent of the fund has been allocated for demand Incentive to create demand for EVs in the country.

- The government has allocated incentives for electric buses, three-wheelers and four-wheelers to be used for commercial purposes till 2022, and earmarked another $135 million for charging stations.

  * Based on the experience gained in the Phase-I of FAME India Scheme, it has been observed that a sufficient number of charging infrastructure is required to achieve expected outcome of the plan, which is being addressed presently in Phase-II of FAME Scheme.

NITI Aayog proposal:

- A proposal for a $4.6 billion subsidy for battery makers has also been proposed by the NITI Aayog.

- These policies are embedded with the vision to have 30% of electric vehicles plying the roads by 2030.

Attracting foreign automobile companies to set up base in India:

- Japanese automobile major Suzuki Motor formed a consortium with Japanese automotive component manufacturer Denso and multinational conglomerate Toshiba to set up a manufacturing unit in Gujarat. The unit will get into the production of lithium-ion batteries and electrodes.

Scouting for mineral assets:

- The present lithium imports are narrow in sources, imports from China and Vietnam would not be sufficient to meet India's needs and this has pushed India to look for resources elsewhere as well.

- The Government has taken pre-emptive action to send a high-level delegation to have a precise understanding of the availability of lithium and possibilities of joint ventures that will supply domestic markets and drive international markets.

- The need to secure a stable supply of lithium and cobalt prompted India's National Aluminium Company Limited (NALCO), Hindustan Copper Limited (HCL) and Mineral Exploration Corporation Ltd (MECL) to form a consortium named Khanij Bidesh India Limited (KABIL) to scout for strategic mineral assets like lithium and cobalt abroad for commercial use and for supplying to meet the domestic requirement for battery manufacturers.

Additional information:

- Lithium also has other applications other than being an important component of lithium batteries. Lithium is also used as a drug to treat bipolar disorder and is soon becoming the metal to treat a world polluted by excessive carbon emissions.

Government schemes

2. PM-KISAN scheme

  » Prelims: PM-KISAN scheme

  » Mains: Challenges in implementation of government schemes

Context:

- According to a response to a RTI request, PM-KISAN payments worth ₹1,364 crore have been wrongly made to more than 20 lakh ineligible beneficiaries and income tax payer farmers.

Background:

PM-Kisan:

- Pradhan Mantri Kisan Samman Nidhi is a central sector scheme under the government of India which provides income support to the farmers and their families.

- Under the scheme an income support of 6,000/- per year in three equal instalments is provided to small and marginal farmer families having combined land holding/ownership of upto 2 hectares. (Recently, the land size criterion has been removed to include large farmers as well).

- State Government and UT administration will identify the farmer families which are eligible for support as per scheme guidelines.

- The fund will be directly transferred to the bank accounts of the beneficiaries.

Exclusions:

- There are various Exclusion Categories for the scheme. The following categories of beneficiaries of higher economic status shall not be eligible for benefit under the scheme.

  * All Institutional Land holders.

  * Farmer families which belong to one or more of the following categories:

    » Former and present holders of constitutional posts.

    » Former and present Ministers, Members of LokSabha/ RajyaSabha/ State Legislative Assemblies/ State Legislative Councils, Mayors of Municipal Corporations, Chairpersons of District Panchayats.

    » All serving or retired officers and employees of Central/ State Government Ministries Public Sector Undertakings and Attached offices /Autonomous Institutions under Government as well as regular employees of the Local Bodies.

    » All superannuated/retired pensioners whose monthly pension is Rs.10,000/-or more.

    » All Persons who paid Income Tax in last assessment year.

    » Professionals like Doctors, Engineers, Lawyers, Chartered Accountants, and Architects registered with Professional bodies and carrying out profession by undertaking practices.

Issue:

- There are 11 crore beneficiaries registered under the scheme. However, until July 2020, 20.5 lakh people who should have been excluded had wrongly received PM-Kisan payouts.

- 56% of these undeserving persons belonged to the "income tax payee" category, while the remainder belong to the "ineligible farmers" category.

- Punjab tops the list of States, accounting for 23% of those who wrongly received money. Maharashtra and Assam also saw a large number of such payments.

- A number of State Agriculture Departments have now been tasked with recovering the money wrongly paid.

MISCELLANEOUS

1. Update debate

» Prelims: General Data Protection Regulation

» Mains: Challenges posed by Big tech dominance

Context

- WhatsApp has announced that it would delay the new policy launch to May from February after facing a backlash worldwide.

  * The reaction from the users was so strong that millions of new users signed up for alternatives such as Telegram and Signal — around 25 million new users signed up for Telegram in just three days, and Signal became the number one app in its category in many parts of the world.

Details:

- The announcement by WhatsApp about the update to its terms of service and privacy policy was the beginning of the problems for the Facebook-owned app.

- The update to its terms of service and privacy policy would mean that the users would no longer have the option to opt-out of sharing data with Facebook was.

- A deadline of February 8 was announced for accepting the new terms, but this proved to be counterproductive as it led to a mass exodus from WhatsApp.

- Users leaving the app was unprecedented, never in the history of the application had it seen such a huge backlash, not even in the aftermath of the Cambridge Analytica scandal.

  * The Facebook–Cambridge Analytica data scandal concerned the obtaining of the personal data of millions of Facebook users without their consent by British consulting firm Cambridge Analytica, predominantly to be used for political advertising.

Cause for concern:

- The WhatsApp policy update did not go down well with the users, their concerns largely revolved around privacy not being protected.

WhatsApp justification:

- The company has come out saying that all the messages are end-to-end encrypted, and it doesn't keep logs of who people message or call.

- The app already shares certain categories of personal data, including the user's phone number and IP address, with Facebook.

- The service also tried to clarify that WhatsApp can't see the shared location (neither can Facebook), and it doesn't share users' contacts with Facebook.

- WhatsApp has also justified that millions of business interactions take place every day on WhatsApp, and the new privacy updates will make it easier while also enabling personalised ads on Facebook.

What may happen?

- WhatsApp has chosen to postpone the update to May 15. The opting out of sharing data with Facebook is inevitable as WhatsApp was acquired by Facebook for a $19 billion.

- WhatsApp gave up plans to charge its users and thus would be aiming to monetize the app by the handling of business interactions.

- The change in terms of services is not applicable to its users in Europe, as Europe's data protection regime going by the name of General Data Protection Regulation (GDPR) prevents such sharing between apps. Users in Europe governed by GDPR, exercise far greater ownership and thus the control of their data than the rest of the world.

Conclusion:

- In the present era where data is referred to as the "new oil", digital companies are looking at opportunities to share the data, monetize the data, this could create an incentive for a private data breach.

- The recent WhatsApp episode has highlighted as to how the Privacy of citizens is too important to be left to the business practices of digital companies.

- In India, the discussion on a Data Protection law has been on for several years now, a Data Protection Bill was proposed more than a year ago, but has not proceeded further. The recent events have highlighted the need to regulate digital companies dealing with private data of people.

- Privacy of a billion citizens is too important a thing to be left just to the practices of a commercial enterprise. It will be reassuring if it is guaranteed by a strong law.

Additional information:

General Data Protection Regulation (GDPR):

- The General Data Protection Regulation (GDPR) is an EU law on data protection and privacy for all individual citizens of the European Union (EU) and the European Economic Area (EEA).

- GDPR is a regulation that requires businesses to protect the personal data and privacy of EU citizens for transactions that occur within EU member states. And non-compliance could cost companies dearly.

- The General Data Protection Regulation (GDPR) sets a new standard for consumer rights regarding their data.

- GDPR protects privacy data like
  * Basic identity information such as name, address and ID number.
  * Web data such as location, IP address, cookie data and RFID tags
  * Health and genetic data
  * Biometric data
  * Racial or ethnic data
  * Political opinions
  * Sexual orientation

- GDPR serves as a template on which Indian policymakers can work upon in drafting a Personal Data Protection legislation.

PRACTICE QUESTIONS

1. **Which of the following statements best describes Interconnection Usage Charges (IUC)?**

   A. Usage and licensing fee that telecom operators are charged by the Department of Telecommunications (DoT).

   B. Charge paid by the Telecommunication service provider (TSP) whose subscriber makes a call, to the Telecommunication Service Provider whose subscriber receives the call.

   C. The amount paid by subscribers to the distributor for distribution of TV channels subscribed by them.

   D. Fee paid to be a part of the closed user group for seamless sharing of calls and data between members associated within the group.

2. **Which of the following statements is correct with respect to CoWIN?**

   A. It is a digitalised platform to be used to effectively roll out and scale up the mechanism for COVID Vaccine Distribution System in India.

   B. It is a COVID-19 contact tracing, syndromic mapping and self-assessment digital service.

   C. It is a Vaccine Alliance for increasing access to immunisation in poor countries.

   D. It is the first vaccine candidate to be approved by the Drugs Controller General of India (DCGI).

3. **Consider the following statements:**

   1. It has 12 pairs of exquisitely ornamented wheels pulled by seven horses.

   2. It was built by King Narasimhadeva I, the great ruler of Ganga dynasty.

   3. The temple is also known as 'Black Pagoda'.

   The world heritage site described in the above statements is:

   A. Airavateshwara Temple, Thanjavur

   B. Hampi Stone Chariot, Hampi

   C. Sun Temple, Konark

   D. Dharamaraja Ratha, Mahabalipuram

4. **Consider the following statements with respect to National Human Rights Commission:**

   1. It is a constitutional body.

   2. The chairperson is a retired chief justice of India or a judge of the Supreme Court.

   3. Chairpersons of National Commission for Minorities, National Commission for Scheduled Castes, National Commission for Scheduled Tribes and National Commission for Women are the ex-officio members of NHRC.

   Which of the given statement/s is/are correct?

   A. 1 only

   B. 1 and 3 only

   C. 1, 2 and 3

   D. 2 and 3 only

5. **Financial Stability Report is released by which of the following organisation?**

   A. International Monetary Fund

   B. World Bank

   C. Reserve Bank of India

   D. World Economic Forum

6. **Consider the following:**

   1. Ranganathittu Bird Sanctuary : Kerala

   2. Deepor Beel Bird Sanctuary : Assam

   3. Velavadar Bird Sanctuary : Maharashtra

   Which of the above is/are correctly matched?

   A. 1 only.

   B. 2 and 3 only

   C. 2 only

   D. 1, 2 and 3

7. **UNSC Resolution 1373 deal with which of the following**

   A. Eradication of racism.

   B. Suppression of terrorism.

   C. Environmental conservation.

   D. Protection of Global Commons.

8. **River Tirekhtyakh is found in which of the following countries?**

   A. Russia

   B. South Africa

   C. Japan

   D. Turkey

9. **Consider the following statements:**

1. A medical condition in which the body has abnormally high levels of blood sugar or glucose is called hypoglycemia.

2. Glucagon is a peptide hormone that stimulates glycogenolysis resulting in increased blood sugar.

3. Hypoglycemia is a commonly seen sign among Acute encephalitis syndrome (AES) patients.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1, 2 and 3

D. 3 only

10. **Which of the given pairs are correctly matched?**

1. Nanjangud banana – Karnataka

2. Virupakshi Hill banana – Kerala

3. Chengalikodan Nendran banana – Tamil Nadu

4. Jalgaon banana – Maharashtra

Choose the correct option:

A. 1 and 4 only

B. 1, 2 and 4 only

C. 2 and 3 only

D. 3 and 4 only

11. **Consider the following statements with respect to trans-fat:**

1. Trans fats are a form of unsaturated fat created by converting liquid vegetable oils into semi-solid partially hydrogenated oil.

2. Trans fats are produced artificially and do not occur naturally.

3. Trans fats not only raise total cholesterol levels but also reduce good cholesterol (HDL).

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 only

C. 2 and 3 only

D. None of the above

12. **Consider the following statements with respect to the Central Vigilance Commission (CVC):**

1. CVC was created via executive resolution and was later conferred with statutory status.

2. It was created based on the recommendations of the Santhanam Committee.

3. The CVC is under the control of the Ministry of Home Affairs and submits its reports to the Ministry.

Which of the given statement/s is/are correct?

A. 3 only

B. 1 only

C. 2 and 3 only

D. 1 and 2 only

13. **Consider the following statements with respect to Pong Dam Lake:**

1. The Lake is located in Uttarakhand.

2. It is a Ramsar Site.

3. Pong Dam Lake is declared a wildlife sanctuary.

Which of the given statement/s is/are INCORRECT?

A. 1 and 2 only

B. 3 only

C. 1 only

D. None of the above

14. **Which of the following zoo/s host/s pangolin conservation and breeding centre?**

1. Nandankanan zoo

2. Arignar Anna Zoological Park

3. Kurumbapatti Zoological Park

Choose the correct option:

A. 1 only

B. 2 and 3 only

C. 1, 2 and 3

D. 3 only

15. **Consider the following statements with respect to Regulation S bonds:**

1. Regulation S bonds are issued by foreign issuers in the U.S. debt market.

2. These bonds are denominated in U.S. dollars.

3. Resident American citizens cannot subscribe to them.

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 3 only

C. 2 and 3 only

D. 1, 2 and 3

16. **Consider the following statements with respect to Dal Lake:**

1. It has been declared an Eco-Sensitive Zone.

2. The lake is located in the Zabarwan mountain valley.

3. It is surrounded by Shankaracharya hills on three sides.

4. Hazratbal, Bod dal, Gagribal and Nagin are four main interconnected basins of the lake.

Which of the given statement/s is/are correct?

A. 2, 3 and 4 only

B. 1, 2, 3 and 4

C. 2 and 3 only

D. 1 and 2 only

17. **Global Economic Prospects is released by:**

A. World Trade Organisation

B. International Monetary Fund

C. World Bank

D. World Economic Forum

18. **Which of the given pairs are correctly matched?**

1. Channapatna toys – Karnataka

2. Etikoppa toys – Tamil Nadu

3. Sawantwadi toys – Gujarat

4. Kondapalli Bommalu – Andhra Pradesh

Choose the correct option:

A. 1 and 4 only

B. 2 and 3 only

C. 1, 2 and 4 only

D. 3 and 4 only

19. **Consider the following statements with respect to Gulf Co-operation Council:**

1. It is a political and economic union of countries surrounding the Persian Gulf.

2. Its headquarters is located at Riyadh, Saudi Arabia.

3. Iraq is not a part of GCC

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 3 only

C. 2 and 3 only

D. 1, 2 and 3

20. **What is the status of Indian Skimmer in the IUCN Red List?**

A. Critically Endangered

B. Endangered

C. Vulnerable

D. Least Concern

21. **The famous Rev Stanislaus vs Madhya Pradesh, 1977 case is associated with which of the following?**

A. Right to equality

B. Right to constitutional remedies

C. Right to practise and propagate religion

D. Right to privacy

22. **Pong Dam wildlife sanctuary is located in**

A. Madhya Pradesh

B. Odisha

C. Himachal Pradesh

D. Assam

23. **Consider the following statements:**

1. Parliamentary committees do not find a mention in the Constitution of India.

2. The consultative committees are not a part of parliamentary committees.

Which of the above statements is/are true?

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

24. **Consider the following statements about the Indian Ocean Commission:**

1. The Indian Ocean Commission is an initiative of India with the ASEAN nations.

2. The Commission was established immediately after the 2004 tsunami.

3. Japan and the European Union are observers on this platform.

Which of the above statements is/are true?

A. 1 and 2 only

B. 2 and 3 only

C. 3 only

D. All of the above

25. **The 'Section 301' report is a flagship publication of which of the following?**

A. World Bank

B. World Economic Forum

C. International Monetary Fund

D. United States Trade Representative (USTR)

26. Which of the following Cabinet Committee is headed by the Union Minister of Home Affairs?

A. Cabinet committee on security

B. Cabinet committee on political affairs

C. Cabinet committee on economic affairs

D. Cabinet Committee on Accommodation

27. Which of the following is the best description of Fundamental Rights?

A. All the rights an individual should have.

B. All the rights given to citizens by law.

C. The rights given and protected by the Constitution.

D. The rights given by the Constitution that cannot ever be restricted.

28. Project ECHO is associated with

A. Wildlife conservation

B. Promotion of women rights

C. Tribal rights

D. Healthcare

29. With reference to the Gangetic River Dolphin, which of the following statement/s is/are correct?

1. It is recognized as the National Aquatic Animal.

2. Its IUCN status is critically endangered.

Options:

A. 1 only

B. 2 only

C. Both

D. None

30. Which of the following are the functions of Directorate General of Civil Aviation (DGCA)?

1. Keeping a check on aircraft noise and engine emissions

2. Promoting indigenous design and manufacture of aircraft

3. Checks on the proficiency of flight crew

4. Construction, Modification and Management of passenger terminals

Options:

A. 1, 2 and 3 only

B. 2, 3 and 4 only

C. 1, 3 and 4 only

D. 1, 2, 3 and 4

31. Muga silk protected with the Geographical Indication (GI) tag is from the state of

A. Tamil Nadu

B. Karnataka

C. Gujarat

D. Assam

32. Which of the following are the tiger landscapes in India?

1. Shivalik Hills and Gangetic Plains

2. Central Indian Landscape and Eastern Ghats

3. Western Ghats

4. North-East Hills and Brahmaputra Plains

5. The Sundarbans

Options:

A. 2, 3 and 4 only

B. 1, 3 and 5 only

C. 1, 2, 3, 4 and 5

D. 3, 4 and 5 only

33. Consider the following pairs:

Martial Arts:	State
1. Silambam:	Karnataka
2. Kalariyapattu:	Kerala
3. Sarit Sarak:	Mizoram
4. Gatka:	Punjab

Which of the above is/are correctly matched?

A. 1 and 2 only

B. 2 and 4 only

C. 3 only

D 1, 2, 3 and 4

34. Consider the following statements:

1. Hayabusa- 2 is a mission to moon by the Japanese space agency.

2. OSIRIS Rex is an asteroid sampling mission by NASA

Which of the above statement/s is/are true?

A. 1 only

B. 2 only

C. Both

D. None

35. Pangti village was recently in news for

A. Only known habitat of Apatani tribes.

B. Arogyapacha plant was discovered.

C. Conservation of Amur Falcon

D. Breakout of Avian influenza.

36. Ex EKUVERIN is a bilateral exercise of India with which of the following countries?

A. Oman

B. Indonesia

C. Myanmar

D. Maldives

37. Which of the following are the member states of Gulf Co-operation Council?

1. Bahrain

2. Kuwait

3. Oman

4. Iraq

5. Qatar

Choose the correct option:

A. 1, 2, 3 and 4 only

B. 1, 2, 3, 4 and 5

C. 2, 4 and 5 only

D. 1, 2, 3 and 5 only

38. Gangasagar Festival is organised in which Indian state?

A. Uttarakhand

B. West Bengal

C. Uttar Pradesh

D. Madhya Pradesh

39. Consider the following statements with respect to Vanadium:

1. It is a malleable transition metal rarely found in nature.

2. It is used in strengthening steel and titanium.

3. The largest deposits of vanadium of the world are in India.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1, 2 and 3

D. 1 only

40. Consider the following statements with respect to the

Animal Welfare Board of India:

1. The Animal Welfare Board of India is a statutory advisory body.

2. It was started under the stewardship of Smt. Rukmini Devi Arundale.

3. The Board is within the jurisdiction of the Government of India's Ministry of Environment, Forest and Climate Change.

Which of the given statement/s is/are incorrect?

A. 1 only

B. 3 only

C. 1 and 2 only

D. None of the above

41. Abraham Accords were signed between which of the following countries?

1. Israel

2. United Arab Emirates

3. Qatar

4. Iran

5. Saudi Arabia

Choose the correct option:

A. 1 and 2 only

B. 1, 3 and 5 only

C. 2, 4 and 5 only

D. 1, 2 and 5 only

42. Which of the following categorie/s of farmers is/are excluded from the list of beneficiaries of PM-Kisan?

1. Farmer families having a combined landholding of more than 2 hectares.

2. Institutional Landholders.

3. Farmer families having a combined landholding of less than 2 hectares.

4. Persons who have paid Income Tax in the last assessment year.

Choose the correct option:

A. 1, 2 and 4 only

B. 1, 2, 3 and 4

C. 2 and 4 only

D. 2 only

43. Consider the following statements with respect to Prime Minister's National Relief Fund (PMNRF):

1. The initial purpose of the fund was to help people displaced due to the partition of India and Pakistan.

2. The resources of the PMNRF are utilized primarily to render immediate relief to families of those killed in natural calamities.

3.   PMNRF has not been constituted by the Parliament.

4.   Home Minister is the Chairman of PMNRF.

Which of the given statement/s is/are correct?

A. 1, 2 and 3 only

B. 2, 3 and 4 only

C. 2 only

D. 3 and 4 only

44. Dzukou Valley is located at the borders of which of the following states?

A. Nagaland and Manipur

B. Manipur and Mizoram

C. Nagaland and Arunachal Pradesh

D. Assam and Meghalaya

45. Consider the following statements with respect to Migrant Integration Policy Index (MIPEX):

1.   It covers 52 countries in five continents.

2.   There are 5 policy indicators on migrant integration in the MIPEX.

3.   The Migrant Integration Policy Index was earlier called European Civic Citizenship and Inclusion Index.

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 3 only

C. 2 and 3 only

D. 1, 2 and 3

46. Consider the following pairs:

Festival	State
1. Maghi	Punjab
2. Saaji	Himachal Pradesh
3. Uttarayan	Rajasthan
4. Pongal	Kerala

Which of the given pairs are correctly matched?

A. 1, 2 and 4 only

B. 2 and 4 only

C. 1 and 2 only

D. 1, 2 and 3 only

47. Consider the following statements:

1.   India derives the provision of criminal contempt from the English system.

2.   Interfering or obstructing the administration of justice in any manner would amount to civil contempt.

3.   Criminal contempt is the wilful disobedience to any judgment, decree, direction, order, writ or other processes of a court or wilful breach of an undertaking given to a court.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 and 3 only

C. 1, 2 and 3

D. None of the above

48. Consider the following statements:

1.   The Financial Action Task Force (FATF) was established by G-7.

2.   The FATF Secretariat is housed at the OECD headquarters in Paris.

3.   All the members of FATF Asia-Pacific Group are the members of the Financial Action Task Force.

Which of the given statement/s is/are incorrect?

A. 2 only

B. 1 and 2 only

C. 3 only

D. 2 and 3 only

49. Global Findex report is released by

A. World Bank

B. Organisation for Economic Co-operation and Development

C. International Monetary Fund

D. World Economic Forum

50. Consider the following about Quadrilateral Coordination Group (QCG):

1.   Iran

2.   Iraq

3.   China

4.   Pakistan

5.   India

Which of the above are members of the Quadrilateral Coordination Group (QCG)?

A. 2, 3 and 4 only

B. 1, 3 and 5 only

C. 3 and 4 only

D. 1, 2, 3, 4 and 5

51. Consider the following:

1.   Brazil

2.   Ecuador

3. Guyana

4. Columbia

Which of the above are the neighbouring countries of Venezuela?

A. 1, 2 and 4 only

B. 2, 3 and 4 only

C. 1, 3 and 4 only

D. 1, 2 and 3 only

52. Consider the following statements about Judicial Review:

1. The concept of judicial review was borrowed from the United Kingdom.

2. The power of judicial review can be exercised only by the Supreme Court of India and not by the High Courts.

Which of the above statements is/are correct?

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

53. Nagi and Nakti bird sanctuaries are located in which state?

A. Bihar

B. Uttar Pradesh

C. Odisha

D. Madhya Pradesh

54. Consider the following statements about Open Skies Treaty:

1. It is an agreement that allows countries to monitor signatories' arms development by conducting surveillance flights over each other's territories.

2. The surveillance flights can collect data on military forces and activities.

3. India is a member of this treaty.

Which of the given statement/s is/are incorrect?

A. 2 only

B. 2 and 3 only

C. 3 only

D. 1 and 2 only

55. Intermediate-Range Nuclear Forces Treaty covered which of the following types of missiles?

1. Intermediate-range land-based missiles carrying nuclear warheads

2. Medium-range land-based missiles carrying nuclear warheads

3. Nuclear sea-launched missiles

Choose the correct option:

A. 1 only

B. 1 and 2 only

C. 1, 2 and 3

D. 2 and 3 only

56. Consider the following statements:

1. Central Adoption Resource Authority (CARA) is a statutory body of the Ministry of Women & Child Development.

2. CARA monitors and regulates both in-country and inter-country adoptions.

3. India has ratified the Hague Convention on Inter-country Adoption, 1993.

Which of the given statement/s is/are incorrect?

A. 2 only

B. 1 only

C. 2 and 3 only

D. None of the above

57. Consider the following

1. Hokera wetland: Punjab

2. Harike wetland: Assam

3. Kanjili wetland: Kerala

4. Rudrasagar wetland: Chattisgarh

Which of the following are correctly matched?

A. 1, 3 and 4 only.

B. 2 and 3 only.

C. 1, 2, 3 and 4

D. None

58. Consider the following statements about Central Pollution Control Board:

1. It is a statutory organisation which was constituted under the Environment Protection Act 1986.

2. It advises the Central Government on any matter concerning prevention and control of water and air pollution and improvement of the quality of air.

Which of the above statement/s is/are correct?

A. 1 only

B. 2 only

C. Both

D. None

59. Consider the following statements

1. The World Health Assembly is the decision-making body of WHO.

2. The Director-General of WHO is appointed by nations on a rotational basis.

Which of the above statement/s is/are correct?

A. 1 only

B. 2 only

C. Both

D. None

60. Gadwall, little cormorant and common teal, belong to

A. Reptiles

B. Birds

C. Primates

D. Amphibians

61. "Manju Virattu" or "Eru Thazhuvuthal" are associated with which of the following sports?

A. Kambala

B. Jallikattu

C. Vallam Kali

D. Sangai festival

62. Which of the following is/are correctly matched?

Place	Event
1. Kapilavastu	Birthplace of Buddha
2. Sarnath	Buddha gave his first sermon after attaining enlightenment
3. Rajgir	Buddha attained Mahaparinirvana
4. Kushinagar	First Buddhist council was held

Choose the correct option:

A. 1, 2 and 4 only

B. 2 only

C. 3 and 4 only

D. 2 and 3 only

63. Consider the following statements with respect to Swadesh Darshan Scheme:

1. It is a Central Sector scheme.

2. The scheme was launched by the Ministry of Culture.

3. Under the scheme, theme-based tourist circuits in the country are identified and developed.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

64. Consider the following statements about the National Investigation Agency (NIA):

1. It is the Central Counter-Terrorism Law Enforcement Agency in the country.

2. It is a statutory body headquartered in New Delhi.

3. It does not have the authority to investigate offences that are committed outside Indian territory.

4. The NIA can investigate terror cases across the country without having to get permission from the states.

Which of the given statement/s is/are incorrect?

A. 1 and 4 only

B. 2 only

C. 2 and 3 only

D. 3 only

65. Consider the following statements with respect to Indian Start Tortoise:

1. It is placed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora Appendix-I.

2. It is classified as Near Threatened in the IUCN Red List.

3. It is found in dry areas and scrub forests of India, Pakistan and Sri Lanka.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 only

C. 2 and 3 only

D. None of the above

66. The Char Dham as defined by Adi Shankaracharya comprises which of these pilgrimage sites?

1. Yamunotri

2. Dwaraka

3. Kedarnath

4. Badrinath

5. Puri

6. Gangotri

7. Rameshwaram

A. 2, 4, 5 and 7 only

B. 1, 3, 4 and 6 only

C. 2, 3, 4 and 7 only

D. 1, 3, 4 and 6 only

67. **Which of the following are considered the Great Trilogy of Ayurvedic Medicine?**

    1. Sushruta Samhita
    2. Charaka Samhita
    3. Brihat Samhita
    4. Ashtanga Hridaya
    5. Panchasiddhantika

    Choose the correct option:

    A. 1, 2 and 3

    B. 2, 3 and 4

    C. 3, 4 and 5

    D. 1, 2 and 4

68. **Consider the following statements with respect to United Nations Human Rights Council:**

    1. Its members are elected by the members of the General Assembly.

    2. A member is not allowed to occupy a seat for two consecutive terms.

    3. The members to the council are elected for five-year terms.

    Which of the given statement/s is/are correct?

    A. 1 only

    B. 2 and 3 only

    C. 1, 2 and 3

    D. 3 only

69. **Consider the following statements with respect to Countering America's Adversaries Through Sanctions Act (CAATSA):**

    1. It is a United States federal law.

    2. CAATSA includes sanctions against countries that engage in significant transactions with the Russian defence and intelligence sectors.

    3. Sanctions have been imposed under the act on Iran, North Korea and Turkey.

    Which of the given statement/s is/are correct?

    A. 1 and 2 only

    B. 2 and 3 only

    C. 1, 2 and 3

    D. 2 only

70. **Global Food Policy Report is published by:**

    A. Food and Agriculture Organisation

    B. International Food Policy Research Institute

    C. United Nations Population Fund

    D. World Health Organization

71. **Consider the following statements with respect to Subhas Chandra Bose:**

    1. He authored the book 'The Indian Struggle'.

    2. The newspaper named 'Swaraj' was started by him.

    3. He founded the Naujawan Bharat Sabha to promote revolution against British rule.

    Which of the given statement/s is/are correct?

    A. 1 only

    B. 2 only

    C. 2 and 3 only

    D. 1 and 2 only

72. **Exercise Desert Knight-21 and Garuda are air exercises between which of the following countries?**

    1. India
    2. France
    3. Australia
    4. Saudi Arabia

    Choose the correct option:

    A. 1 and 2 only

    B. 1 and 4 only

    C. 1, 2 and 3 only

    D. 1 and 3 only

73. **Consider the following statements with respect to International Labour Organization:**

    1. It was founded in 1919 under the League of Nations.

    2. The organisation has won the Nobel Peace Prize.

    3. Its annual flagship publication is called "The World Employment and Social Outlook".

    Which of the given statement/s is/are correct?

    A. 2 and 3 only

    B. 1, 2 and 3

    C. 3 only

    D. 1 and 3 only

74. **"Sanaa" recently in news is located in:**

    A. Yemen

    B. Saudi Arabia

    C. Azerbaijan

    D. Iran

75. **Which of the following is correct with respect to Secured Overnight Financing Rate (SOFR)?**

    1. It is a benchmark interest rate for dollar-denominated derivatives and loans.

2. SOFR is based on transactions in the Treasury repurchase market.

3. The Federal Reserve Bank of New York began publishing the SOFR as part of an effort to replace LIBOR.

Choose the correct option:

A. 1 only

B. 1 and 3 only

C. 2 and 3 only

D. 1, 2 and 3

76. Which of the following is/are classified under the Particularly Vulnerable Tribal Groups (PVTG)?

1. Toda

2. Kattunayakan

3. Onges

4. Reangs

Choose the correct option:

A. 2 only

B. 1 and 2 only

C. 3 and 4 only

D. 1, 2, 3 and 4

77. Which of the following pairs are correctly matched?

Instance	Majority
1. Election of the Speaker to Lok Sabha	Simple Majority
2. Removal of the Speaker	Special Majority
3. Removal of Rajya Sabha Chairman	Effective Majority

Choose the correct option:

A. 3 only

B. 1 and 3 only

C. 2 and 3 only

D. 1, 2 and 3

78. Consider the following statements with respect to the Question Hour:

1. Questions cannot be directed at the private members during this hour.

2. There is no Question Hour on the day the President addresses MPs from both Houses in the Central Hall.

3. It is not mentioned in the parliamentary rules book.

4. Question Hour is not scheduled on the day the Finance Minister presents the Budget.

Which of the given statement/s is/are INCORRECT?

A. 1 and 4 only

B. 2, 3 and 4 only

C. 1 and 3 only

D. None of the above

79. Consider the following pairs:

Martial Art forms	State
1. Kalaripayattu	Kerala
2. Gatka	Rajasthan
3. Thang Ta	Arunachal Pradesh

Which of the given pairs are correctly matched?

A. 1 and 3 only

B. 1 only

C. 2 and 3 only

D. 1, 2 and 3

80. Consider the following statements with respect to General Data Protection Regulation (GDPR):

1. It was drafted and passed by the European Union (EU).

2. It imposes obligations onto organizations anywhere, so long as they target or collect data related to people in the EU.

3. The GDPR provides for the 'right to be forgotten'.

Which of the given statements/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1, 2 and 3

D. None of the above

81. "Operation Trident" and "Operation Python" were a part of which of the following?

A. Indo-Pakistani War of 1971

B. Sino-Indian War of 1962

C. Kargil War of 1999

D. Indo-Pakistani War of 1965

82. Consider the following statements with respect to Mohiniyattam:

1. It is the classical solo dance form of Kerala.

2. Vyavaharamala written by Mazhamangalam Narayanan Namputiri has references of the art form.

3. In this the dancer usually stands on a brass plate locking the feet and moves the plate rhythmically with great dexterity.

Which of the given statement/s is/are INCORRECT?

A. 2 only

B. 1 and 2 only

C. 2 and 3 only

D. 3 only

83. **Which of the following is/are Indian Arctic Research Base/s?**

1. Maitri

2. Himadri

3. Bharati

Choose the correct option:

A. 1 and 2 only

B. 2 only

C. 2 and 3 only

D. 1 and 3 only

84. **Consider the following statements with respect to Charminar:**

1. Charminar was built by Muhammad Quli Qutb Shah of the Qutb Shahi dynasty.

2. Each of the four minarets stands on a lotus-leaf base.

3. It was used as a madrassa during the Qutb Shahi period.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 and 3 only

C. 3 only

D. None of the above

85. **The National Security directive deals with which of the following?**

A. Defence manufacturing

B. Telecom sector

C. Border protection

D. Money laundering

86. **Which of the following statement/s is/are correct with respect to the Poona pact of 1932?**

1. It was signed in the Yerawada jail.

2. It sought to provide separate electorate for the depressed classes.

Options:

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

87. **Which of the following is the correct explanation of 'SPICe+'?**

A. Promotion of export of spices from India

B. The long endurance UAV developed by DRDO

C. Electronic form for incorporation of companies

D. Platform for global co-operation on vaccine development.

88. **Which of the following is the name of the recently concluded India-France air exercise?**

A. Desert Knight

B. Blue Flag

C. Red Flag

D. Dark Pitch

89. **Consider the following statements about the Congress-Khilafat Swarajya Party:**

1. The party was formed by C. R. Das and Motilal Nehru.

2. It won 42 out of 104 seats to the Central Legislature in 1923.

3. The party merged with the Congress in 1930.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 2 and 3 only

C. 3 only

D. None

90. **Consider the following statements with respect to Bal Kalyan Puraskar:**

1. This award was instituted in 1979 as "National Child Welfare Awards".

2. This is given to individuals only.

3. The scheme is under the Ministry of Education.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 and 3 only

C. 1 and 2 only

D. None

91. **Consider the following statements with respect to PRAGATI:**

1. It is an Information and Communication Technology (ICT) platform that reviews and monitors various Government Projects across the country.

2. It is a three-tier system that comprises the Prime Minister's Office, Union Government Secretaries, and Chief Secretaries of the States.

3. The platform uses digital data management, video-

conferencing and geo-spatial technologies.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 1 and 3 only

C. 1, 2 and 3

D. None of the above

92. Consider the following statements with respect to the Montreal Protocol:

1. It is a protocol to the Vienna Convention for the Protection of the Ozone Layer.

2. It is a treaty designed to protect the ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion.

3. The Kigali amendment is the first amendment to this protocol.

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 2 only

C. 2 and 3 only

D. 1, 2 and 3

93. Consider the following statements with respect to Indian Pangolin:

1. It is classified as Critically Endangered in the IUCN Red List.

2. Meat and scales of pangolins are used for medicinal purposes in several parts of the world.

3. It is an insectivorous mammal.

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 3 only

C. 1, 2 and 3

D. 2 and 3 only

94. Consider the following statements with respect to Border Security Force (BSF):

1. BSF is the designated border guarding force for India's borders with Pakistan and Myanmar.

2. It is one of the Central Armed Police Forces under the Ministry of Home Affairs.

3. It has its own air wing, marine wing, an artillery regiment, and commando units.

4. It is the world's largest border guarding force.

Which of the given statement/s is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 3 and 4 only

D. 2, 3 and 4

95. Consider the following statements with respect to M-sand:

1. It is produced from hard granite stone by crushing.

2. M-Sand is a substitute for river sand in construction.

3. Usage of M-sand may lead to environmental disasters like groundwater depletion, water scarcity.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 1, 2 and 3

C. 3 only

D. None

96. Consider the following statements with respect to Asian Giant Softshell Turtle:

1. It is a freshwater turtle occurring in eastern and southern India.

2. It is classified as endangered in the IUCN Red List.

3. It is also called the frog-faced softshell turtle.

Which of the given statement/s is/are correct?

A. 1 only

B. 1 and 3 only

C. 1, 2 and 3

D. 2 and 3 only

97. Consider the following statements with respect to Nilgiri Biosphere Reserve:

1. It spans across Tamil Nadu, Karnataka and Kerala.

2. It is a part of the UNESCO World Network of Biosphere Reserves.

3. It includes the Mudumalai, Nagarhole, Bandipur and Silent Valley national parks.

Which of the given statement/s is/are INCORRECT?

A. 2 only

B. 1 and 3 only

C. 3 only

D. None

98. **"World Energy Outlook" is published by:**

A. U.S. Energy Information Administration

B. International Energy Agency

C. International Atomic Energy Agency

D. International Renewable Energy Agency

99. What is the primary purpose of Elephant Corridors?

A. Facilitating the stress-free migration of elephants from one habitat to another

B. Promoting the breeding of elephants

C. Promotion of elephant-centric eco-tourism

D. Protection of elephants from poachers and wildfires

100. Consider the following statements:

1. India is the largest exporter of Textiles and Apparel.

2. The Textiles Committee in India ensures the quality of all textiles and textile products for domestic and export markets.

3. India and Japan have signed the Comprehensive Economic Partnership Agreement (CEPA) which facilitates the import of garments from India to Japan at zero duty.

Which of the given statement/s is/are correct?

A. 1 and 3 only

B. 1 and 2 only

C. 2 and 3 only

D. 3 only

101. Consider the following statements with respect to Lala Lajpat Rai:

1. He founded the "Arya Gazette".

2. He co-founded the Punjab National Bank.

Which of the given statement/s is/are INCORRECT?

A. 1 only

B. 3 only

C. 1 and 2 only

D. None of the above

102. Which of the following schemes are subsumed under Samagra Shiksha Abhiyan?

1. Rashtriya Madhyamik Shiksha Abhiyan (RMSA)

2. Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

3. Sarva Shiksha Abhiyan (SSA)

4. Teacher Education (TE)

Choose the correct option:

A. 1 and 2 only

B. 1, 2 and 3 only

C. 1, 3 and 4 only

D. 2, 3 and 4 only

103. Consider the following statements with respect to Ethanol:

1. Ethanol is alcohol of 99% plus purity that can be used for blending with petrol.

2. Ethanol is mainly produced from molasses.

3. Ethanol blending with fossil fuels will cut down carbon emissions.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 and 3 only

C. 3 only

D. 1, 2 and 3

104. Consider the following statements with respect to Uniting for Consensus (UFC) group:

1. It is an informal club that developed at the United Nations.

2. It began as a movement nicknamed the Coffee Club that called for expansion of permanent seats in the United Nations Security Council.

3. It supports the extension of UNSC permanent membership to G4 nations.

4. The group opines that any increase in permanent seats would further accentuate the disparity between the member countries.

Which of the given statement/s is/are incorrect?

A. 1 and 4 only

B. 2 and 3 only

C. 1, 2 and 3 only

D. 4 only

105. The journal 'Prabuddha Bharata' was started by:

A. Netaji Subhas Chandra Bose

B. Bal Gangadhar Tilak

C. Sister Nivedita

D. Swami Vivekananda

106. Consider the following statements with respect to Economic Survey of India:

1. It is compiled and presented by the Department of Economic Affairs, Ministry of Finance.

2. It is submitted to both houses of Parliament during the Budget Session.

3. The Economic Survey is presented as a part of the Budget.

Which of the given statement/s is/are correct?

A. 1 only

B. 2 only

C. 1 and 2 only

D. 1, 2 and 3

107.   Which among these tribes rear Changthangi and are the traditional producers of the Pashmina wool in the Ladakh region?

A.   Balti Tribe

B.   Dogra Tribe

C.   Changpa Tribe

D.   Bakarwal Tribe

108.   Consider the following statements with respect to STARS project:

1.   It is an education reform initiative in India which is financially aided by the World Bank.

2.   It is a centrally sponsored scheme under the Department of School Education and Literacy (DoSEL).

3.   This project will be implemented through the Samagra Shiksha Scheme.

Which of the given statement/s is/are INCORRECT?

A. 2 only

B. 3 only

C. 1 and 3 only

D. None

109.   Consider the following statements

1.   "Ekamra Kshetra" comprises the temples of Varnasi

2.   Ekamra Kshetra has the unique cultural heritage of having Buddhist sites, Jain sites and Hindu temples.

Which of the above statement/s is/are true?

A. 1 only

B. 2 only

C. Both 1 ad 2

D. Neither 1 nor 2

110.   Which of the following factors aid the formation of a tropical cyclone:

1.   Coriolis force

2.   Availability of latent heat

3.   Temperature contrast between Air masses

4.   Wind shear

Which of the following statements are correct?

A. 1 and 2 only

B. 1, 2 and 3 only

C. 2 and 4 only

D. 1, 2, 3 and 4

111.   Damara is a town located in:

A.   Algeria

B.   Morocco

C.   Ethiopia

D.   Central African Republic

112.   Consider the following statements:

1.   Neutrinos are the most abundant particles in the universe.

2.   India-based Neutrino Observatory is located in Hanle, Ladakh.

Which of the above statement/s is/are true?

A. 1 only

B. 2 only

C. Both 1 ad 2

D. Neither 1 nor 2

ANSWER KEYS

1	B
2	A
3	C
4	D
5	C
6	C
7	B
8	A
9	B
10	A
11	B
12	D
13	C
14	A
15	D
16	A
17	C
18	A
19	D
20	B

21	C
22	C
23	B
24	C
25	D
26	D
27	C
28	D
29	A
30	A
31	D
32	C
33	B
34	B
35	C
36	D
37	D
38	B
39	A
40	B

CLICK HERE TO READ EXPLANATION

41	A
42	C
43	A
44	A
45	B
46	C
47	A
48	C
49	A
50	C
51	C
52	D
53	A
54	C
55	B
56	D
57	D
58	B
59	A
60	B

61	B
62	B
63	C
64	D
65	B
66	A
67	D
68	A
69	C
70	B
71	D
72	A
73	B
74	A
75	D
76	D
77	B
78	C
79	B
80	C

CLICK HERE TO READ EXPLANATION

BYJU'S | IAS
The Learning App

81	A
82	D
83	B
84	D
85	B
86	A
87	C
88	A
89	D
90	A
91	C
92	B
93	D
94	D
95	C
96	C
97	D
98	B
99	A
100	C

101	D
102	C
103	D
104	B
105	D
106	C
107	C
108	D
109	B
110	D
111	D
112	D

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BYJU'S IAS
The Learning App

MAINS PRACTICE QUESTIONS

GS Paper 1

Women Issues

1. Explain how societal constructs and legal framework in India have contributed to the marginalization of Indian women in agriculture. (15 marks, 250 words)

Society

1. What are the challenges and flaws involved in conducting the census and the Socio-Economic Caste Census in its current form? Discuss the roadmap for a framework around caste and the census to enhance the utility of census data. (15 Marks, 250 Words)

Poverty and Developmental Issues

1. "Inequality is widening across the world, and India is no exception." In light of the above statement, discuss the observations made by Oxfam's "The Inequality virus" report. (15 marks, 250 words)

GS Paper 2

Health

1. What do you understand by vaccine dry run? Discuss its importance. (10 Marks, 150 Words)

2. Communication strategies must be harnessed for vaccination as a means of counteracting vaccine hesitancy and promoting optimal vaccine uptake. Elucidate. (10 Marks, 150 Words)

3. Discuss the need to focus on building up a cadre of trained healthcare workers along with improving the health infrastructure. (15 marks, 250 words)

4. What is Avian influenza? What are the steps that can be taken as preventive measures? (10 marks, 150 words)

5. In the backdrop of the roll-out of the world's largest COVID-19 vaccination programme in India, discuss the key regulatory challenges and measures essential in achieving vaccine confidence. (15 Marks, 250 Words)

6. What are 'rare diseases'? Briefly outline the National Policy for Treatment of Rare Diseases, 2017. (10 marks, 150 words)

7. How does the Government look to tackle 'vaccine hesitancy' in the context of the COVID-19 vaccination programme in India? (10 marks, 150 words)

8. "Public confidence in the vaccines is crucial for a vaccination campaign to succeed." In the light of the above statement, explain the vaccine hesitancy witnessed currently in the Covid-19 vaccination drive. (10 marks,150 words)

9. An intranasal delivery mechanism for COVID-19 vaccines has several advantages over the injection and oral forms. Comment. (10 marks, 150 words)

10. Poor communication and lack of transparency on vaccine efficacy data have produced vaccine hesitancy, resulting in low uptake in some States. Comment. (10 marks, 150 words)

International Relations

1. "The latest agreement erects new barriers, rather than remove existing ones, in trade ties between London and Brussels." Critically analyze the above statement in light of the new agreement signed between the U.K and the EU. (15 marks, 250 words).

2.   "The India – United Kingdom relationship in the 21st century will be defined by their ties in the post-BREXIT era." Discuss. (15 marks, 250 words)

3.   "The BREXIT was driven largely by nationalistic impulse rather than economic considerations." Critically examine. (15 marks, 250 words)

4.   Discuss India's foreign policy challenges in the neighbourhood. (15 marks, 250 words)

5.   Highlight the role of SAARC as a platform in furthering India's regional ambitions. (15 marks, 250 words)

6.   What are the new geopolitical challenges and strategic dilemmas that India will encounter in the Indo-Pacific? (15 marks, 250 words)

7.   What is the Open Skies Treaty? With the introduction of modern drones & satellites, has the treaty outlived its utility? (15 Marks, 250 Words)

8.   Discuss the major talking points between India and Nepal in the recent past. (15 marks, 250 words)

9.   "India's regional ambitions will hinge upon how it resolves disputes with its neighbouring countries." In light of the above statement, explain the Palk Bay fishermen dispute between India and Sri Lanka. (15 marks, 250 words)

10.   Explain how India can utilize its status as a non-permanent member at the UNSC to further its foreign policy objectives. (15 marks, 250 words)

Polity & Governance

1.   The controversial nature of the position of the Governor has made several experts suggest an abolishment of the Governor's post. Critically examine. (15 marks, 250 words)

2.   Do you think the Government could have gone for renovation rather than reconstruction in reference to the Central Vista project? Justify. (10 marks, 150 words)

3.   "Orderly transition of power is a sine qua non for a stable political setup." Discuss. (10 marks, 150 words)

4.   "A healthy feedback mechanism is a sine qua non for the smooth implementation of a policy." Comment. (10 marks, 150 words)

5.   'The role of the judiciary is to interpret laws and not make one.' Critically examine. (10 marks, 150 words)

6.   Explain the doctrine of Separation of Powers and discuss the difference between the Indian and the US model of separation of powers. (15 marks, 250 words)

7.   Examine the importance of a data security law and highlight the steps taken in India to protect personal data. (10 marks, 150 words)

8.   Discuss the pardoning powers of the President and compare them with the pardoning powers of the Governor. (15 marks, 250 words)

9.   Critically examine the salient features of 'The Personal Data Protection Bill, 2019'. (10 marks, 150 words)

10.   What are some of the key issues and perspectives of various stakeholders on net neutrality in India? (15 marks, 250 words)

11.   In the absence of parliamentary debates, the rationale behind the provisions of a law is hard to understand. Analyze. (15 Marks, 250 Words)

GS Paper 3

Indian Economy

1. What is 'Regulatory forbearance'? Explain in the context of steps taken by the government during the pandemic to alleviate certain problems. (10 marks, 150 words)

2. "The farm laws will usher in a new era of market forces." Critically examine the above statement. (10 marks, 150 words)

3. "The relief package to offset the pandemic impact has led to a bulged fiscal deficit, however, that doesn't mean it's time for austerity measures yet." Critically examine. (10 marks, 150 words)

4. Unauthorized digital lending platforms and mobile apps have caused financial frauds and blackmail. What are the measures taken by the RBI and the State Governments to curb such services? (10 marks, 150 words)

5. Explain the term 'Impossible trilemma' in the context of the Indian economy. (10 marks, 150 words)

6. Discuss the importance of Parliamentary committees taking into context the recently enacted farm laws. (10 marks, 150 words)

7. Discuss the salient features of India's National Mineral Policy 2019. (10 marks, 150 words)

8. "The RBI's plan to tighten scrutiny of large NBFCs is critical for financial stability." Comment. (10 marks, 150 words)

9. Critically examine the need to relax the fiscal discipline rules at the central and state levels to make way for a fiscal stimulus in the pandemic era. (10 marks, 150 words)

10. What do you understand by Money Laundering? What are the challenges facing India in the implementation of the Prevention of Money Laundering Act? (10 Marks, 150 Words)

11. Discuss the need to have a multi-pronged strategy to reduce dependence on China for critical imports. (15 marks, 250 words)

Intellectual Property Rights

1. "Encouragement of innovation must not supersede public interests." In light of the above statement, discuss the amendment to the Patent Rules, 2020. (10 marks, 150 words)

Energy

1. Discuss the measures taken to achieve energy efficiency in the recent few years. (10 marks, 150 words)

2. Sustainable Development Goal 7 calls for universal access to sustainable energy by 2030. Discuss the steps taken by India to achieve universal electrification. (150 words,10 marks)

Security

1. Discuss the steps taken by the Indian Navy in recent years to strengthen its maritime domain awareness. (10 marks, 150 words)

2. Explain the relevance of the National Investigation Agency and also discuss the recent amendments made to the NIA Act, 2008. (15 marks, 250 words).

3. What do you understand by Data mining? Data-mining companies, if left unregulated, can infringe on fundamental rights. Discuss. (15 Marks, 250 Words)

Infrastructure

1. The shift to electric mobility will serve a greater purpose than just reducing pollution. Comment. (10 marks, 150 words)

Environment and Ecology

1. "The discharge of untreated industrial effluents has contributed to a deterioration in the health of rivers." In light of the above statement, highlight the steps to be taken to protect the health of rivers. (10 marks, 150 words)

2. There would be profound implications of the U.S. rejoining the Paris climate agreement. Discuss. (10 marks, 150 words)

3. What does 'green tax' mean for vehicle owners? (10 marks, 150 words)

Road Transport

1. "Raising tax on older vehicles will help shift to cleaner ones." In light of the above statement, discuss the Centre's proposed policy to raise road tax on vehicles of a certain age. (10 marks, 150 words)

INTERVIEW TRANSCRIPT

Candidate Details:

- Name: Sachin Gupta
- AIR: 3 (CSE 2017)
- Chairperson: Smita Nagraj
- Duration: 30 – 35 minutes
- Hometown: Sirsa, Haryana

Sachin Gupta

Optional Subject: Anthropology

Work Experience: 2 years in Maruti Suzuki

Education: B.Tech in Mechanical Engineering, Thapar University, Patiala

Hobbies: Cricket, Reading Books and Watching Documentaries

Interview

In his second attempt, Sachin Gupta had secured the 575th rank and had secured the Indian Corporate Law Service. Questions on his background included those about the Indian Corporate Law Service.

- What is Moot Court?
- Why was the name changed from Company Affairs to Corporate Affairs?
- Issues concerning the corporate sector.
- Role of Independent Directors.
- Satyam Scam and learning for the Corporate Sector.

Banking Sector

- Could we have prevented the PNB scam?
- What are the key issues within the PNB scam?
- Curative steps required now in the banking sector.
- Don't you think personnel management is a bigger issue in this?
- What role do you think higher management could have played in this issue?

Science and Technology

- What is Artificial Intelligence? Pros and cons.
- Will it further decrease jobs in India?
- Differentiate between big data analytics and Artificial Intelligence?

International Relations

- Do you think developments in the Maldives are threatening India's interests?

- India's options.

- Interfering with Internal Affairs.

- Views on Indian Ocean recent developments.

- How should we counter Chinese assertiveness?

- What are the steps India has already taken?

- Do you think we should make naval ports in the Indian Ocean region?

- Should we have a better neighbourhood policy?

- Any examples where countries interfere in the internal affairs of other countries?

- What if any other country does it with India?

Economy

- Do you think we can double farm income?

- What are your views on land fragmentation?

- Do you think it's time to go back to cooperativization?

- Isn't promising 1.5 times MSP and then playing out in the calculation cheating?

- What is TReDS?

- Do you think we can introduce it in agriculture?

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