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G.S PAPER II

1. POLITY

1.1 No Reservation in Promotions

What is the issue?

- The Supreme Court ruled that no individual including the Scheduled Caste and Scheduled Tribes could claim reservation in promotions.
- It said that the court could not issue a mandamus directing State governments to provide reservation.

What is the concern with this case?

- This verdict on reservation on promotions has affected the social justice and the advancement of the under-privileged.
- This case should have been dealt by a larger constitutional bench which could have a Scheduled Caste (SC) or Scheduled Tribe (ST) judge.
- So, it is the moral responsibility of the Union Government to appeal this case and request a constitutional bench hearing.

Is reservation in promotions a fundamental right?

- The scope for reservation for the Backward Classes is promised in Part III of the Constitution under Fundamental Rights.
- Articles 16(4) and 16(4A) empowers the state to provide reservation for SCs and STs in public employment.
- The right to equality is enshrined in the Preamble of the Constitution.
- Many see that the reservation is against Article 16 (Right to equality).
- But there is an absence of equal opportunities for the Backward Classes due to historic injustice by virtue of birth entails them reservation.
- Articles 16 (2) and 16(4) are neither contradictory nor mutually exclusive in nature, but are complementary to each other.

Is there any necessity to provide data on inadequate reservation?

- There is a question whether the quantifiable data for inadequate representation is a must for giving reservation in promotions.
- This question has been addressed by Article 16(4) in the Constitution.
- It reads that the State can make any provision for the reservation of appointments or posts in favour of any backward class of citizens which in the State's opinion, is not adequately represented in the State services.
- Here, "in the State's opinion" should **not be construed as the discretion of the state** to give the reservation or not.
- On the contrary, it means if the state feels that SCs and STs are under-represented, it is in the domain of the state to provide reservation.
- There is **no mention in the Constitution** about quantifiable data.
- Even after 70 years of SC/ST reservation, their representation is as low as 3%.



Is it the obligation of the state to give reservation?

- It must be noted that when reservation rights are in Part III, it's the obligation of the state to ensure reservation to the underprivileged.
- This recent SC judgment has interpreted Articles 16 (4) and 16(4A) only as enabling provisions.
- Enabling provisions mean that these provisions empower the state to intervene; it does not mean the state is not bound to provide it.
- Interpreting the Constitution by paraphrasing and selective reading is dangerous.

What does this judgment say about administrative efficiency?

- This judgment has raised a new point that the decision of the State government to provide reservation for SC/STs shouldn't affect the efficiency of administration.
- This implies that the entry of SC/STs in the job market can reduce the quality of administration; this by itself is discriminatory.
- There is no evidence that performance in administration is affected on account of caste.
- There have been many attempts to dilute reservation in the past.
- But, this judgment appears to be debatable in the larger context and should be challenged in a constitutional bench.
- In a country of parliamentary democracy, even the Constitution of India can be amended.
- If the government at the Centre has genuine concern for SC/STs, it can amend the Constitution using its political majority.

Why reservation should be applied in promotions?

- As there is a peculiar hierarchical arrangement of caste in India, it is obvious that SCs and STs are poorly represented in higher posts.
- Denying application of reservation in promotions has kept SCs and STs largely confined to lower cadre jobs.
- Hence, providing reservation for promotions is even more justified and appropriate to attain equality.
- This judgment destabilises the very basis of reservation, when there is no direct recruitment in higher posts.
- This delineation of the scope of reservation as at the entry level and in promotions will only lead to confusion in its implementation.
- Now, by declaring that reservation cannot be claimed as a fundamental right is a dangerous precedent in the history of social justice.

1.2 SC Ruling against Judicial Transparency

Why in news?

Supreme Court (SC) has barred citizens from securing access to court records under the Right to Information (RTI) Act.

What is the SC ruling?

- The SC held that these records could be accessed only through the rules laid down by each High Court under **Article 225** of the Constitution.
- It ruled so in the Chief Information Commissioner (CIC) v. High Court (HC) of Gujarat case.
- This ruling does not preclude the application of the RTI Act to the administrative side of the court.
- But it firmly denies access to the court records filed on the judicial side under the RTI Act.

- The SC's verdict in this case is based on **Section 22** of the RTI Act.

What is the Section 22 of the RTI Act?

- The Section 22 states that the **RTI Act shall override any other law** to the extent that the latter is inconsistent with the former.
- It is **non-obstante clause** which means that it can be used as a common drafting device by legislatures to permit certain actions regardless of what is mentioned in existing legislation.
- Despite this, the SC and, High Courts on previous occasions have concluded exactly the opposite.

Why records should be shared?

- A significant number of decisions taken by the courts influence a person's daily life.
- Every prosecution before a criminal court is essentially an opportunity to hold the police accountable.
- The pleadings filed by parties contain information that are useful to citizens, journalists, shareholders, etc., who can better inform the public discourse on the ramifications of these decisions.

What reasoning did the court give?

- The court concludes that there is **no inconsistency** between the RTI Act and the court rules.
- It is factually incorrect as the Gujarat HC Rules require the submission of an affidavit stating the purpose of seeking copies of the pleadings.
- But, the RTI Act requires no reasons to be provided while seeking information.
- The court argues that an enactment can't be overridden by a later general enactment simply because the latter opens up with a **non-obstante clause**, unless there is clear inconsistency between the two legislations.
- But that is exactly the point of a non-obstante clause.
- The court concludes that the **Section 22** could not be read in a manner to imply repeal of other laws, such as the Gujarat High Court Rules.
- The court states that if the intention was to repeal another law, the legislature would have specifically stated so in the RTI Act.
- This reasoning is bewildering because it would render non-obstante clauses entirely useless.

Why it's a problematic decision from citizen's perspective?

- **Administrative discretion** - Some HCs allow only parties to a legal proceeding to access the records of a case and some allow third parties to access court records if they can justify their request.
- This is entirely unlike the RTI Act, where no reasons are required to be provided thereby reducing the possibility of administrative discretion.
- **Logistical difficulties** -An application under the RTI Act can simply be made by post, with the fee being deposited through a postal order.
- Most HCs and the SC require physical filing of an application with the Registry, and a hearing to determine whether records should be given.

1.3 Nomination of Ex-CJI to Rajya Sabha

Why in news?

Within five months of his retirement as Chief Justice of India, Justice Ranjan Gogoi has been nominated to the Rajya Sabha by the President of India.



What were the key judgments handled?

- During his tenure, Justice Gogoi presided over and pushed through the exercise of the National Register of Citizens (NRC) in Assam.
- Then, there is the **Sabarimala temple review case** in which the Supreme Court (SC) held that excluding menstruating women from entering the temple against constitutional morality.
- He **dismissed review of the Rafale aircraft deal** without dealing with the grounds on which the original judgment had been challenged.
- Shortly before his retirement, he delivered several important verdicts including the **Ayodhya judgment**.
- His judgments left the government pleased, with scarcely any politically-sensitive case being decided against the government's wishes.

What is a forgotten code?

- The **16-point code of conduct** for judges, also called the "Restatement of Values of Judicial Life" is a forgotten code.
- This code was adopted at a Chief Justices Conference in May 1997.
- It states that a judge should practice a degree of aloofness consistent with the dignity of his office.
- It also says that a judge shall not hear and decide a matter in which a member of his family, a close relation or a friend is concerned.

What is the significance of aloofness?

- It is the most essential trait needed from politicians or functionaries of the government.
- Unfortunately, these values seem to have been forgotten by judges who invite politicians to their personal functions.
- It is incumbent on such judges not to hear and decide cases of those politicians who are their personal friends.
- Judges can also interact with functionaries of the government in their official capacity for official work.

What is the concern?

- This code of conduct also lays the basis of how post-retirement conduct ought to be.
- A judge after a deciding politically sensitive case, soon after retirement gets a plum post such as a Rajya Sabha nomination.
- It would obviously raise serious questions about his or her independence as a judge when he or she had decided those cases.
- Nomination of Justice Gogoi to a Rajya Sabha seat by the government raise serious doubts about the fairness of many critical judgments.

How this nomination should be seen?

- Mr. Gogoi's appointment cannot be seen as a way of ensuring cohesion between the judiciary and the legislature.
- Any attempt to create cohesion between the two wings would necessarily encroach on the judiciary's role as a restraining force on the executive and legislature.
- As for the government, making such an offer to a just-retired CJI is not mere brazenness.
- It indicates an alarming intention to undermine judicial authority so that the elected executive is seen as all-powerful.



1.4 Human Rights Commissions

Why in news?

The Madras High Court (HC) is to decide on whether the recommendations made by Human Rights Commissions are binding upon the state.

Why these commissions were established?

- The Protection of Human Rights Act of 1993 created,
 1. National Human Rights Commission at the national level and
 2. Human Rights Commissions at the levels of the various States.
- These commissions were established to protect, promote and fulfil the fundamental rights guaranteed by the Indian Constitution.

What is the criticism?

- The complexity of governance and administration has necessitated the existence of a set of independent bodies with vital functions of oversight.
- However, for all intents and purposes, the Human Rights Commissions are toothless: at the highest, they play an **advisory role**.
- The government is free to disobey or even disregard their findings.

What are their powers?

- Under the 1993 Act, these commissions are empowered to inquire into the violations of human rights committed by state authorities.
- They can take action either upon petitions presented to them, or upon their own initiative.
- While conducting these inquiries, the Commissions are granted identical powers to that of civil courts, such as the examining witnesses, etc.
- These proceedings are deemed to be judicial, and they require that any person has a right to be heard.
- After concluding a violation, the Section 18 of the Act empowers this Commission to “**recommend**” to the concerned government to,
 1. Grant compensation to the victim,
 2. Initiate prosecution against the erring state authorities,
 3. Grant interim relief and take various other steps.
- Furthermore, the Section 18 of the Act obligates the concerned government to forward its comments on the report, including the action taken or proposed to be taken, to the Commission within a month.

What is the pending case?

- The Madras High Court (HC) will be deciding upon a case whether “recommendations” made by the Human Rights Commissions are
 1. Binding upon their respective State (or Central) governments, or
 2. The government is entitled to reject or take no action upon them.
- The Full Bench of the Madras HC is hearing the case as to bring a common conclusion to the **meaning of the word “recommend”** in the context of the Protection of Human Rights Act, 1993.
- The argument is that the only obligation upon the government is that it needs to report to the Commission under the Section 18.

What is the view that needs to be rejected?

- If the Act intended to make the recommendations of the Commission binding upon the government, it would have said so.
- It would not simply have required the government to report what action it intended to take to the Commission (“no action” also as a category).
- This is a view that needs to be rejected due to many reasons.

Why this view needs to be rejected?

- Ordinarily, a mere “suggestion” is not binding.
- There is often a gap between the ordinary meanings of words and the meanings that they have within legal frameworks.
- Legal meaning is a function of context, and the purpose of the statute within which a word occurs has influence on how it is to be understood.

What is the constitutional commitment?

- The task of Human Rights Commissions is to ensure the adequate realisation of constitutional commitment to protecting human rights.
- If the state was left free to disobey the findings of the Commission, this constitutional role would be effectively pointless.
- If this is the case, whatever the Human Rights Commission did, the final call on whether or not to comply with its commitments under the Constitution would be left to the state authorities.
- This, it is clear, would defeat the entire purpose of the Act.

What should the courts do?

- In the past, the courts have invoked constitutional purpose to determine the powers of various institutions, like CBI, Election Commission, etc., in cases of ambiguity.
- Therefore, it should also determine the powers of the Human Rights Commission, as their role in the constitutional scheme is significant.
- As the Human Rights Commission has the powers of a civil court, its findings should be treated as quasi-judicial.
- Its findings should be made binding upon the state (unless challenged).

1.5 Karnataka HC on Right of an Accused

Why in news?

The Karnataka High Court (HC) observed that it is unethical and illegal for lawyers to pass resolutions against representing accused in court.

What is the story behind?

- The Hubli Bar Association passed a resolution that objected to defend students arrested for sedition in court.
- So, the HC has asked the association to place on record a resolution withdrawing this resolution.
- This isn't the first time that bar associations has passed such resolutions.
- The Supreme Court (SC) has ruled that these are against all norms of the Constitution, the statute and professional ethics.

What does the Constitution say about the right of an accused?

- Article 22(1) gives the fundamental right to every person not to be denied the right to be defended by a legal practitioner of his or her choice.
- Article 14, also a fundamental right, provides for equality before the law and equal protection of the laws within the territory of India.
- Article 39A, part of the Directive Principles of state policy, states that equal opportunity to secure justice mustn't be denied to any citizen by reason of economic or other disabilities, and provides for free legal aid.

What has the SC said about such resolutions?

- **Case** - In 2010, a SC Bench dealt with the illegality of such resolutions under the A S Mohammed Rafi vs State of Tamil Nadu case.
- This case arose from a confrontation between a lawyer and policemen.
- So, the lawyers passed a resolution to not allow any lawyer to represent the police personnel.
- The Madras HC ruled this “unprofessional”, after which lawyers appealed in the SC.
- **SC ruling** - The SC ruled that such resolutions are wholly illegal, against all traditions of the bar and against professional ethics.
- Every person, however may be, has a right to be defended in a court of law and correspondingly, it is the duty of the lawyer to defend him.
- It said such resolutions were against all norms of the Constitution, the statute and professional ethics, and declared them null and void.

How are professional ethics of lawyers defined?

- The Bar Council of India has **Rules on Professional Standards**, part of the Standards of Professional Conduct and Etiquette to be followed by lawyers under the Advocates Act.
- An advocate is bound to accept any brief in the courts or tribunals, at a fee consistent with his standing at the Bar and the nature of the case.
- The Rules provide for a lawyer refusing to accept a particular brief in “special circumstances”.
- In 2019, the Uttarakhand HC clarified that these special circumstances refer to an advocate who may choose not to appear in a particular case.
- But it says that he cannot be prohibited from defending an accused by any threat of removal of his membership of the bar association.

Have lawyers faced action for such resolutions?

- A writ petition was filed in the Uttarakhand HC after the Kotdwar Bar Association passed a resolution.
- This resolution stated that anyone who represented the accused in an advocate murder case would have their Bar membership terminated.
- The court held the resolution null and void.
- It directed the State Bar Council to initiate action against office-bearers of the Bar Association if such resolutions were passed in the future.
- It said that action under Section 15(2) of the Contempt of Courts Act, 1971, can be considered against advocates who interrupt court proceedings.



1.6 Electoral Reforms

Why in news?

The Election Commission of India (ECI) has plans to strengthen the electoral process, but some require scrutiny.

What is an unhealthy pattern?

- Even as electoral democracy has taken strong root in India, some unhealthy patterns have emerged.
- The voter electoral participation has remained robust with the poor voting in large numbers.
- But, the candidates and winners in Assembly and Lok Sabha polls have largely been from affluent sections.
- With elections becoming expensive, most parties have sought to field richer candidates irrespective of their merit to represent public interest.

What are the current regulations?

- Current campaign finance regulations by the ECI **seek transparency on expenses** by party and candidate.
- The ECI **prescribes limits on a candidate's expenditure** have not been sufficient deterrents.
- Poll results have tended to be a function of either party or leader preference by the voter rather than a statement on the capability of the candidate.
- In many cases, capable candidates stand no chance against the money power of more affluent candidates.

What does the ECI seek to do now?

- The ECI is considering tightening ways to cap the expenditure of parties.
- It is welcomed as it should provide a more level playing field.
- But even this can be meaningful only if there is **more transparency in campaign finance**.
- The ECI has also suggested bringing social media and print **media under the silent period** ambit after campaigning ends.
- Regulating social media will be difficult and it remains to be seen how the ECI will implement this.

What does the ECI's plan need?

- The ECI's plans to introduce new safe and secure voting methods, however, this needs a **thorough scrutiny**.
- The EVM used now as a standalone, one-time programmable chip-based system, along with administrative safeguards is a safe mechanism.
- But any other online form of voting that is based on networked systems should be avoided.
- The idea of an Aadhaar-linked remote voting system that is sought to be built as a prototype could be problematic.
- This may be problematic because the unique identity card has excluded genuine beneficiaries when used in welfare schemes.

In what areas do the ECI needs concentration?

- The measures missing from the recommendations are the need for more teeth for the ECI in its fight against **vote buying** and **hate speech**.
- **Vote buying** - Increasingly, parties have resorted to bribing voters in the form of money and other commodities in return for votes.
- While the ECI has tried to warn outfits or in some cases postponed polls, these have not deterred them.
- **Hate speech** - In times when hate speech is used during elections, the ECI has only managed to rap the offending candidates or party spokespersons on the knuckles.

- But stricter norms including disqualification of the candidate would be needed for true deterrence.

2. GOVERNMENT ACTS & POLICIES

2.1 Major Port Authority Bill, 2020

Why in news?

The Union Cabinet has cleared the Major Port Authority Bill, 2020 and it is expected to breathe new life into government-owned major ports.

What is the government trying to do?

- The Union government's Sagarmala project (2015) was aimed at modernising major port infrastructure.
- Having invested in port infrastructure, the Cabinet has taken the next critical step to enable ports to control that new infrastructure - **operating policy reform**.
- So, it approved the Major Ports Authority Bill, 2020 to comprehensively overhaul the governance structure of major ports.
- This Bill seeks to replace a 1963 Act and it will be sunset time for the **Tariff Authority for Major Ports (TAMP)**.

Why such regulation is needed?

- Indian state-owned ports or major ports (12 in number) account for around 55% of maritime cargo traffic in the country.
- But, they still have to adhere to a tariff and policy regime that has its roots in the 1960s.
- The TAMP is the central authority that sets tariffs for the ports.
- It also holds the master key for many other operational and commercial matters. This is just a lot for it to deal.
- As a consequence, a substantial chunk of trade has shifted to the "non-major" or "private" ports.

What are the benefits of shifting to private ports?

- These ports operate under a much more **liberal regime** and are under the control of state governments.
- They are **operationally more efficient** and are crucially developed better linkages to the hinterland to enable smooth traffic flows.
- Currently, the private sector is involved in major ports in areas like cargo handling.
- Much more is needed by way of investment in areas such as dredging and adding new terminals.
- [Dredging - Done to increase the depth of the port to accommodate larger ships.]

What is the 2016 version?

- The latest Bill approved by the Cabinet is expected to be along the lines similar to the 2016 version of the Bill.
- The 2016 Bill granted major ports greater autonomy, including the ability to set tariffs on their own.
- It also enabled the board of an individual **port to raise funds** from banks and financial institutions without taking the permission of the central government.
- It provided for the setting up of a **centralised adjudication board** to resolve disputes in PPP projects between the port and private sector concessionaires.



What is the importance of the Bill?

- These measures could lead to major ports becoming more attractive to the private sector, both in terms of investment and as service providers.
- These reforms are critical if the investments made in the last few years are to pay off.
- The recent measures like the Sagarmala project, developing port-based SEZs, etc., gave a boost to the shipping sector.
- With the approval of the Port Authority Bill by the Parliament, a critical missing link will finally be in place.

2.2 Property Damage Ordinance

Why in news?

The Property Damage Ordinance will set up a **compensation claims tribunal** for the recovery of property losses from those accused of rioting.

What is the problem with the timing of the ordinance?

- The Uttar Pradesh government has passed this ordinance a day before the Allahabad High Court's (HC) deadline for the district magistrate and the police to report to it on the removal of certain hoardings.
- These were "name and shame" hoardings of people accused of allegedly damaging property during riots to protest the CAA.
- None of these people had gone through the legal process to establish guilt, and remain vulnerable to violence.
- So, this Ordinance is seen as an example of unique extra-judicial interpretation of the law.

What did the HC rule?

- It ruled that the state government's move (i.e.,) the ordinance amounted to an unwarranted interference in privacy.
- By putting up for public display the details of accused, the government violated the rights guaranteed under **Article 21** of the Constitution.
- [Article 21 - No person can be deprived of his life and personal liberty except according to a procedure established by law.]
- The UP government has appealed this ruling before the SC, which, has seen fit to refer the matter to a larger bench.

What does the Ordinance say?

- The ordinance offers a smut to the spirit of the HC's judgment upholding the sanctity of Article 21.
- It provides that the court set up under it will be the sole institution for hearing the recovery cases; no other civil courts will hear these cases.
- The court under this ordinance can instruct the authorities to publish the details of people it has found guilty of destruction.
- In other words, the court can provide legal cover for the same "name and shame" process that the high court had ruled illegal.

What precedence does the ordinance set?

- The encounter killings are also extra-judicial method of law enforcement.
- The UP government has normalised this technique in a manner that may well encourage other states to follow.
- Naming and shaming could well enjoy similar enthusiasm.

- This ordinance sets a sinister precedent in a state that has scarcely been renowned for the smooth functioning of its law and order machinery.

2.3 The Competition Amendment Bill, 2020

Why in news?

The Competition Amendment Bill, 2020 has proposed some key changes to the Competition Act, 2002.

What are the proposed changes?

- The key changes that are proposed include organisational structure, investigation procedure and combination laws.
- The two proposed amendments that would significantly alter the enforcement of competition law in India are,
 1. The hub-and-spoke arrangement which is welcomed,
 2. The res judicata proposal that needs to be reconsidered.

Why is the Hub-and-spoke arrangement welcomed?

- Currently, the agreements amongst players operating in the same market (horizontal level) with respect to price fixing, customer/territory allocation, etc., were included under the definition of cartels.
- The Bill proposes to increase the scope of agreement by including enterprises that act in furtherance of any anticompetitive agreement.
- This proposed amendment would cover enterprises facilitating the operation of cartels, too.
- By way of this proposed amendment, the jurisdiction of the CCI would extend to hub-and-spoke arrangement.
- A participant who was not in the horizontal level but acts in furtherance of the said arrangement by virtue of the hub-and-spoke model may be caught as being a participant in anticompetitive agreement.

What does the Bill say about penalty?

- Earlier, if the hub-and-spoke arrangement was covered, the penalty would have been limited to cases of non-cartel offences.
- With this proposed amendment, the penalty would be applicable for cartel offences too.
- By virtue of the Bill, such arrangements that are adopted in furtherance of a cartel by upstream players may also be caught in this Bill's proviso.

What are the provisions about channel partners?

- Companies would have to ensure that not only their employees, but also the channel partners are well-trained on competition law principles.
- Any agreement with channel partners must contain a clause to mandate the adoption of competition law compliance manual by such partners.
- This said clause should be scrupulously followed to avoid the liability under the Act.
- This assumes significance as the Bill provides for settlement and commitment option, which is not available for cartel offences.
- The proposed amendment, if incorporated, would be a great step forward in terms of enforcement.

What is the res judicata provision?

- [Res judicata - A matter that has been adjudicated by a competent court and therefore may not be pursued further by the same parties.]
- The Bill proposes that the CCI would not inquire into information, if substantially same facts have been decided by the CCI in previous orders.

- But, this provision fails to take into account that market dynamics and state of competition keep on evolving.

Why this provision needs to be reconsidered?

- A classic example of why this provision needs to be relooked is the entire e-commerce analysis.
- In 2014, the CCI took the view that online and offline are not two different markets.
- Conversely, in 2019-20, it took a view that online is a different market.
- Thus, the CCI, based on the market dynamics and evidence on record, has flexibly adopted a different approach than earlier.
- Since the principle of res judicata may be counter-intuitive, it must need a relook to adopt flexibility.

2.4 Pradhan Mantri Garib Kalyan Yojana

Why in news?

Union Finance Minister announced an Rs 1.70 lakh crore 'Pradhan Mantri Garib Kalyan Yojana' relief package.

What is the story behind?

- A nationwide lockdown was imposed recently to stop the novel coronavirus in its tracks.
- This has led to scores of daily wage workers and informal sector entrepreneurs losing earning opportunities from their existing activities.
- To alleviate the distress of those least equipped to bear the cost of staying home for the larger public interest of battling the COVID-19 pandemic, Rs 1.70 lakh crore relief package was announced.

What is a significant component of the relief package?

- The increased entitlement of food grains supplied through the public distribution system (PDS) is a major intervention.
- Currently, the PDS provides 5 kg of cereals per person per month at Rs 2/kg and Rs 3/kg for wheat and rice, respectively.
- Under the package, an additional 5 kg of wheat or rice would be given per person per month, free of cost.
- The doubling of entitlement, effective for the next 3 months with the extra grain coming free, will meet the family's entire cereal requirement.
- Roughly, 80 crore persons or two-thirds of India's population covered under the National Food Security Act will benefit.
- Further, they will receive 1 kg of pulses per family per month, again free of cost for the next three months.

What will be the costs and savings?

- **Cost** - An average economic cost for procuring and distributing wheat or rice by the Food Corporation of India (FCI) could be around Rs 30/kg.
- So, 80 crore persons being provided 15 kg each of free grain (over three months) would translate into an additional outgo of Rs 36,000 crore.
- **Savings** - The economic cost does not include the FCI's expenses in holding and maintaining excess stocks in its godowns.
- This carrying cost (interest and storage charges) is estimated at Rs 5.61 per kg in 2019-20.
- For 15 kg of grain for 80 crore people, it would be over Rs 6,700 crore.
- So, the net outgo for the exchequer will be well under Rs 30,000 crore.

- Given the Government of India is now holding some 77.6 mt of cereals (3.5 times more than required) and 2.2 mt of pulses, this is also an effective way to dispose of excess stocks.

What is the relief measure for LPG cylinders?

- LPG gas cylinders would be distributed free to 8 crore poor families for the next three months.
- An average non-subsidised cylinder would cost Rs 800. So, distributing them for free would cost Rs 19,200 crore.
- As the government will secure the basic dal, roti and cooking fuel requirement for those worst hit by the lockdown, it is worth bearing.

What is the relief measure under MNREGA?

- An enhancement of daily wages from an average of Rs 182 to Rs 202 under MNREGA was announced, which is not an effective measure.
- In today's context, the only way to compensate the locked down daily wage earners under MNREGA is through unemployment allowance.
- However, the onus for paying that under the Act is on the state governments.
- It is unlikely they would make the necessary budgetary provision.

What are the cash transfer components of the relief package?

- A total of 20.4 crore of bank accounts belonging to women under the Pradhan Mantri Jan Dhan Yojana are to be credited Rs 500 each per month for the next 3 months through direct benefit transfer (DBT).
- That is hardly any recompense for those forced out of work.
- Nor is the payment of Rs 2,000 to 8.7 crore farmers under the Pradhan Mantri Kisan Samman Nidhi.
- Farmers will anyway be receiving the first instalment payment of Rs 2,000 due in April, from their Rs 6,000 annual income support for 2020-21.

What does the package really amount to?

- For economic agents (particularly poor households and small businesses), the main crisis today is a crisis of liquidity.
- Unlike big businessmen or the salaried middle class, these are people with no balance sheets, reserves, or bank balances.
- Every day's loss of work for them means cutting down even basic consumption and going deeper into debt.
- Free grain can help, but does not address the real crisis of liquidity.

3. SOCIAL JUSTICE

3.1 Withdrawal of Tax on Disability Pension

Why in news?

The government has directed the banks, not to deduct income tax on pension and disability benefits provided to disabled retired military personnel.

What is the story behind?

- A circular was issued by the Principal Controller of Defence Accounts (PCDA) in February, 2020.
- This circular allowed the banks to deduct the income tax on pension and disability benefits.

- It was based on a June 2019 notification of the Central Board of Direct Taxes (CBDT) which provided exemption to those invalidated from service due to bodily disabilities.
- But, the sudden deduction of tax liabilities by the banks led to a public outrage, forcing the government to keep the decision in abeyance.
- The defence accounts department has been directed by the government to withdraw this circular.

What are the categories of disabled veterans?

- They are classified under three categories: battle casualties (war wounded), battle casualties and disabilities due to service conditions.
- **Battle casualties (war wounded)** - Military personnel who have been disabled due to wounds or injuries suffered by them in operations with the enemy or such like operations.
- **Battle casualties** - Military personnel who have been declared battle casualties but have not suffered injuries due to physical wounds.
- **Disabilities due to service conditions** - Military personnel who have been disabled due to conditions of service, wherein some of the disabilities akin to lifestyle diseases are also included.

How are benefits given to disabled personnel?

- **Benefits** are based on the percentage of disability.
- Less than 20% disability is not entitled to any benefits while those with 50% disability, 75% disability and 100% disabled are entitled to.
- **Amount of disability pension** given is also based on the percentage of disability.
- A percentage of last pay drawn on retirement by the military personnel is given as disability pension for the three categories of disabled veterans.

Are these disability pensions tax-free?

- The entire pension and disability element of pension in all the categories is exempt from payment of income tax.
- But the June 2019 CBDT notification had said that tax exemption on disability pension would be available only to personnel who had been invalidated from service and not to personnel who had retired otherwise.
- This has been challenged in the Supreme Court which, in a 2019 order, directed all parties to maintain 'status quo' on the matter.

What is the current controversy about?

- The PCDA circular was issued for taking "necessary action" on the 2019 CBDT notification.
- Then banks started debiting tax at source for the entire financial year 2019-20 from the February pension of retired military personnel who were receiving disability pension.
- This led to several pensioners receiving as little as Rs.1000 in their accounts.

4. HEALTH

4.1 COVID-19 as a Notified Disaster

Why in News?

The Ministry of Home Affairs (MHA) will treat COVID-19 as a notified disaster for providing assistance under the State Disaster Response Fund (SDRF).

What is a disaster?

- The Disaster Management Act, 2005 (DM Act, 2005) has given a definition for disaster.
- Disaster is a catastrophe, calamity or grave occurrence in any area, arising from natural or man-made causes.
- It may result in substantial loss of life or human suffering or damage to, and destruction of, property or environment.
- Disaster would be of nature or magnitude as to be beyond the coping capacity of the community of the affected area.

How are disasters classified?

- The High Power Committee on Disaster Management of 1999 had identified 31 disaster categories.
- This committee organised these categories into 5 major sub-groups,
 1. Water and climate related disasters
 2. Geological related disasters
 3. Chemical, industrial and nuclear related disasters
 4. Accident Related Disasters
 5. Biological related disasters, which includes epidemics.

What is SDRF?

- The SDRF was constituted under the DM Act, 2005.
- It is the primary fund available with the State governments for responses to notified disasters.
- This fund will help the State governments meet expenditure for providing immediate relief to the victims.
- The disasters covered under the SDRF include cyclones, droughts, tsunamis, hailstorms, landslides and pest attacks among others.

How much does the Centre contribute?

- The Centre contributes 75% of the SDRF allocation for general category States and Union Territories.
- It contributes 90% of the SDRF allocation for special category States (northeast, Uttarakhand, Himachal Pradesh, Jammu and Kashmir).
- For SDRF, the Centre releases funds in two equal instalments as per the recommendation of the Finance Commission.
- The National Disaster Response Fund (NDRF), also constituted under the DM Act, 2005, will supplement the SDRF of a state.
- The NDRF will support the SDRF in case of a disaster of severe nature, if adequate funds are not available in the SDRF.

Have there been such instances in the past?

- In 2001, the National Committee on Disaster Management under then Prime Minister was mandated to look into the parameters that should define a national calamity.
- However, the committee did not suggest any fixed criterion.
- As of now, there is no executive or legal provision to declare a national calamity.
- In 2018, in view of the devastation caused by the Kerala floods, Kerala politicians demanded that the floods be declared a “national calamity”.



- There have been demands from states to declare certain events as natural disasters, such as the Uttarakhand flood (2013).

4.2 Health Budgetary Allocation

What is the issue?

- In India, there is a rising demand which exceeds supply in most sectors due to the coronavirus pandemic.
- This suggests that the health budgetary allocation needs to go up.

What is the situation?

- In India, the number of positive Coronavirus cases is going up.
- Due to the pandemic, there is an ever-rising demands for testing kits, masks, hand sanitisers, etc., which had increased.
- There is a question whether national and state health systems will be able to cope with these rising demands.
- In mainland China where the rapidly climbing numbers went far beyond the capacity of the country, the health systems struggled to cope.

How much is the current health allocation?

- For years, India's health expenditure as a percentage of GDP has been abysmal at about 1%.
- As per the National Health Profile, 2019, there has been no significant change in health-care expenditure since 2009-2010.
- The highest it has been in the decade is 1.28 % of the GDP, and hit the lowest point at 0.98 % in 2014-2015.
- The report does record that per capita public expenditure on health in nominal terms went up from ₹621 in 2009-10 to ₹1,112 in 2015-16.
- A 2018 WHO report says that out-of-pocket payments remain common in India which was estimated at 62% of total health expenditure in 2014.

Why the health allocation should be increased?

- The public spending on health care should be increased to lessen the financial hardship for communities.
- The increased public spending will also better the health outcomes of a community.

What could be done?

- The government has made a promise to increase public health spending to 2.5 % of GDP by 2025.
- It could use this epidemic as an opportunity to scale up budgetary allocations for health to facilitate expansion of capacity.
- Epidemics are known to change the course of history.
- So, India must steer this one to harness finite resources optimally for the benefit of all.

5. BILATERAL RELATIONS

5.1 Blue Dot Network

Why in News?

The Blue Dot Network was a proposal which was on table when the US President Donald Trump made a maiden [visit to India](#).

What is the Blue Dot network?

- It will **certify infrastructure and development projects**.
- It was jointly launched by the US (Development Finance Corporation), Japan (Japanese Bank for International Cooperation) and Australia (Department of Foreign Affairs and Trade).
- It is a multi-stakeholder initiative that was launched in November 2019 on the sidelines of the 35th ASEAN Summit (Thailand).

What does the initiative aim to do?

- It aims to promote high quality and trusted standards for global infrastructure development by bringing together the governments, the private sector and civil society.
- The infrastructure projects will be vetted and approved by the network depending on standards, as per which, the projects should meet certain global infrastructure principles.
- The projects that are approved will get a “Blue Dot”, thereby setting universal standards of excellence.
- This will attract private capital to projects in developing and emerging economies.
- The proposal for the Blue Dot network is part of the US’s Indo-Pacific strategy which aims at countering China’s Belt and Road Initiative (BRI).

Why the proposal is countering BRI?

- BRI is a programme that wants to connect Asia with Africa and Europe.
- It wants to connect them via land and maritime networks along six corridors with the aim of improving regional integration, increasing trade and stimulating economic growth.
- The name was coined in 2013 by China’s President Xi Jinping.
- It consists of a belt of rail routes, highways, oil and gas pipelines and other infrastructure projects extending from Xian in Central China through Central Asia, Russia, West Asia and Europe.
- There is also a branch extending from Kashgar in Xinjiang to Gwadar in Balochistan via Pakistan occupied Kashmir (PoK).

What are the areas in which Blue Dot need a lot of work?

- **Financing** - The BRI involves direct financing that will give countries in need of immediate short-term relief.
- But, the Blue Dot Network is not a direct financing initiative and therefore may not be what some developing countries need.
- The question is whether the Blue Dot is offering first-world solutions to third-world countries.
- **Coordination** - The Blue Dot will require coordination among multiple stakeholders when it comes to grading projects.
- Given the past experience of Quad, the countries involved in it are still struggling to put a viable bloc.
- Therefore, it remains to be seen how Blue Dot fares in the long run.
- [Quad - An informal strategic dialogue between the US, Japan, Australia and India.]

How has the US’s foreign policy towards China evolved?

- Prior to 2001, US foreign policy was focused towards integrating China into its plan.
- But this changed after China’s emergence as a global superpower.
- Under Barack Obama, US foreign policy started shifting focus to Asia, where the US wanted to counter China’s growing influence.

- The National Security Strategy (NSS) under Trump says that the China seeks to displace the US in the Indo-Pacific region.
- It also says that it wants to expand the reaches of its state-driven economic model, and reorder the region in its favour.
- The US sees China's infrastructure investments and trade strategies as reinforcing its geopolitical aspirations.
- As per the US, China's efforts to militarise outposts in the South China Sea restricts the free movement of trade and undermines regional stability.

5.2 OHCHR's Intervention in CAA Case

Why in News?

The Office of the High Commissioner for Human Rights (OHCHR) has made an intervention application for a Supreme Court case regarding the Citizenship Amendment Act (CAA), 2019.

What is the OHCHR?

- The OHCHR is the leading UN entity on human rights that speak out objectively in the face of human rights violations worldwide.
- The UN General Assembly (UNGA) adopted the UNGA resolution 48/141 in 1994 and this created the OHCHR.
- The General Assembly of the body has entrusted the High Commissioner with a mandate to **promote and protect all human rights** for all.

On what grounds is this UN body seeking to intervene in CAA case?

- The High Commissioner seeks to intervene in the CAA case as **amicus curiae** (third party) and established a pursuant to the UNGA resolution 48/141.
- In the intervention application, the High Commissioner has underlined that she is the principal human rights official of the UN.
- She also adds that it is her role to support the domestic courts with their constitutional function in ensuring the implementation of international legal obligations regarding human rights.

What exactly does the intervention application say?

- **Admirable** - The OHCHR has admired the CAA's stated purpose,
 1. Protection of some people from persecution on religious grounds,
 2. Simplifying procedures and facilitating the granting of citizenship to such persons from some neighbouring countries.
- It welcomes that India has exhibited to persons seeking to find a safer, more dignified life within its borders.
- **Questionable** - It says that the examination of the case by the Supreme Court of the CAA is of substantial interest to the High Commissioner.
- It says that CAA raises human rights issues, including its compatibility in relation to the right to equality before law and non-discrimination on nationality grounds under human rights obligations.
- It questions the reasonableness and objectivity of the criterion of extending the benefits of the CAA to Buddhists, Sikhs, Hindus, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan alone.

Is there a specific basis on which the CAA has been faulted?

- The High Commissioner flags some central principles of international human rights law:
 1. The impact of the CAA on some migrants;

2. The enjoyment of human rights by all migrants and the rights of all migrants (non-citizens) to equality before the law;
 3. The principle of non-refoulement which prohibits the forcible return of refugees and asylum seekers to a country where they are likely to be persecuted.
- The application mentions that all migrants regardless of their race, ethnicity, religion, nationality and/or immigration status enjoy human rights and are entitled to protection.
 - It says that the international human rights law doesn't distinguish between citizens and non-citizens or different groups of non-citizens for providing protection to them from discrimination.
 - This international law requires the granting of citizenship under law to conform to the right of all persons to equality before the law and to be free from prohibited discrimination", the application says.

How has India reacted to this UN body's move?

- The Ministry of External Affairs (MEA) said that the CAA is an internal matter of India and it concerns the sovereign right of the Indian Parliament to make laws.
- The MEA says that it strongly believes that no foreign party has any locus standi on issues pertaining to India's sovereignty.
- It said that India was clear that the CAA is constitutionally valid and complies with all requirements of India's constitutional values.
- It also said that the CAA is reflective of the long-standing national commitment in respect of human rights issues arising from the tragedy of the Partition of India.

6. INTERNATIONAL ISSUES

6.1 U.S.-Taliban Agreement

Why in News?

A deal has been signed between the United States of America (USA) and the Taliban insurgents in Doha.

What is this deal about?

- This deal could pave the way toward a full withdrawal of foreign soldiers from Afghanistan over the next 14 months.
- This will also represent a step towards ending the 18-year-war there.
- In October 2001, the U.S. went into Afghanistan after the 9/11 terror attacks with the goals of defeating terrorists and stabilising Afghanistan.
- Almost 19 years later, the U.S. now seeks to exit Afghanistan with assurances from the Taliban that,
 1. They will not allow Afghan soil to be used by transnational terrorist groups such as al-Qaeda and
 2. They would engage the Afghan government directly to find a lasting solution to the civil war.
- For U.S, the deal represents a chance to make good on his promise to bring U.S. troops home.

What did the war cost?

- For U.S., the Afghan war is estimated to have cost \$2-trillion, with more than 3,500 American and coalition soldiers killed.
- Afghanistan lost the lives of many civilians and soldiers.
- After all these, the Taliban is at its strongest moment since the U.S. launched the war.



- The insurgents control or contest the government control in half of the country, mainly in its hinterlands.

What is the issue with this deal?

- The war had entered into a tie long ago and the U.S. failed to turn it around despite U.S. Presidents having sent additional troops.
- Faced with no other way, the U.S. just wants to leave Afghanistan. But the problem is with **the way it is getting out**.
- The fundamental issue with this deal is that it deliberately **excluded the Afghan government** because the insurgents don't see the government as legitimate rulers.
- By giving in to the Taliban's demand, the U.S. has practically called into question the legitimacy of the government it backs.

What were the concessions made in the agreement?

- The Taliban was not pressed enough to declare a ceasefire.
- Both the sides settled for a 7-day "reduction of violence" period before signing the deal.
- The U.S. has committed to pull out its troops in a phased manner in return for the above-mentioned two assurances from the Taliban.
- But the Taliban has not made any promises on whether it would respect civil liberties or accept the Afghan Constitution.
- The Taliban got what it wanted i.e. the withdrawal of foreign troops without making any major concession.

What would be the impact?

- Security experts have called the deal a foreign policy gamble that would give the Taliban international legitimacy.
- The U.S. withdrawal will weaken the Kabul government, altering the balance of power both on the battlefield and at the negotiating table.
- A weakened government will have to talk with a resurgent Taliban.
- The U.S. in a bid to exit the war has practically abandoned the Kabul government and millions of Afghans who do not support the Taliban's violent, tribal Islamism, to the mercy of insurgents.

Why India seems to be at the losing end?

- The earlier Taliban regime was anti-India because India had militarily supported the Northern Alliance that kept up the military pressure against the Taliban.
- Today's Taliban does not share the same animus for India.
- So, India could've rearranged its approach to Taliban this time around.
- However, India did not reach out to the Taliban because,
 1. It didn't want to irk the elected government in Afghanistan and
 2. It adopts a moralistic approach in dealing with extremist groups.
- This moralistic attitude that India would only talk to the legitimate government in that country, is a self-defeating position.
- As a result, India's relations with Afghanistan will take a hit in the immediate aftermath of the deal.

Why will India be hit?

- China is deeply involved in the geopolitics and geo-economics of the region including in Afghanistan.
- So, India's traditional ability to influence the region's political and security outcomes will be severely limited.

- This will be further exacerbated by the U.S. withdrawal from the region.
- Other regional actors in Afghanistan are also less friendly towards India than ever before: like Iran, Russia, Pakistan, etc.
- Unless India carefully envisages a counter strategy, these factors will increasingly push it into a geopolitical tough spot in the region.

What is the Kashmir angle?

- The direct physical impact of the Taliban's return to power in Afghanistan on Kashmir will be negligible.
- But, there is going to be more psychological impact on the disenchanted Kashmiri youngsters.
- They may pick up guns drawing inspiration from this Afghan situation where US leaving the country in the hands of an extremist group.

How will Pakistan influence?

- The U.S.-Taliban deal can't survive without Pakistan's assistance towards ensuring its success, and the U.S. and its allies recognise that.
- Using this, the Pakistan may put up a gamble in Kashmir.
- India's official statement which describes Afghanistan as a "contiguous neighbour" will make Pakistan and China sit up and take notice.
- [Contiguous neighbour - India considers Pakistan-occupied Kashmir (PoK) a part of its sovereign territory]
- Erstwhile rhetorical claims on PoK and Aksai Chin have suddenly assumed lot more geopolitical significance today.
- This has made conciliatory approaches to conflict resolution ever more difficult.

G.S PAPER III

7. ECONOMY

7.1 SC Quashed Ban on Virtual Currency

Why in News?

The Supreme Court (SC) has set aside a ban by the Reserve Bank of India (RBI) on virtual currency.

What was the ban?

- In a 2018 circular, the RBI had banned banks from dealing with virtual currency exchanges and individual holders.
- This ban was based on the grounds that these currencies had **no underlying fiat**.
- The RBI said that this ban was necessary in the **larger public interest** to stop banks from providing any services related to these.

Why this ban was set aside by the SC?

- The court held that the ban didn't pass the "proportionality" test.

Five-prong Test to check Proportionality

- Direct and immediate impact upon fundamental rights.
- The larger public interest sought to be ensured.
- Necessity to restrict citizens' freedom.
- Inherent pernicious nature of the act prohibited or its capacity or tendency to be harmful to the general public.
- The possibility of achieving the same object by imposing a less drastic restraint.



- The test of proportionality of any action by the government, the court held, must pass the test of Article 19 (1) (g).
- [Article 19(1)(g) - All citizens of the country will have the right to practise any profession, or carry on any occupation or trade and business.]

What are virtual currencies?

- As there is no globally accepted definition, virtual currency may be regarded as a method of exchange of value; or as a commodity.
- It may be defined as a **new electronic cash system** that's fully peer-to-peer, with no trusted third party.
- There would be **no central regulator** for virtual currencies as they would be placed in a globally visible ledger, accessible to all its users.
- All users of such virtual currencies would be able to see and keep track of the transactions taking place.
- Virtual currency is the larger umbrella term for all forms of non-fiat currency being traded online.
- They are mostly created, distributed and accepted in local virtual networks.

Why did the RBI ban virtual currencies?

- The RBI flagged its concerns on trade and use of the currency due to,
 1. Lack of any underlying fiat,
 2. The episodes of excessive volatility in their value,
 3. Their anonymous nature which goes against global money-laundering rules,
 4. Risks and concerns about data security and consumer protection,
 5. Its potential impact on the effectiveness of monetary policy.
- The RBI argued in the SC that these currencies weren't safe for use due to a significant shoot in the valuation of many virtual currencies and rapid growth in initial coin offerings.

What did the petitioners say?

- The petitioners included virtual currency exchanges operational in the country.
- They told the SC that the **RBI action was outside its purview** as the non-fiat currency was not a currency as such.
- Arguing that the ban was solely on "moral grounds", the petitioners said the RBI should have adopted a **wait-and-watch approach**.

What did the SC rule?

- In its judgment, the SC held that the RBI directive came up short on the five-prong test to check proportionality.
- The court did not agree, however, with any other submission made by the petitioners.
- The court said that the RBI could not be faulted for not adopting a "light-touch" approach as adopted by the developed economies.
- Therefore, the court said that it won't test the correctness of the measure taken by RBI on the basis of the approach adopted by other countries.
- The verdict removes the arbitrariness of regulatory actions without disregarding the power of RBI to regulate.

What happens now?

- The SC's judgment could lead to the RBI rethinking its policies surrounding virtual currencies.

- If rethought, the RBI may come up with a new framework that deals with the reality of these technological advancements.
- The decision will help those investors who had used this money through banking channels.

7.2 Yes Bank Crisis

Why in news?

The Reserve Bank of India (RBI) has placed the financially troubled Yes Bank under a moratorium (temporary suspension).

What happened after this?

- After placing this bank under a moratorium, the RBI announced a **draft ‘Scheme of Reconstruction’**.
- This scheme entails the State Bank of India (SBI) investing capital to acquire a 49% stake in the restructured private lender.
- Yes Bank’s stock tumbled that eroded shareholders’ holdings and dragging the 10-bank S&P BSE Bankex down with it.
- This is an indicator of the contagion risk that a sudden bank resolution can pose to the financial system.
- So, the enthusiasm with which the bailout has been proposed is praiseworthy.

Why the lender was hit hard?

- Yes Bank’s problems with mounting bad and illegal loans reflect the underlying woes in the borrower industries.
- The continued inability of many corporate to repay their loans has resulted in many landing up in **insolvency proceedings**.
- This has meant that lenders have been the hardest hit.
- It has suffered a **doubling in gross non-performing assets** over the April-September period, even as it scrambled to raise capital to shore up its balance sheet.
- With the economy in the throes of a persistent slowdown, the prospects of banks’ burden of bad loans easing soon are limited.
- The lender has been ended up at the resolution stage, without being placed under the Prompt Corrective Action (PCA) framework of the RBI.
- This raises a question over how and why the bank escaped the PCA that was a tailor-made solution to address weakness at banks.

How did the lender escape the PCA framework?

- The lender’s stated operational metrics had not breached the pre-set thresholds for triggering the PCA action.
- But, the central bank had flagged several concerns in recent years.
- This also includes the concern of the distinct divergence between the reported and RBI’s own findings on the financials of the bank.
- This could be a good opportunity for the RBI to **review its PCA** guideposts and revise them to ensure that such a slipping under the radar does not recur.

Why SBI has been chosen as an investor?

- The choice of SBI as the investor to effect the bailout reflects the scarcity of options with the government.
- Several other public sector banks are also currently engaged in merging with weaker peers as part of the Centre’s plan.

7.3 Assemble in India

What is the issue?

- There is a proposal to promote 'Assemble in India' as a ground for 'Make in India'.
- This move may revive Indian exports which have failed to compete in global markets, but widens the skills gap.

What is the export status of India?

- India has the lowest manufacturing share in gross exports in Asia.
- India is no longer the fastest growing economy in the region.
- It lags behind Bangladesh, Vietnam and Cambodia in terms of growth performance.
- Weakening of exports is a gloomy sign for India's already deteriorating GDP growth, which is estimated to decelerate to 5% in 2019-20.
- When the production process is getting fragmented globally, the idea to boost production alone does not go very far in alleviating exports.
- Nor does it help the 'Make in India' cause of the government.

What is the 'Assemble in India' proposal?

- The Economic Survey 2019-20 proposed a scheme to **integrate 'Assemble in India' into 'Make in India'**.
- This will encourage Multinational enterprises to begin assembling the network products in India.
- The Economic Survey predicts that by this integration, 4 crore well-paid jobs can be created by 2025 and 8 crore by 2030.
- The estimate of creating 8 crore jobs is based on the premise that India can increase its world export share of network products from 0.6% currently to 6% by 2030.
- This is premised assuming that India can mimic China's export performance during the first decade of the China's export market entry in network products.

What does it mean if these estimates are true?

- If these estimates are believed to be true, then the country is heading towards a **widening skills gap**.
- A chunk of jobs created by India's export of network products has been for workers with above secondary education.
- This is in sharp contrast to the corresponding share in case of overall manufacturing exports.
- The **requirement for high-educated workers** is only going to **rise** at the cost of uneducated and less educated.
- This is so, as the transnational companies are the ones that largely control the production process of network products.
- Greater integration into Global Value Chains (GVCs) for network products will require India to close the quality gap faced among its peers, requiring its manufacturers to leapfrog to newer technologies.

What will be the consequences?

- A World Economic Forum study (2018) - The adoption of Industry 4.0 may impact low-skilled employees because of their vulnerability to automation.
- In the process, the less educated workers are likely to remain excluded.

- While integrating into GVCs seems the way forward, one must be mindful of the distributional consequences on the jobs so created.
- The employment and wage gains through GVC integration have been largely biased towards more skilled workers.

7.4 Cut in Oil Price

Why in News?

Saudi Arabia has cut the oil prices and declared its intention to increase output well beyond what the oil market can absorb currently.

Why did Saudi cut the price?

- The Organisation of the Petroleum Exporting Countries (OPEC) and Russia (the largest non-OPEC producer) failed to reach an agreement to deepen existing production cuts to cope with the falling demand.
- So, the Saudi Arabia has cut the oil price.
- Already teetering from the impact of the corona virus, global markets received a shake with the fall in price.
- This is so as oil prices crashed overnight consequent to the price fall.

What will happen now?

- The oil market is now set to witness the rare conjunction of a demand and supply shock which is bad news for prices.
- Fears of a fall in demand following the outbreak of COVID-19 had already depressed oil prices.
- The possibility of the market being flooded with excess production from Saudi Arabia and Russia will unfortunately lead to a supply shock.
- There is still a downside to prices from current levels especially if Russia joins the battle with Saudi Arabia and decides to hike its own output.

How this news is perceived?

- A fall in prices is good news for major consumers such as India and China which depend on imports for a major part of their oil needs.
- But, it may be bad news for the big oil companies and the smaller shale oil players who are highly leveraged.
- A collapse of these shale oil producers may set off defaults in the bond markets, setting off its own non-virtuous spiral.
- With stock and bond markets already in turmoil, the price war now set off in oil is only going to make the markets more volatile and murkier.

How will India be impacted positively?

- For India, the sharp dip in oil prices is good news, for now.
- This will reduce the oil import bill at a time when merchandise exports are likely to suffer due to the freeze in the developed economies.
- This will keep the current account deficit balanced.

Organisation of the Petroleum Exporting Countries (OPEC)

- OPEC is a permanent intergovernmental organization of 13 **oil-exporting developing nations**.
- It was founded in 1960 by five countries namely Islamic Republic of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela.
- In accordance with its Statute, the mission of the OPEC is to coordinate and unify the **petroleum policies** of its Member Countries.
- It should ensure the **stabilization of oil markets** in order to secure an efficient, economic and regular supply of petroleum to consumers.

- The fall in fuel prices will also drag down headline inflation giving the Reserve Bank of India elbow room to cut rates.

How will India be impacted negatively?

- The Centre's disinvestment programme to sell the Bharat Petroleum Corporation Limited (BPCL) could run into headwinds.
- The company's valuation may drop.
- So, the big oil companies, which are expected to bid for BPCL, may either shy away from it or their bids may be much lower than expected.
- Eventually, the government may increase the excise duties to compensate for the loss from disinvestment proceeds.
- Any such decision is unlikely to go down well with India's consumer middle class.

7.5 NSO Estimates of GDP Growth

Why in News?

National Statistical Office (NSO) estimates of Gross Domestic Product (GDP) have pegged growth at 4.7% in the October-December 2020 period.

What is GDP?

- GDP is the total market value of all the finished goods and services produced within a country's borders in a specific time period.
- As a broad measure of overall domestic production, it functions as a comprehensive scorecard of the country's economic health.
- Though GDP is usually calculated on an annual basis, it can be calculated on a quarterly basis as well.

Why the estimate has pegged?

- The estimate for the GDP growth of the October-December quarter has pegged as it is a **demand-filled festival season**.
- This estimate is a distinct slowdown from the revised year-earlier and preceding quarters' 5.6% and 5.1% paces respectively.

What are the sectors that saw drag?

- **Manufacturing** contributes under a fifth to gross value added (GVA).
- But, this sector saw the biggest drag posting a 0.2% decline and extending the sector's contraction into a second straight quarter.
- Output at **electricity** and allied utility services shrank 0.7%, reflecting lack of demand from becalmed factories.
- Activity in **construction** softened worryingly to a 0.3% expansion, prolonging the industry's slowdown for a third consecutive quarter.

What are the sectors improved?

- **Agriculture** and the three largest **services sectors**, including public administration and defence have shored up overall GVA.
- According to NSO estimates, farm output will expand by 3.5% and the government-centred services will grow by 9.7%.

What did the Centre assert quickly?

- The Economic Affairs Secretary cited an improvement in output at the 8 core industries as an uptick in momentum.
- So, the Centre was quick to assert that the economy appeared to have “bottomed out”.
- The overall growth at the 8 industries that include coal, steel, cement and electricity averaged 2.2% in January 2020.
- This growth was propelled by an 8% increase in coal production.
- The survey-based India Manufacturing Purchasing Managers' Index (PMI) of IHS Markit for February 2020 pointed to an **improvement in manufacturing**, clearly a positive sign.

What do the key components of GDP reveal?

- The key components of GDP are private final consumption expenditure (PFCE) and gross fixed capital formation (GFCF).
- A closer look at the actual numbers for PFCE and GFCF across the three quarters belies hope that the economy is out of danger.
- A downward revision of data for 2018-19 have lent a statistical boost of 0.6 percentage point to the 1st and 2nd quarter GDP growth estimates.
- Disconcertingly the second-quarter PFCE and GFCF figures have been revised downward from what was projected earlier.
- Of concern is the second successive contraction in capital formation.
- GFCF shrank 5.2% in the 3rd quarter, after declining 4.1% over July-September.
- This signals that in spite of government's corporate tax cuts, investment activity is recovering.
- Consumption spending remains palpably soft with the pace of growth for all three quarters lagging the year-earlier levels even after the revision.

Why the bottom may still be distance away?

- Automobile sales are still floundering.
- The consumer confidence survey by the RBI points to a fall in non-essential consumption.
- The impact of the corona virus outbreak on global demand is yet to be factored in.
- Due to all these factors, the bottom may still be some distance away.

7.6 Companies (Auditor's Report) Order, 2020

Why in news?

The Union Ministry of Corporate Affairs (MCA) has announced the notification of the Companies (Auditor's Report) Order, 2020 (CARO 2020).

What changes did the Order introduce?

- It has introduced several **changes to the rules governing audit reports of companies**, with a view to increase transparency.
- These changes may enhance the role of auditors and bring their incentives into more clear alignment.
- It proposed that **non-audit services** not be provided to audit clients.
- It said so to prevent revenue from such services impinging upon the decisions taken by the auditor when writing its report.



- The auditors should provide reports that are as **factual** and **complete** as the information they are provided by the company in question.

What are the transferred responsibilities?

- The 2020 CARO has now sought to transfer greater responsibility for **providing complete information to its auditors**.
- Auditors have essentially been forced to demand more information, in what will be a net positive for shareholders and other stakeholders.
- It is true that the **paperwork burden** will significantly increase.
- The 2020 CARO requires auditors to comment on 50 matters, including sub-clauses, where 2016 CARO required comment on only 21 matters.
- This is a significant expansion in scope and it remains to be seen how much it adds to transaction cost and delays in practice.

How the auditor's report should?

- The auditors are now required to **report on how the company is using its connections** with subsidiaries and joint ventures i.e.,
 1. Are loans being raised to finance them? or
 2. Are loans being taken out against them?
- The auditor will also have to **examine what the auditors of the subsidiary** have said in their annual reports.
- They should also report these auditor's reports in the holding company's report if they find "adverse" remarks.
- Several requirements seem designed to ease the load on banks, such as
 1. The requirement to specify the amount of loans that don't have terms for repayment, and
 2. The requirement to specify whether the company has itself loaned money to related parties.
- The provision, the auditor has been directed to provide an opinion on the main financial ratios of the firm, may simply go too far.

What is the significance of CARO?

- The CARO 2020 restricts itself to enhancing the information available to both investors and financial institutions.
- It should be considered to be a major step forward for transparency in accounts.
- It is important that **audit companies implement the rules** in both letter and spirit.

Why regular audit matters?

- There have been some recent high-profile examples of companies that have knowingly deceived their auditors.
- Yet a regular audit is not a forensic exercise, and instead relies on the companies to turn over information in a timely and accurate fashion.
- If they do not do so, the entire process is naturally called into question.

7.7 State of Voluntary Tax Compliance

Why in news?

The Prime Minister (PM) Narendra Modi recently commented on the state of voluntary tax compliance in India.

What was his comment?

- Only 1.5 crore out of the 130 crore people pay income tax in India.
- Those persons declaring an annual income of Rs 50 lakh are just 3 lakh.
- Only 2,200 professionals declare their annual income of over Rs 1 crore.
- The PM remarked that when lots of people find ways not to pay tax, the burden comes on those who pay their taxes honestly.
- He appealed to all citizens to take a pledge to pay their taxes honestly, saying there was a long way to go in terms of tax compliance in India.

What does data on I-T Return reveal?

- The Income Tax Return Statistics for various assessment years (AYs) reveal that **salary income is the highest source of income** reported by individuals between FY15 and FY18.
- Salary income reported across all income ranges is significantly higher than business income.
- Tax returns filed by individuals over this period indicate that salary income is higher than business income in the slabs above Rs 50 lakh.

What is the situation of the salaried class?

- The gap between salary and business income is increasing year on year.
- The salaried class is subject to **tax deduction at source** on their entire income, even before they get their salary which results in accurate reporting of income.
- No other class of taxpayers is subject to this type of tax withholding, resulting in rampant under-reporting and non-reporting of income.
- For AY17, the income-tax paid by a salaried taxpayer was about three times higher than that of business taxpayer - not a feat to be proud of.
- This is so as the individual business taxpayer doesn't report their income and they get away with impunity.
- **Under-reporting** of income has been the bane of India's tax system.

Why the salaried class are penalised with higher taxes?

- This is due to the government's **inability to increase the taxpayer base**, and collect income tax from the non-salaried class.
- Taxes on honest salaried taxpayers have increased over last four years.
- This has resulted in a minuscule 0.1% of individuals contributing about 20% of the tax payable by all individuals between FY15 and FY19.
- In FY21 budget, the **dividend distribution tax has been abolished**, and shareholders are required to pay income tax on the dividend income.
- Individuals earning a gross total income (GTI) above Rs.5 crore have an additional tax impact of 7.94% on dividend received in FY21 and beyond.
- So, the salaried taxpayers are penalised with more tax for being honest.

How do salaried class feel?

- There is **strong resentment** and anger among the salaried class for being penalised for their honesty.
- Many high-income earning, honest, taxpaying citizens are **relocating out of India** due to the growing disparity due to tax evasion.
- There is **very low tax morale** among the salaried class.

How tax evasion is driven?

- Tax evasion is driven significantly by **tax morale**, viz., the intrinsic motivation of taxpayers in a country to pay taxes.
- Tax morale itself is driven primarily by two perceptible factors:
 - a) **Vertical fairness**, i.e., what one pays in taxes is commensurate to the benefits one receives as services from the government; and
 - b) **Horizontal fairness**, i.e., differences in the taxes paid by various sections of society.

7.8 Making GST a Success

What is the issue?

- The reality of Goods and Services Tax (GST) in the field is worrisome as there is tax evasion and administrative hurdles.
- There is a need to make some fundamental changes to make GST a success.

What are the challenges?

- The tax administration is unable to fulfil the objective of providing a tight infrastructure to weed out evasion.
- The administration and the taxpayer have to contend with continuing changes in GST rates made by policymakers.
- New laws in other sectors have conflicted with GST implementation.
- Large businesses are as much prone to tax evasion as small, lending a touch of implausibility to the tax.
- Examination of systemic deficiencies and correcting them promptly are missing.
- The frequent dropping and jamming of the GST website have to be mitigated successfully if good taxpayers are expected to comply on time.

What is leading to tax evasion?

- The biggest challenge for the system has been its **inability to auto-populate linked information** from one tax form to another.
- The taxpayer has to report his sales, purchases and the GST return in three different forms separately.
- These forms are supposed to be linked electronically but are not.
- The introduction of GST without this basic linked-framework is now rearing its head in tax evasion.
- GST without the innovation of linkages is not fundamentally different from India's earlier indirect tax structures.
- Similar modes of evasion continue under GST.

What are these modes of evasion?

- One method of evasion is **claiming huge amounts** of tax payment **through accumulated credit (AC)**.
- Without field investigation there is no way to find if the AC used to pay tax reflects the true picture.
- Another method is to show **large and false turnover** and, together with it, large input costs.

What would be the impact?

- False AC limits GST revenue collection, in turn constraining government expenditure disbursements.
- This will increase the pressure on tax collectors to increase collection haphazardly which will in turn limit legitimate input tax credit claimed by honest taxpayers.



- Fake invoices are used by brokers who are being used by company executives in particular sectors.
- Such brokers are the ones who make illicit profit through exploiting such businesses that they are supposed to serve.
- The Bankruptcy Code has not helped. It allows taxpayers to hide behind Section 13 on non-performing assets (NPAs).

How GST could be made a success?

- Terminating GST registration when a supplier goes out of operation should be considered automatic rather than pending the process.
- Ultimately, how GST fares will depend on the Indian taxpayer's attitude towards paying tax.
- Complementary policy and administrative actions are imperative.
- Policymakers should produce a consistent and stable tax rate structure.
- The model for auto-populating forms should be achieved without delay.
- Facilitation by the administration in refunds, de-registration and other functions should not be thwarted by the administration to meet revenue objectives.

7.9 Abolition of Dividend Distribution Tax

What is the issue?

- The abolition of the Dividend Distribution Tax (DDT) in Budget 2020 is hailed as a big relief for corporates and non-resident shareholders.
- There will be no disputes regarding disallowance of expenses in terms of Section 14A of Income Tax (I-T) Act read with Rule 8D of I-T Rules.

What is dividend and DDT?

- **Dividend** is a return given by a company to its shareholders out of the profits earned by the company in a particular year.
- Dividend constitutes income in the hands of the shareholders which ideally should be subject to income tax.
- However, the Indian income tax laws provide for an exemption of the dividend income received from Indian companies by the investors.
- **DDT** is levied on any domestic company which is declaring/distributing dividend and is paid at the rate on the gross amount of dividend.

What are the current regulations?

- **Section 14A** provides that any expense concerning income not forming part of total income would not be allowed as deduction.
- Presently, the dividend income is not taxable in the hands of shareholder and does not form part of total income.
- **Section 56** charges income tax on the dividend.
- **Section 57** allows certain deductions while computing income from other sources.
- All expenses incurred wholly and exclusively to earn income taxable under Section 56 are allowed as deduction.

What does the Budget 2020 propose?

- It proposes a proviso to Section 57 that states that no deduction shall be allowed against dividend income other than interest expenses.

- The deduction on account of interest will be restricted to 20% of the dividend income.
- The cap of 20% is based on the amount of income earned and offered to tax in the previous year.
- Hence, in case, no dividend income is earned in a year even though the assessee incurs interest expenditure or fee on investment managers, she cannot claim any deduction.

What are the other proposals?

- Besides restricting the quantum of deduction in respect of interest, the amendments change the regime of taxation from being net to gross.
- The intention cannot be to discourage investors from borrowing heavily to invest in shares or paint all dividend earned as a windfall, nor can there be a fear of an excessive claim of expenses.
- Presently, expenses are allowed to be deducted as per Section 57, and it is nobody's case that it has resulted in a massive leakage of revenue.

How income is taxed now?

- Income may be interpreted in a wide manner to include receipts, windfalls and gifts.
- When the income like **profit** is taxed, the mechanism provided to tax it would allow for a deduction of expenses.
- Certain incomes like **royalty, fee** for technical service, etc, are subject to taxation on a gross basis.
- In case of **income from house property**, there is a cap on deduction towards interest paid on borrowed capital.
- The rationale is that the annual lettable value of a self-occupied property is deemed as nil.
- Where the assessee claims that dividend is **business income**, it may be possible to claim all expenses regarding it.
- However, the debate of whether dividend can ever constitute business income is already before the courts.

What would be the impact?

- The abolition of DDT and reintroduction of tax on dividends in the hands of the shareholder has brought relief to non-resident investors.
- However, this change is likely to increase the pain of resident shareholders, especially those falling in higher tax brackets.

7.10 RBI and Payment Aggregators

Why in news?

RBI has issued final guidelines for bringing payment aggregators (PAs) under its direct supervision.

What is the significance of the move?

- Extending RBI's regulatory oversight is a welcome move.
- PAs (like Bill Desk, CCAvenue, etc.) facilitate online payments and they play a crucial role in the digital payments ecosystem.
- So, the RBI guidelines will be instrumental in ensuring that only serious players with robust governance framework remain in the market.

What was the distinction made?

- The 2019 RBI discussion paper proposed common regulatory framework for PAs and PGs without making any distinction in their roles.
- Contrary to these, the final guidelines distinguished a PG from PA as,

1. Payment Gateways (PGs) - Merely provides technological infrastructure without any access to consumer funds.
 2. Payment Aggregators (PA) - Actually handles consumer funds.
- Accordingly, only PAs are mandated to comply with the regulatory requirements outlined in the guidelines.
 - However, as a measure of good practice, PGs are recommended to adopt the baseline technology measures in the guidelines.

What is the mandate regarding net-worth?

- The discussion paper recommended a net-worth requirement of Rs 100 crore for PAs and PGs, which was heavily criticised by the industry.
- But, the final guidelines mandate PAs to have a net-worth of Rs 15 crore initially, and then Rs 25 crore by 2023.

What consumer difficulty was addressed?

- The guidelines require refunds to be made to the original method of payment, unless an alternate mode has been agreed to by the consumer.
- This may prohibit the practice of many e-commerce platforms to credit refunds automatically to a consumer's e-wallet created on the platform.
- This was a difficult practice for a consumer, as the amount in these wallets can only be used for transactions on that particular platform.
- Now, the e-commerce platforms have to credit the refunds to the account from where the amount was originally debited.

What are the issues that require further clarity?

- **Account with only one SCB** - The guidelines require PGs to maintain an escrow account with only one State Cooperative Bank (SCB).
- It may be worthwhile to reconsider this provision and enable more than one account, in light of Yes Bank debacle.
- Due to restrictions imposed by the RBI on Yes Bank, the nodal accounts maintained by payment intermediaries with it could not be operated.
- This resulted in disruption of services by fintech companies, especially related to paying out merchants.
- **Background check** - In addition to undertaking KYC for on-boarding merchants, PAs have been mandated to undertake background and antecedent check of the merchants.
- This is to ensure that such merchants do not have any mala fide intention of duping consumers or selling counterfeit products.
- Mandating PAs to address the regulator's concern regarding the quality of the merchant and its goods appears to be an onerous burden for a PA.
- **Grievance redressal** - The PA is mandated to maintain customer grievance redressal mechanisms in line with RBI's prescriptions on turnaround time for resolution of failed transactions.
- Unlike the regulatory prescriptions for prepaid payment instrument issuers, there is no requirement for PAs to report about the receipt of complaints and action taken status thereon to the RBI.
- **Preparation of plans** - The impact of the Yes Bank moratorium on the fintech sector clearly indicates the relevance of business continuity plans.
- Accordingly, it may have been useful for guidelines to refer to preparation of plans by PAs.

7.11 RBI and COVID-19

Why in news?

RBI has taken some measures to safeguard the economy from impact of the COVID-19 pandemic.

What are the measures?

- RBI has cut the Repo Rate by 75 basis points (bps) from 5.15% to 4.4%.
- Marginal Standing Facility (MSF) rate and Bank Rate has been reduced from 5.40% to 4.65%
- Reverse Repo Rate is reduced by 90 bps to 4%
- Cash Reserve Ratio (CRR) of banks to be reduced by 100 bps to 3%
- Banks are permitted to grant moratorium i.e. a temporary halt, on all term loans of 3-months of instalments.
- These measures will inject liquidity of Rs 3.74 lakh crore to the system.

What do these policy cuts mean?

- The cut in repo rate and CRR are the sharpest after the 2008 response to the global financial crisis.
- With a high 90 bps cut in the reverse repo rate, lenders are being nudged away from parking funds in RBI's reverse repo corridor.
- This rate cut and other liquidity facilities need to be enveloped in a package of macro and micro-prudential relaxations and regulatory forbearance.

What does the 3-months moratorium mean?

- This is not a waiver, but only a deferment i.e. a borrower does not have to pay interest or repay the principal on a loan for 3 months.
- Since non-payment will not lead to non-performing asset classification by banks, there will be no impact on credit score of the borrowers.
- But, the payments will be cumulated and will need further spreading out over the next quarter.
- Help for MSMEs is provided by enhancing Working Capital draw limits, by reducing margins or extending the WC cycle.
- The moratorium will reduce anxiety among businesses and individuals who will see a fall in income/cash flows.

Will these measures be effective?

- The effectiveness also depends on stakeholders' perception of the credibility of the authorities' response functions.
- As the shock to an already weakened economic system was a public health crisis, the first task is to stabilise the economy.

8. INFRASTRUCTURE

8.1 India's Road Safety Record

Why in News?

Union Transport Minister said that the amendments made to the [Motor Vehicles Act](#) have begun reducing the death toll due to road accidents.

What is the reality?

- Any reduction in road safety incidents in a rapidly motorising country is encouraging.

- But the cold reality is that the data on those who lose their lives or are incapacitated do not reflect a marked decline.
- Small reductions in this infamous tally have little meaning, since they don't represent a trend of targeted reductions.
- The rise in fatalities from 80,888 (2001) to 1.5 lakh lives each year since 2015 explains that the policymakers are just tolerating the loss of lives.

Did the amended law have an impact?

- The new Motor Vehicles law does have more muscle in being able to levy stringent penalties for road rule violations.
- But this doesn't mean that India has moved to a scientific road system marked by good engineering, sound enforcement, appropriate technology use and respect for all road users.
- The World Bank's 'Delivering Road Safety in India' report says that rapid motorisation and more high-speed road infrastructure have raised the risks for road users.
- The transition to a professional road environment requires implementation of **first-tier reforms**.

How the reforms should be?

- These reforms should deal with **quality** of road infrastructure and **facilities** for vulnerable users.
- There should be **zero-tolerance enforcement** of rules by trained professional and empowered machinery.
- A key mechanism of change is the District Road Safety Committees.

How these committees should work?

- A mandatory **monthly public hearing** of such committees involving local communities can highlight safety concerns.
- Their follow-up action can be supervised by the Members of Parliaments' Road Safety Committees.
- It is essential to make the Collector, local body and police accountable.

What could be done?

- Making **dashboard cameras mandatory** (with the video evidence accepted in investigation) would aid enforcement.
- To save lives on highways, **quality trauma care at the district** level holds the key.
- In the absence of good hospitals and cashless free treatment, no significant improvement is possible in the quest to save life and limb.

8.2 Stimulating the Aerospace Industry

Why in News?

Addressing an industry gathering, the Defence Minister spoke about a series of targets for increasing the aerospace and defence production of India.

What are the targets?

- He urged the **private sector to boost annual defence production** to \$26 billion by 2025.
- He also stated that the government aims to **double the aeronautics industry's size** from Rs 30,000 crore to Rs 60,000 crore by 2024.
- This aim is to be achieved through measures such as encouraging the global aerospace industry to source aero components from India.



- He stated that efforts are made to double the number of the micro, small and medium enterprises (MSMEs) in aerospace and defence (A&D).

What is the current production?

- Of the current annual aerospace production of Rs 30,000 crore, Hindustan Aeronautics Ltd (HAL) accounts for over Rs 20,000 crore.
- The remaining one-third consists of offset related production by biggies and the export related production of aerospace components by MSMEs.
- MSMEs have embedded themselves into the global supply chains of industry leaders such as Boeing, Airbus, Bell Helicopters and others.
- These MSMEs need to meet the demand of international benchmarks of high-quality production and on-time delivery.

How the production target is to be met?

- There are structural and functional limitations to how much HAL can realistically expand production.
- Meeting the aerospace production target of Rs 60,000 crore would have to come through MSMEs that are manufacturing for the global supply chains of the large “original equipment manufacturers” (OEMs).
- To support these firms and enable their growth, the fundamentals need to be set right first.

What policy hindrances do Indian companies face?

- Indian government must recognise that our firms competing for global orders are up against rivals that are supported by their governments.
- These governments support them with tax and export incentives and infrastructure that almost invariably surpasses India's.
- The high cost of capital and lack of access to funds are the greatest deterrent to growth of the Indian companies.
- This resulted in a loss of business and a missed opportunity for creating jobs and skills.

How these policy hindrances are to be overcome?

- The government could create **A&D Fund** to provide low cost capital quickly to enable our MSMEs to grab fleeting business opportunities.
- The government must introduce these MSMEs to the overseas OEMs, with the tacit assurance that New Delhi backs its companies.
- Simultaneously, it government must incentivise global OEMs with tax incentives for working with Indian MSMEs.
- It would be worthy to change the criteria for defining an MSME in terms of annual revenue with an upper limit of Rs 500 crore.

What could be done academically?

- The government must shift the skilling emphasis from quantity (numbers put through training) to quality (ability imparted).
- The AICTE must allow industry participation in creating curriculum and training infrastructure in consonance with industry needs.
- Already, several companies run their own training curricula.
- The government could recognise these programmes as valid academic qualifications for career advancement.



- It must create a legal intellectual property (IP), patents and inventions protection system on a par with global standards.

9. AGRICULTURE

9.1 Punjab and Pulses Cultivation

Why in News?

Punjab Agriculture Department is distributing moong dal seed kits to farmers during the ongoing sowing season to push pulses cultivation in the state.

What is the total area under pulses in Punjab?

- While Punjab is the highest contributor of wheat and paddy to the national pool, it lags behind in cultivation of pulses.
- In Punjab, mainly green gram (moong), black gram (mash) and pigeon pea (arhar) pulses are grown.
- In 2019, there was 11,700 hectares (0.74%) area under pulses in the state, out of around 39.69 lakh hectares under agricultural crops.
- This is a further decrease of 27% from the previous decade.

Why Punjab wants to increase its area under pulses?

- Farmers are already reeling under an agrarian crisis and this can boost their income.
- Punjab is a leading state in wheat and paddy production but it is totally lagging behind in pulses and dependent on the other states.
- So, there is a want to **increase their self-dependence** in the pulses cultivation and to **increase the farmers' income**.
- Sources in the Agriculture Department said that Punjab is not even growing 3% of pulses against the total requirement of the state.

How pulses cultivation can help Punjab farmers?

- Moong cultivation provides farmers with an opportunity to have a third crop in a year.
- Moreover, moong being a leguminous crop, it helps in nitrogen fixation and contributes to improving the soil fertility.
- In Punjab, the most suitable time for cultivating pulses is during spring/summer months (March to May).
- This is the same time when hectares of land in Punjab remain vacant after wheat and potato harvesting for over two months.
- Farmers will be able to take advantage of this period.

How much a farmer can earn from growing moong dal?

- Farmers can get 5-6 quintals moong per acre which translates to Rs 35,000 to Rs 42,000 per acre if he gets the Rs 7000 per quintal MSP of moong decided by the Centre.
- While the input cost would be around Rs 8000-9000 per acre including seed, labour, and other expenditure.
- This can maximize the farmers' profits even from small landholdings.
- But farmers feel that the state government must make a system for local procurement, so that the produce can be consumed in Punjab.



What is government doing on the ground?

- The government is distributing 4-kg kits to the farmers free-of-cost to multiply the seed.
- It is also holding awareness and training camps for farmers to demonstrate the use of the latest techniques for sowing pulses.
- These kits will help farmers cover two-fifth of an acre and will give a yield that can be used as seeds that can be sown in around 20 acres.

9.2 Shifting Agriculture Policy

Why in News?

The government is formulating a new policy that would lend legal recognition to shifting agriculture as a form of agro-forestry.

What is the objective of this move?

- By lending legal recognition, the government wants to enable nomadic farmers get bank credit and agriculture-related subsidies.
- This move has consequences that are likely to be disastrous.
- In India, shifting farming is still practiced largely in the ecologically fragile hilly terrains in the Northeast, alongside some other states.

What is Shifting Agriculture?

- It involves clearing of forests, burning the stubble and cultivating the land for a few years before moving to another plot, leaving the old patch for regeneration.
- It is also known as jhumming or slash-and-burn agriculture.
- This mode of farming has ill-effects on ecology, biodiversity, habitats and other natural features.
- It also causes loss or deterioration of forest cover leading to soil erosion and degradation of catchments of rivers and other water bodies.

What was NITI Aayog's idea?

- The NITI Aayog which had mooted the idea of redefining jhumming land-use as agro-forestry in a 2018 report.
- It is based on the contention that shifting farming is essentially a method of putting land to two distinct uses alternately,
 1. **Agriculture**, when it is under cultivation, and
 2. **Fallow forestry**, when it is left untilled for revival of forest.
- This plea seems well founded, but it cannot be disregarded that the time given for renewal of forests (3 to 4 years) is insufficient for that purpose.
- This phase used to be as long as 10 to 40 years in the past.
- The green cover now rarely comes up to the level where it can be deemed as secondary forest.

What do farmers need?

- The farmers engaged in jhumming (jhumias) are themselves fed up with this kind of nomadic life.
- As they feel jhumming is economically unviable, they want to move beyond subsistence farming to take up market-linked agriculture.
- They want opportunities for higher income from farming and non-farm employment, education and medical facilities and other civic amenities apart from access to government schemes.

- These are unduly denied to them in the absence of land titles (pattas) in their name.
- They don't get the benefits provided under the Forest Rights Act.
- At present, they are treated neither as farmers nor as forest dwellers.

9.3 Odisha's Samrudhi

Why in News?

The Odisha government launched its new State Agricultural Policy (SAP) 2020-SAMRUDHI that focuses on profitability for farmers.

What is Samrudhi?

- Samrudhi is focused on the social and economic well-being of farmers, sharecroppers and landless agriculture households.
- It aims to actualise the untapped potential of agriculture, while ensuring growth process is environmentally, economically and technologically inclusive.
- It is based on an **8-pillar strategy** focused on simultaneous reforms.

What is the 8-pillar strategy?

- The policy lays emphasis on **diversification, market linkages** and use of **technology**.
- It suggests mechanisms to orient governance reforms towards **farmer-centricity**, which is in alignment with its flagship programmes.
- It recommends the creation of **agriculture production clusters**.
- It paves the way for the creation of an agro-ecological map, which will help in identify an ideal cropping pattern.
- The policy also suggests that these clusters should be linked to the market aggressively by removing all the existing barriers.
- **Innovative market reforms** like the eNAM portal, Gramin Agricultural Markets (GrAM), creation of market information system for disseminating current and forecasted prices have been laid down.
- Special focus has been given to the **adoption of model acts** like the Model Contract Farming Act, etc, with suitable changes necessary for its implementation in Odisha.
- The policy also emphasises development of **warehousing** and **quality testing infrastructure** for better marketing of the crops.
- The agriculture policy pushes for widespread usage of new-age technology to increase the quality of farming and farm products.

What sectors does Samrudhi want to develop?

- It provides recommendations for developing the livestock and fisheries, as they have contributed the most to the growth of farmer incomes.
- For livestock, it includes elements like protection of animals from diseases, artificial insemination, conservation of indigenous species and encouraging the private sector to create value chains.
- For fisheries, the focus is on the promotion of inland fisheries and digitisation of Odisha's assets like ponds and lakes.

How was Samrudhi formed?

- The process followed for the creation of Samrudhi has been participative with the involvement of various government departments, policy experts, NGOs working with Odisha.

- To create the policy, relevant data for the last 15 years was analysed and specific opportunity areas for policy interventions were identified.
- This policy is a time-bound, action-oriented document that clearly lists outcome targets the state should achieve over the next five years.

10. ENVIRONMENT

10.1 IUCN's Gender-based Study

Why in News?

The International Union for Conservation of Nature (IUCN) has studied the effects of climate change and environmental degradation on gender-based violence.

What does the study reveal?

- This study shows that the damage humanity is inflicting on nature can fuel violence against women around the world.
- This study adds to the urgency of halting environmental degradation alongside action to stop gender-based violence in all its forms.
- It demonstrates that these two issues need to be addressed together.

What is the survival strategy followed?

- According to the study, girls in Ethiopia and South Sudan are being sold off in marriage during extreme droughts, in exchange for cattle.
- It is a survival strategy to get rid of a daughter to relieve the pressure on the family, or it's a way to generate income.
- The rate of **child and forced marriages** increases in crisis situations.
- Growing resource scarcity also increases the risk that women and girls will be victims of violence.

What problems do women face due to water scarcity?

- With increasing drought and desertification in the global south, more and more water sources and wells are drying up.
- Women who go to fetch water are forced to walk farther for that water.
- Because of this, the risk of sexual assault also increases.
- The same risk applies to gathering firewood.
- So wells are being built in the villages directly, or nearby, and try through reforestation efforts to plant trees near settlements.
- In addition to practical measures, aid organizations have also called for changes to traditional gender roles.
- It's also important that girls and women know who they can contact after an assault, and that they're encouraged to do so.

What problems do women face due to scarcity of fish?

- Women living on many of Africa's coasts and lakes have also suffered as fish have become scarcer.
- Fishermen peddling their wares are now not only expecting money as payment - they're also demanding sex.
- According to the IUCN study, this practice is now so common in western Kenya that it has a name: the Jaboya system.



- To counteract this form of sexual exploitation, women have been given the opportunity to breed fish in ponds around Lake Victoria, Africa.
- This way, they can now set up their own business and sell fish without getting into violent situations.

What is the situation of the women farmers?

- In places where women are responsible for agriculture, a sudden natural disaster or extreme weather event can have a dramatic effect on their social and family standing.
- If harvests are threatened or wiped out altogether, it can lead to violence - often from within their own families.
- Diversifying their sources of income is the most important way to protect women.

How do traditional societal roles lead to death?

- When societies dictate certain behaviours and prohibit others to women, they can suffer terribly in extreme weather situations and during natural disasters.
- Women are also more likely to die as a result of flooding, because they rarely seek refuge in emergency shelters.
- Most women prefer to barricade themselves in their huts, where they're often simply washed away by the floods. Eg: Bangladesh shelters.
- But men also die because of these traditional societal roles, as men receive significantly less help than women in crisis situations.
- This is primarily related to the traditional view of masculinity.

How do environmental crimes lead to violence?

- Environmental crimes, such as poaching and illegal resource extraction, can also lead to gender-based violence.
- According to the IUCN study, threats and sexual violence such as rape are often used to target women environmental activists to undermine their status within the community.
- It is also done to prevent other women from working to preserve the environment.
- Similar strategies are also used in industrialized nations, as women who work on environmental issues are threatened with rape on social media in order to intimidate and silence them.

11. INTERNAL SECURITY

11.1 Defence Diplomacy

What is the issue?

- India is currently facing international criticism for some of its actions.
- The “defence diplomacy” which is at the centre stage in the pursuit of its foreign policy, has helped India to stay afloat.

What is defence diplomacy?

- Defence diplomacy is a term used in international politics.
- It refers to the pursuit of foreign policy objectives through the peaceful employment of defence resources and capabilities.
- In earlier years, India hardly looked at military interactions as a means to further the national interest. But, this has changed.

How is defence diplomacy helping India?

- India is currently under international criticism, especially from the muslim world, for some of its actions.
- At the same time, its economy has also been sliding.
- Defence diplomacy has helped India to stay afloat in this worrying environment.
- It has taken the form of frequent and ambitious joint exercises with militaries of the region and beyond, port visits by warships, and so on.
- While with most countries this has been not very significant, with the US in particular, and with Japan, the interface has been substantial.

What is India's defence diplomacy strategy?

- The Indo-Pacific has been repeatedly proclaimed as a region of mutual interest and our understanding of the term is different.
- The precise purpose of the term "freedom of movement at sea" is to counter growing Chinese influence in the region.
- With no other country with which India has defence cooperation at sea does the term Indo-Pacific form the basis of cooperation.
- So, the one significant element of our defence diplomacy in the last decade has been the relationship with the US.
- This has revolved on our purchases of military hardware from them.
- This having been said, if defence diplomacy has become a key ingredient of our foreign policy as we aspire to move up in the global power chain, then it is all to the good.

How should India's diplomacy be?

- With China, India share disputed borders and a tense security relationship.
- With Russia, a defence interface that goes back six decades stands in some difficulty now.
- In the Muslim world, Iran cannot be easily ignored, nor Indonesia in the ASEAN, or Bangladesh next door.
- With these countries, India needs to increase its defence interactions so long as India recognises its limitations.

What would be the impact of defence diplomacy?

- India's profile as seen from outside is now increasingly getting predicated on domestic issues within its borders.
- As India is seeking to emerge as a major power, its domestic issues must mesh holistically with the desired international image.
- Defence diplomacy can only take India thus far. But, it cannot, by itself, overcome the negatives.

PRELIM BITS

12. HISTORY AND ART & CULTURE

UNESCO World Heritage Sites

- A World Heritage Site is a landmark or area, selected by the United Nations Educational, Scientific and Cultural Organization (UNESCO) for having cultural, historical, scientific or other form of significance, which is legally protected by international treaties.
- The sites are judged to be important for the collective and preservative interests of humanity.
- To be selected, a World Heritage Site must be an already-classified landmark, unique in some respect as a geographically and historically identifiable place having special cultural or physical significance.
- It can be an ancient ruin or historical structure, building, city, complex, desert, forest, island, lake, monument, mountain, or wilderness area.
- It may signify a remarkable accomplishment of humanity, and serve as evidence of our intellectual history on the planet.
- The sites are intended for practical conservation for posterity, which otherwise would be subject to risk from human or animal trespassing, unmonitored/uncontrolled/unrestricted access, or threat from local administrative negligence.
- Sites are demarcated by UNESCO as protected zones.
- The list is maintained by the international World Heritage Program administered by the UNESCO World Heritage Committee, composed of 21 "states parties" that are elected by their General Assembly.
- The programme catalogues, names, and conserves sites of outstanding cultural or natural importance to the common culture and heritage of humanity.
- Under certain conditions, listed sites can obtain funds from the World Heritage Fund.
- The programme began with the Convention Concerning the Protection of the World's Cultural and Natural Heritage, which was adopted by the General Conference of UNESCO in 1972.
- Since then, 193 state parties have ratified the convention, making it one of the most widely recognized international agreements and the world's most popular cultural programme.

World Heritage Sites in India

At present, India has 38 World Heritage Sites, The details of India's World Heritage Sites are as below,
Cultural Sites (30)

Under Protection of Archaeological Survey of India (22)

S.No	Name of Site	State
1.	Agra Fort (1983)	Uttar Pradesh
2.	Ajanta Caves (1983)	Maharashtra
3.	Ellora Caves (1983)	Maharashtra
4.	Taj Mahal (1983)	Uttar Pradesh
5.	Group of Monuments at Mahabalipuram (1984)	Tamil Nadu



6.	Sun Temple, Konarak (1984)	Odisha
7.	Churches and Convents of Goa (1986)	Goa
8.	Fatehpur Sikri (1986)	Uttar Pradesh
9.	Group of Monuments at Hampi (1986)	Karnataka
10.	Khajuraho, Group of Temples (1986)	Madhya Pradesh
11.	Elephanta Caves (1987)	Maharashtra
12.	Great Living Chola Temples at Thanjavur, Gangaikondacholapuram and Darasuram (1987 & 2004)	Tamil Nadu
13.	Group of Monuments at Pattadakal (1987)	Karnataka
14.	Buddhist Monuments at Sanchi (1989)	Madhya Pradesh
15.	Humayun's Tomb, Delhi (1993)	Delhi
16.	Qutb Minar and its Monuments, Delhi (1993)	Delhi
17.	Rock Shelters of Bhimbetka (2003)	Madhya Pradesh
18.	Champaner-Pavagarh Archaeological Park (2004)	Gujarat
19.	Red Fort Complex, Delhi (2007)	Delhi
20.	Hill Forts of Rajasthan (Chittaurgarh, Kumbhalgarh, Jaisalmer and Ranthambhore, Amber and Gagron Forts) (2013) (Amber and Gagron Forts are under protection of Rajasthan State Archaeology and Museums)	Rajasthan
21.	Rani-ki-Vav (The Queen's Stepwell) at Patan (2014)	Gujarat
22.	Archaeological Site of Nalanda Mahavihara (Nalanda University) at Nalanda (2016)	Bihar

Under Protection of Ministry of Railways (2)

23.	Mountain Railways of India (Darjeeling,1999), Nilgiri (2005), Kalka-Shimla(2008)	West Bengal, Tamil Nadu, Himachal Pradesh
24.	Chhatrapati Shivaji Terminus (formerly Victoria Terminus) (2004)	Maharashtra

Under Protection of Bodhgaya Temple Management Committee (1)

25	Mahabodhi Temple Complex at Bodh Gaya, (2002)	Bihar
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Under Protection of Rajasthan State Archaeology and Museums (1)

26.	The Jantar Mantar, Jaipur (2010)	Rajasthan
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Under Protection of Chandigarh Administration (1)

27.	The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement (2016)	Chandigarh
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Under Protection of Ahmedabad Municipal Corporation (1)

28.	Historic City of Ahmedabad (2017)	Gujarat
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Under Protection of Bombay Municipal Corporation (1)

29.	Victorian and Art Deco Ensemble of Mumbai (2018)	Govt of Maharashtra
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Under Protection of Jaipur Municipal Corporation (1)

30.	Jaipur City, Rajasthan (2019)	Govt of Rajasthan
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Natural Sites (7)

Under Protection of Ministry of Environment, Forest and Climate Changes

31.	Kaziranga National Park (1985)	Assam
32.	Keoladeo National Park (1985)	Rajasthan
33.	Manas Wildlife Sanctuary (1985)	Assam
34.	Sunderbans National Park (1987)	West Bengal
35.	Nanda Devi and Valley of Flowers National Parks (1988, 2005)	Uttarakhand
36.	Western Ghats (2012)	Karnataka, Kerala, Maharashtra, Tamil Nadu
37.	Great Himalayan National Park (2014)	Himachal Pradesh

Mixed Site (1)

Under Protection of Ministry of Environment, Forest and Climate Changes

38.	Khangchendzonga National Park (2016)	Sikkim
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Indian Culture Portal

- Indian Culture Portal was launched in December, 2019.
- It aims to showcase information about the rich cultural heritage of India across the globe.
- The Indian Culture Portal is available in two languages i.e. Hindi and English.



- The portal will create awareness about both the tangible and intangible cultural heritage of India, through the content available on the portal.
- The portal comprises mainly of rare books, e-books, manuscripts, artefacts from museums, virtual galleries, archives, photo archives, gazetteers, Indian National Bibliography, videos etc.
- The portal also has detailed accounts of Indian UNESCO World Heritage site, Musical Instruments of India, write-ups and beautiful pictures on cuisines, festivals, paintings, folk art and classical art from different States of India etc.

World Heritage List for the year 2020

- The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.
- This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972.
- UNESCO's World Heritage mission is to encourage countries to sign the World Heritage Convention and to ensure the protection of their natural and cultural heritage.
- It encourage States Parties to the Convention to nominate sites within their national territory for inclusion on the World Heritage List.
- Once the sites gets nominated it is referred to World Heritage Centre (WHC) for completeness check.
- Inputs received from WHC have been conveyed to the State Government for further incorporation.
- After the approval of official entry into world heritage sites list UNSECO help States Parties safeguard World Heritage properties by providing technical assistance and professional training.
- It also provides emergency assistance for World Heritage sites in immediate danger.
- Recently India has nominated 'Dholavira: A Harappan City' and 'Monuments and Forts of Deccan Sultanate' for inclusion in the World Heritage List.
- Govt. of Madhya Pradesh has submitted the proposal of 'Group of Monuments at Mandu' in the year 2019.
- M.P has also proposed Bhedaghat (Narmada Valley) as one of the recommended potential site subject to criteria set by UNESCO World Heritage Centre.

Protection of Historical Monuments

- Government is planning a review list of monuments protected under the Archaeological Survey of India (ASI) and the ones protected by the State governments.
- At present, 3,691 monuments nationwide are protected by the ASI, with the highest number, 745, in Uttar Pradesh.
- The list of the centrally protected monuments had not seen a substantial increase in many years, and important sites under the State governments could be added to the list.
- There are also some monuments that could be removed from the Central list and placed under the State governments.
- If reviewed the list of centrally protected monuments can go up to 10,000.
- In Tamil Nadu alone, there are about 7,000 temples, many of which are hundreds of years old.
- In India there is a ban on construction within 100 meters of a centrally protected monument and regulated construction within 100-200 meters under the Ancient Monuments and Archaeological Sites and Remains Act, 1958.
- The Act protects monuments and sites that are over 100 years old.



Ger or 'Phag Yatra'

- Indore district administration plans to nominate 'Ger', a traditional Holi procession, for UNESCO's list of intangible cultural heritage.
- 'Ger' or 'Phag Yatra' is a procession that is taken out on Rang Panchami in different parts of Madhya Pradesh's Indore city during the five-day Holi festivities.
- Efforts are also being made to observe 'Ger' in traditional Holkar style.
- The tradition of Ger in Indore was started under the Holkar dynasty, when royals would take to streets to celebrate Holi with the general public.

Holkar Dynasty

- The Holkar dynasty was a Maratha clan of Dhangar origin in India.
- The Holkars were generals under Peshwa Baji Rao I, and later became Maharajas of Indore in Central India as an independent member of the Maratha Empire until 1818.
- Later, their kingdom became a princely state under the protectorate of British India.
- The dynasty was founded with Malhar Rao, who joined the service of the Peshwas Baji Rao of the Maratha Empire in 1721, and quickly rose to the rank of Subedar.
- Malhar Rao Holkar (1694-1766) established the dynasty's rule over Indore.
- The name of the dynasty was associated with the title of the ruler, who was known informally as Holkar Maharaja.

Rajkumari Amrit Kaur

- Rajkumari Amrit Kaur was born into the Kapurthala royal family, she was educated in Oxford and returned to India in 1918, and began to be drawn towards the work and teachings of MK Gandhi.
- Apart from joining the nationalist freedom struggle, Kaur also began work on a number of other social and political issues such as the purdah system, child marriage and the Devadasi system.
- When the civil disobedience movement took off in the 1930s, Kaur dedicated her life to it.
- Kaur was jailed after the Quit India movement and carried to the jail a spinning wheel, the Bhagwat Gita and the Bible.
- Amrit Kaur was the first woman in independent India who joined the Cabinet as the Health Minister and remained in that position for 10 years.
- Before taking up the position of a Health Minister, Kaur was Mahatma Gandhi's secretary.
- During these 10 years, she founded the Indian Council for Child Welfare.
- She also laid the foundation of the All India Institute of Medical Sciences (AIIMS) and Lady Irwin College in Delhi in the following years.
- While Kaur advocated for equality, she was not in favour of reservations for women and believed that universal adult franchise would open the doors for women to enter into the legislative and administrative institutions of the country.
- In light of this, she believed that there was no place left for reservation of seats.

Pyramid of Djoser

- The Pyramid of Djoser or Step Pyramid is an archaeological remain in Egypt.
- The 6-tier, 4-sided structure is the earliest colossal stone building in Egypt.
- It was built in the 27th century BC during the Third Dynasty for the burial of Pharaoh Djoser.



- The pyramid is the central feature of a vast mortuary complex in an enormous courtyard surrounded by ceremonial structures and decoration.
- The pyramid went through several revisions and redevelopments of the original plan.
- Recently the pyramid was reopened for visitors after 14-year restoration.

13. GEOGRAPHY

Sonbhadra Gold Mines

- Geographical Survey of India (GSI) provided estimates for the amount of gold that can be extracted from a site in Sonbhadra district of Uttar Pradesh.
- The gold resource is located near a village called Mahuli, around 70 km from Sonbhadra district, the land is mainly forest area and inhabited mostly by tribal and members of backward classes.
- The probable resource is 52,806.25 tonnes of ore, with an average grade of 3.03 grams per tonne, which means the total gold that can be extracted is 160 kg.
- The site is part of the Mahakoshal region that includes parts of UP, Madhya Pradesh and Jharkhand.
- It is known to be potentially mineral-rich

Vanilla Islands

- Vanilla Islands is an affiliation of the island nations Seychelles, Madagascar, Réunion, Mauritius, Comoros, Mayotte in the Indian Ocean to form a new travel destination brand.
- Aim of the co-operation that has been founded in 2010 at La Réunion is to pool forces and jointly market the region compared to the solely individual marketing of each island in the past.
- Indian Navy has launched 'Operation Vanilla' by sending INS Airavat, in support of flood-hit Madagascar in January 2020, which was in line with India's vision of Security and Growth for all in the Region (SAGAR).

Great Barrier Reef

- The Great Barrier Reef Marine Park, is located off the east coast of the Queensland mainland, Australia.
- It spreads across a length of over 2,300 km and is roughly the size of Italy.
- It is home to about 3,000 coral reefs, 600 continental islands, 1,625 type of fish, 133 varieties of shark and rays and 600 types of soft and hard corals.
- It was entered into UNESCO World heritage List in 1981.
- Recently scientists have warned that the Great Barrier Reef will face a critical period of heat stress over the coming weeks, following the most widespread coral bleaching the natural world has ever endured.
- Warming ocean temperatures, a sign of climate change, is associated with the deteriorating health of the Reef.

Changes in Snow Cover

- According to NASA and JAXA findings Winter snow cover is now expected to last for 110 days, down from the 126 days between 1982 and 2014.
- The patterns of change were visible in maps showing changes in the duration of winter snow cover between 2071 and 2100. This was compared to data from 1982-2014.
- The largest decline in snow cover was expected between 40 and 50 degrees latitude across North America and Asia.
- This means species will have to try to survive an extra month without such protection.



Teesta River

- Teesta River (or Tista River) is a 315 km long river that rises in the eastern Himalayas, flows through the Indian states of Sikkim and West Bengal through Bangladesh and enters the Bay of Bengal.
- The Teesta River originates from the Pahunri (or Teesta Kangse) glacier above 7,068 metres and flows southward through gorges and rapids in the Sikkim Himalaya.
- It drains an area of 12,540 Sq.Km, It forms the border between Sikkim and West Bengal.
- Recently Border Roads Organisation (BRO) opened for traffic 360 feet long bailey suspension bridge over Teesta River in Munshithang near Chungthang town.
- The bridge will give impetus to tourism and facilitate the movement of logistics for the Armed Forces deployed in forward areas.

14. POLITY

Delimitation Commission

- Recently a 'delimitation commission' has been set up by the Ministry of Law and Justice.
- The commission will be headed by a former Supreme Court judge Ranjana Prakash Desai.
- The commission has been set up for the Union Territory of Jammu & Kashmir and the north-eastern states of Assam, Arunachal Pradesh, Manipur and Nagaland.
- The Election Commissioner (Sushil Chandra) will be the ex-officio member of the commission.
- The Election Commissioners of the concerned states and UT will also be its members.
- The Commission will delimit the constituencies of Jammu and Kashmir in accordance with the provisions of the Jammu and Kashmir Reorganization Act, and of Assam, Arunachal Pradesh, Manipur and Nagaland in accordance with the provisions of the Delimitation Act, 2002.

Delimitation Act, 2002

- Articles 82 and 170 of the Constitution of India provide for readjustment and the division of each State into territorial constituencies (Parliamentary constituencies and Assembly constituencies) on the basis of the 2001 census.
- Articles 330 and 332 of the Constitution of India provide for reserving the number of seats reserved for the Scheduled Castes and the Scheduled Tribes in the House of the People and Legislative Assemblies of the States on the basis of the 2001 census.
- The Delimitation Act, 2002, was enacted to set up a Delimitation Commission for the purpose of effecting delimitation on the basis of the 2001 census so as to correct the aforesaid distortion in the sizes of electoral constituencies.

Special Gram Sabhas

- In order to mark the International Women's Day, all the states and union territories are going to organize 'Special Gram Sabhas' and 'Mahila Sabhas' (Women's Assemblies) in all Gram Panchayats.
- Community Resource Persons (CRPs), Aanganwadi, Asha and Sakhi and Auxiliary Nurse Midwife (ANM) workers will partner Ministry of Panchayati Raj to organize the event.
- Poshan Panchayat, land rights, education, safety, reproductive health and equal opportunity will be points of discussion of assemblies.
- The main focus areas of the assemblies will be:
 1. The ban on sex determination tests and celebrate birth of a girl child.
 2. Pre-natal and neo-natal care, immunization and nutrition for all women.



3. Encourage girls to go to schools and complete their schooling with focus on safe environment at home and in school.
 4. Report violence, abuse or injustice against women and girl children.
 5. Active participation of elected women representatives in Gram Panchayats and contribute to decision making.
- It will also highlight issues like the importance of breast feeding during the first 1,000 days of the new-borns for their ideal physical and mental growth; and raising awareness about Child Helpline – 1098.

Commission for Sub-Categorization of OBCs

- A committee under Justice G Rohini has been set up to examine sub-categorization of Other Backward Classes on 2nd October, 2017 under article 340 of the Constitution to examine the issues of the sub-categorization of Other Backward Classes with the following terms of reference:
- To examine the extent of inequitable distribution of benefits of reservation among the castes or communities included in the broad category of Other Backward Classes with reference to such classes included in the Central List;
- To work out the mechanism, criteria, norms and parameters in a scientific approach for sub-categorization within such Other Backward Classes; and
- To take up the exercise of identifying the respective castes or communities or sub-castes or synonyms in the Central List of Other Backward Classes and classifying them into their respective sub-categories.
- The sub-categorization of OBCs can ensure increased access to benefits such as reservations in educational institutions and government jobs for less dominant OBCs
- The Commission has not submitted its report to the Government, the Commission expressed the need for obtaining the caste-wise data for which additional time was required.
- Therefore, the tenure of the Commission has been extended by the Government from time to time.
- Union Government has notified the latest extension of the Commission to examine the issues of sub-categorization of Other Backward Classes, by six months, till 31st July, 2020.
- This order aims to study the various Entries in the Central List of OBCs and recommend correction of any repetitions, ambiguities, inconsistencies and errors of spelling or transcription.

IPC Sections against Disease spreaders

- During the coronavirus outbreak, penal provisions, such as Sections 188, 269 and 270 of the IPC, are being invoked to enforce the lockdown orders in various states.
- Section 188 – Against disobedience to order duly promulgated by public servant.
- Under this section it is not necessary that the offender should intend to produce harm, or contemplate his disobedience as likely to produce harm.
- It is sufficient that he knows of the order which he disobeys, and that his disobedience produces, or is likely to produce, harm.
- Across the country where Sections 269 and 270 have been used to book persons defying quarantine orders for containing the spread of the pandemic.
- Sections 269 (negligent act likely to spread infection of disease dangerous to life) and 270 (malignant act likely to spread infection of disease dangerous to life) come under Chapter XIV of the Indian Penal Code– ‘Of Offences Affecting The Public Health, Safety, Convenience, Decency and Morals’.
- While Section 269 provides for a jail term of six months and/or fine, Section 270 provides for a jail term of two years and/or fine.
- In Section 270, the word ‘malignantly’ indicates a deliberate intention on the part of the accused.



- Both Sections have been used for over a century to punish those disobeying orders issued for containing epidemics.
- The Sections were similarly enforced by colonial authorities during outbreaks of diseases such as smallpox and bubonic plague.
- In 2018, Health Ministry said that failure by clinical establishments to notify a tuberculosis patient to the nodal officer and local public health staff can be punished under Section 269 and 270.

Section 188 of IPC

- Section 3 of the Epidemic Diseases Act, 1897, provides penalties for disobeying any regulation or order made under the Act.
- These are according to Section 188 of the Indian Penal Code (Disobedience to order duly promulgated by public servant).
- Under Section 188, there two offences:
 1. Disobedience to an order lawfully promulgated by a public servant, If such disobedience causes obstruction, annoyance or injury to persons lawfully employed
Punishment: Simple Imprisonment for 1 month or fine of Rs 200 or both
 2. If such disobedience causes danger to human life, health or safety, etc.
Punishment: Simple Imprisonment for 6 months or fine of Rs 1000 or both
- According to the First Schedule of the Criminal Procedure Code (CrPC), 1973, both offences are cognizable, bailable, and can be tried by any magistrate.
- There must be evidence that the accused had knowledge of the order with the disobedience of which he is charged.
- Mere proof of a general notification promulgating the order does not satisfy the requirements of the section.
- Mere disobedience of the order does not constitute an offence in itself, it must be shown that the disobedience has or tends to a certain consequence.
- The orders issued to curb the spread of the coronavirus have been framed under the Epidemic Diseases Act, 1897, which lays down punishment as per Section 188 of the Indian Penal Code, 1860.
- In the past, the Act has been routinely enforced across the country for dealing with outbreaks of diseases such as swine flu, dengue, and cholera.
- Its penal provisions are currently being invoked by states to contain the COVID-19 pandemic.

15. GOVERNMENT INITIATIVES

Epidemic Disease Act

- Recently a high level meeting to tackle COVID-19 has been decided that all States/Union Territories should be advised to invoke provisions of Section 2 of the Epidemic Disease Act, 1897.
- Epidemic Disease Act, 1897, is expedient to provide for the better prevention of the spread of dangerous epidemic
- It is routinely enforced across the country for dealing with outbreaks of diseases such as swine flu, dengue, and cholera.
- The State Government may take measures and prescribe regulations for the inspection of persons travelling by railway or otherwise, and the segregation, in hospital, temporary accommodation or otherwise, of persons suspected by the inspecting officer of being infected with any such disease.



- Under the act the Central Government may take measures and prescribe regulations for the inspection of any ship or vessel leaving or arriving at any port.
- Any person disobeying any regulation or order made under this Act shall be deemed to have committed an offence punishable under section 188 of the Indian Penal Code.
- It was introduced by colonial government to tackle the epidemic of bubonic plague that had spread in the erstwhile Bombay Presidency in the 1890s.

Essential Commodities Act

- Essential Commodities Act, 1955, intends to provide, in the interest of the general public, for the control of the production, supply and distribution of, and trade and commerce, in certain commodities.
- The act is regulated and administered by the Ministry of Consumer Affairs, Food and Public Distribution.
- Under the EC Act, the States and Union Territories can ensure that manufacturers enhance their production capacity so that masks and hand sanitizers are widely available to consumers.
- The invocation of EC Act has empowered the Centre as well as states to regulate the production, quality, distributions of masks and hand sanitizers.
- It will also help to smoothen the sale and availability of the above items and carry out operations against speculators.
- Consumer Affairs Ministry has also invoked the Prevention of Black Marketing and Maintenance of Supplies of Essential Commodities Act, 1980 which would carry out action against those involved in overpricing and black marketing of the products.
- Recently, the central government has notified that masks (2 ply and 3 ply surgical masks, N95 masks) and hand sanitizers as essential commodities up to June 30, 2020, under the Essential Commodities Act, 1955 (EC Act).
- The invocation of the EC Act aims to ensure that these products, key for preventing the spread of Covid-19 infection, are available to people at the right price and of the right quality.

BEE's Star Rating Programme

- The Bureau of Energy Efficiency is a statutory body under Ministry of Power.
- It was created in 2002 under the provisions of the nation's 2001 Energy Conservation Act.
- The agency's function is to develop programs which will increase the conservation and efficient use of energy in India.
- The Star Labeling Programme has been formulated by Bureau of Energy Efficiency, as part of its mandate, under the Energy Conservation Act, 2001.
- Under this Programme, BEE has covered 24 appliances till date wherein 10 appliances are under mandatory regime.
- Recently BEE has expanded the coverage by including Energy Efficient "Deep Freezers" and "Light Commercial Air Conditioners (LCAC)".
- Through launch of these two new appliances under voluntary regime, 26 appliances would now be covered under this programme.
- The Star Labeling Programme for Deep Freezer and LCAC has been launched on a voluntary basis and the energy consumption standards will be effective up to 31st December 2021.
- Deep freezer and LCAC are major energy guzzlers in commercial space, therefore, it is imperative that these two appliances shall be included in the program to save energy and reduce CO₂ emission.
- With these two products only, a total savings of around 9 Billion units of electricity is expected to be saved for the country by FY 2030.

NAMASTE Portal

- It provides Standardized Terminologies & Morbidity Codes for Ayurveda, Siddha and Unani systems of medicine along with W.H.O ICD-10/11 codes meant for dual coding and morbidity reporting for Yoga, Naturopathy and Homoeopathy Systems.
- It is meant for unambiguous reporting, electronic data submission through individual institutions and gradually moving towards adopting Electronic Health Records (E.H.R.).
- It serves as a reference repository of Ayurveda, Siddha and Unani terminologies and Morbidity Codes for further development of Ayurveda, Siddha and Unani international terminologies and ICD-11 morbidity Codes.
- A nationwide digital platform called 'AYUSH Grid' has been initiated by Ministry of Ayush in collaboration with Ministry of Electronics and Information Technology.

AYUSH Grid

- Its aim is to bring onboard all AYUSH facilities including hospitals and laboratories and to promote traditional systems of healthcare.
- It provides digitalization of the entire AYUSH sector.
- It aims to develop a network of people, knowledge and technology.
- It provides that the strategies for development will be in sync with the international and national policies and health care needs.
- It will make it easier to assess the efficacy of alternative medicine systems and thus enabling AYUSH hospitals and laboratories to share data.

National Supercomputing Mission

- NSM is jointly led by DST and Ministry of Electronics and Information Technology (MeitY).
- Commissioned in May 2015, the nodal agencies spearheading the mission are Centre for Development of Advanced Computing (C-DAC), Pune, and Indian Institute of Sciences (IISc), Bengaluru.
- The NSM envisaged setting up a network of 70 high-performance computing facilities across academia and research institutes, by 2022.
- Since the mission was approved until September 2019, only three systems
 1. PARAM Shivay - IIT-BHU
 2. PARAM Shakti - IIT-Kharagpur
 3. PARAM Bhrahma - Indian Institute of Science, Education and Research (IISER), Pune.
- They are equipped with applications from domains like Weather and Climate, Computational Fluid Dynamics, Bioinformatics, and Material science.
- According to union government's recent plan India is all set to experience the highest ever boost in its supercomputing capacities, with 14 new supercomputers set to be deployed this year.
- These systems would be installed at various national-level research laboratories and academic institutions by end of 2020.
- Once deployed, the total number of supercomputers under Rs 4,500 crore-National Supercomputing Mission (NSM) would grow to 17.
- Three New systems will be made operational at
 1. IIT-Kanpur,
 2. Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru,
 3. IIT-Hyderabad.



- Of the 11 new supercomputing systems eight systems, with collectively compute power of 16 PetaFlop, will be deployed at institutions located in India's Northeastern region.
- Three of the new systems, each having a compute power of 3PetaFlop, will be commissioned at
 1. IIT-Mumbai,
 2. IIT-Chennai
 3. Inter University Accelerator Centre, Delhi.
- These systems will form the backbone of the National Knowledge Network.

Project Isaac

- Indian Institute of Technology, Gandhinagar (IITGN) has launched Project Isaac to engage its students in creative projects to enhance their critical skills while they are confined to their homes because of Corona virus.
- The official release said, the project is inspired by Sir Isaac Newton, who was similarly sent home by Trinity College, Cambridge, because of the Great Plague of London in 1665.
- During this year, Newton, then a 22-year-old college student developed some of his most profound discoveries, including early calculus, as well as his theories of optics and gravity.
- As part of the project, four different competitions are being organized by IIT, Gandhinagar to cultivate new skills among students regarding writing, painting, coding, music, creative expression, and so on. Students can take part in competitions online.
- Nearly 40 per cent of IITGN students are already participating in various activities, which are entirely voluntary.
- Project Isaac is a model for academic institutions worldwide to explore ways to engage students in the midst of the pandemic.

Bhoomi Rashi Portal

- The Bhoomi Rashi Portal is an e-Governance initiative of the Ministry of Road Transport & Highways.
- The portal intends to expedite the process of land acquisition for National Highways.
- It has fully digitized and automated the entire process of land acquisition.
- It has helped to make land acquisition error-free & more transparent with notifications at every stage being processed on a real-time basis.
- Earlier, the acquisition of land for the purpose of National Highway projects, payment of compensation to the landowners etc. was done manually by physical movement of documents.
- It had some constraints viz. delay in issuing land acquisition notification, errors in the land/ area details etc.
- The portal is integrated with the Public Financial Management System (PFMS) for depositing the compensation in the account of affected/ interested persons on a real-time basis.

YUva Vigyani Karyakram

- ISRO has launched the YUva Vigyani Karyakram programme for School Children, in tune with the Government's vision "Jai Vigyan, Jai Anusandhan".
- The Program is primarily aimed at imparting basic knowledge on Space Technology, Space Science and Space Applications to the younger ones with the intent of arousing their interest in the emerging areas of Space activities.
- It is proposed to select 3 students each from each State/ Union Territory to participate in this programme covering CBSE, ICSE and State syllabus.
- Those who have just completed 9th standard will be eligible for the online registration.



- The selection is based on the 8th Standard academic performance and extracurricular activities. Students belonging to the rural area have been given special weightage in the selection criteria.
- In case there is tie between the selected candidates, the younger candidates will be given priority.

ROPAX

- The Ministry of Shipping has launched a roll on-roll off cum passenger ferry service, called 'ROPAX', between Mumbai and Mandwa (Maharashtra).
- ROPAX service is a water transport service project under Eastern Waterfront Development.
- The road distance from Mumbai to Mandwa is about 110 kilometres, and it takes three to four hours, whereas by waterway the distance is about 18 kilometres and a journey of just an hour.
- ROPAX Vessel M2M -1 was built in Greece in September 2019. This Vessel has a speed of 14 knots and can carry 200 cars and 1000 passengers at a time.
- It is capable of operating even in a monsoon season.
- The benefits of this service include reduction in the travel time, vehicular emission and traffic on the road.

Eastern Waterfront Development

- The Eastern Waterfront is the Mumbai Port Trust's (MbPT's) plan to develop the port lands across Mumbai's eastern coast stretching from Sassoon Dock to Wadala.
- MbPT is an autonomous Body of the Government of India under the Ministry of Shipping.
- Some of the major proposals under the project include a 93- hectare park near Haji Bunder, around 17 hectares for tourism-related projects such as themed streets and affordable housing.
- The project also has a focus on a water transport by making a provision for water taxis, international and domestic cruises and ro-pax (roll on/roll off passengers) services.

National Biopharma Mission

- The National Biopharma Mission (NBM) is an industry-academia collaborative mission for accelerating biopharmaceutical development in the country.
- It was launched in 2017 at a total cost of Rs 1500 crore and is 50% co-funded by World Bank loan.
- It is being implemented by the Biotechnology Industry Research Assistance Council (BIRAC).
- BIRAC is a Public Sector Enterprise, set up by the Department of Biotechnology (DBT).
- Under this Mission, the Government has launched Innovate in India (i3) programme to create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing in the biopharma sector.
- It has a focus on following four verticals:
 1. Development of product leads for Vaccines , Biosimilars and Medical Devices that are relevant to the public health need by focusing on managed partnerships.
 2. Upgradation of shared infrastructure facilities and establishing them as centers of product discovery/discovery validations and manufacturing.
 3. Developing human capital by providing specific training.
 4. Developing technology transfer offices to help enhance industry academia inter-linkages.
- The oversight to the mission activities is provided by the inter-ministerial Steering Committee chaired by the Secretary-DBT (Ministry of Science & Technology).
- The Technical Advisory Group (TAG) chaired by an eminent scientist provides scientific leadership to the mission drawing upon global expertise.

India Renewable Idea Exchange (IRIX) Portal

- India Renewable Idea Exchange IRiX is a real-time idea exchange platform for the Global RE community.
- It empowers to ideate, innovate and incubate in the renewable energy sector.
- It is launched by Ministry of New and Renewable Resources.

Mission 175

- Mission 175 is a global platform to explore strategies for development and deployment of renewables.
- It is hosted by the Ministry of New and Renewable Energy (MNRE), the event showcases India's renewable energy potential and the Government's efforts to scale up capacity to meet the national energy requirement in a socially, economically and ecologically sustainable manner.
- In the year 2015, the Government of India announced a target for 175 GW cumulative renewable power installed capacity by the year 2022.
- Ahead of COP 21, India submitted its Intended Nationally Determined Contribution (INDC) to the UNFCCC, outlining the country's post-2020 climate actions.
- India's INDC builds on its goal of installing 175 Gigawatts (GW) of renewable power capacity by 2022 by setting a new target to increase the country's share of non-fossil based installed electric capacity to 40 percent by 2030.

Akshay Urja Portal

- Akshay Urja Portal is launched by Ministry of New and Renewable Energy.
- The energy such as Solar Energy, Wind energy, hydroelectrical power are few example of Akshay Urja.
- The portal aims to develop ways to use akshay urja or renewable energy more efficiently.
- It promotes innovation to adopt renewable energy sources to produce power for the electricity grid and for several standalone applications and decentralized power production.

Mission Solar Charkha

- The Ministry of Micro, Small and Medium Enterprises (MSME) has launched the Mission Solar Charkha in 2018-19 for implementation of 50 Solar Charkha Clusters across the country.
- The aims and objectives of Mission Solar Charkha are
 1. To ensure inclusive growth by generation of employment, especially for women and youth and sustainable development through solar charkha cluster in rural areas.
 2. To boost rural economy and help in arresting migration from rural to urban areas.
 3. To leverage low-cost, innovative technologies and processes for substance.
- As of now 10 projects have been approved under Mission Solar Charkha.
- One Solar Charkha cluster has been identified in Andhra Pradesh.
- The scheme envisages to generate direct employment to nearly one lakh persons.

Bengaluru's Water Conservation Score

- According to Jal Shakti Abhiyan score card Bengaluru is 200th in the country in terms of water conservation, with a score of a mere 11 percentage.
- The city's lakes have often been a part of the news cycle for being polluted enough to literally catch fire sometimes.
- The initiative addresses the water and irrigation needs of 255 water-stressed districts across the country.

- Apart from city rules, Karnataka's 2017 wastewater policy also advocates for interventions similar to those described under JSA and allocates a 20 per cent reuse target.
- None of these, however, was reflected in the Bengaluru district's scorecard that gave it a zero on all fields except for uploading details of five conservation sites.
- There were disagreements between the center and state regarding the criteria and methods of assessment that seem to show in the final scorecard.
- The JSA scorecard, however, seemingly disregards the existence of policy measures that were put in place to improve the city's water security.
- Bengaluru Corporation has 205 lakes under its purview has, however, forged some successful partnerships with citizen groups over the past decade for the maintenance and upkeep of the lakes.

16. GOVERNMENT SCHEMES

Kishori Health Cards

- 'Kishori Health Cards is a scheme for all the Adolescent Girls (11-18 years) which is maintained by Anganwadi Centre (AWCs), under Ministry of Women and Child Development.
- Its objective is to record the information about the weight, height and Body Mass Index (BMI).
- The scheme will be implemented across the country.
- It is a redesign of the already existing Adolescent Girls (AG) Scheme being implemented as a component under the centrally sponsored Integrated Child Development Services (ICDS) Scheme.
- It aims to improve the following
 1. Nutritional, health and development status of adolescent girls,
 2. Link them to opportunities for learning life skills,
 3. Going back to school,
 4. Help them gain a better understanding of their social environment.
 5. Take initiatives to become productive members of the society.

KIRAN Scheme

- Department of Science and Technology (DST) has started several pioneering initiatives for promoting women in science.
- In the year 2014, DST restructured all women specific programmes under one umbrella called Knowledge Involvement in Research Advancement through Nurturing (KIRAN).
- It encompasses women-exclusive schemes and encourages them to foster their career by undertaking research in Science and Technology (S&T) and also focusing on S&T solutions of issues & challenges at the grassroots level for social benefits.
- The mandate of KIRAN Program is to bring gender parity in S&T through gender mainstreaming.
- Women Scientist Scheme (WOS) addresses challenges faced by S&T qualified women primarily due to social responsibilities.
- Its two components WOS-A and WOS-B are directly implemented by KIRAN Division and the third component WOS-C or KIRAN-IPR is implemented by TIFAC with grant-in-aid from DST.

National Crèche Scheme

- The National Crèche Scheme is a centrally sponsored scheme being implemented by the Ministry of Women and Child Development.
- The scheme was earlier named as Rajiv Gandhi National Creche Scheme.
- It aims to provide day care facilities to children (age group of 6 months to 6 years) of working mothers.
- The fund sharing pattern under National Creche Scheme amongst Centre, States/UTs & Non-Governmental Organizations/Voluntary Organizations is in the ratio of 60:30:10 for States, 80:10:10 for North Eastern States and Himalayan States and 90:0:10 for UTs.
- The salient features of the National Creche Scheme are as follows:
 1. Daycare Facilities including Sleeping Facilities.
 2. Early Stimulation for children below 3 years and pre-school Education for 3 to 6 years old children.
 3. Supplementary Nutrition (to be locally sourced)
 4. Growth Monitoring
 5. Health Check-up and Immunization
- Further, the guidelines provide that :
 1. Crèches shall be open for 26 days in a month and for seven and half (7-1/2) hours per day.
 2. The number of children in the crèche should not be more than 25 per crèche.
 3. User charges will be levied to bring in an element of community ownership.

Scheme for beggars

- The Ministry of Social Justice & Empowerment is exploring the possibilities of a scheme for persons engaged in the act of begging.
- The Scheme would cover identification, rehabilitation, provision of medical facilities, counselling, education, skill development with the support of State Governments/UTs and Voluntary Organizations, etc.
- The Ministry also provides funds to the National Backward Classes Finance & Development Corporation (NBCFDC) and the National Institute of Social Defence (NISD) for the development of members of beggars' community.

17. BILATERAL ISSUES

WISTEMM

- The Indo-U.S. Fellowship for Women in Science, Technology, Engineering, Mathematics and Medicine (WISTEMM)[®] program of Department of Science and Technology (DST) in association with Indo-U.S. Science & Technology Forum (IUSSTF) have provided international exposure to several women scientists.
- WISTEMM aims to provide opportunities to Indian Women Scientists, Engineers & Technologists to undertake international collaborative research in premier institutions in U.S.A, to enhance their research capacities and capabilities.
- The programme is run for two categories of women scientists---
 1. Women Overseas Student Internship (Module I) for women students pursuing PhD,
 2. Women Overseas Fellowship (Module II) for women with PhD degree and holding regular position at any recognized institution/laboratory in India.
- Around 20 women scientists have visited 20 leading institutions across the United States of America for furthering their research work and to get trained in the state of the art technologies related to their research.



- The fellowship is for bright Indian women Citizen within the age bracket of 21 to 45 years.
- The funding support extended under the program includes stipend, airfare, health insurance, contingency and conference allowances.

18. GOVERNMENT ORGANISATIONS

Lalit Kala Akademi

- Lalit Kala Akademi, National Academy of Art, New Delhi was set up by the Government of India as an autonomous body, on 5th August, 1954.
- The Akademi was given statutory authority in 1957, under the Societies Registration Act 1860.
- Lalit Kala Akademi manifests a commitment to the service of the visual arts by establishing, preserving and documenting visual art of the highest order.
- It has a vision that takes care of the traditional art of India as well as of helping artists to imbibe many of the contemporary happenings in the international art scene.
- Lalit Kala Akademi, National Academy of Art Awards will be conferred to eminent artists annually by the President of India at the Rashtrapati Bhavan.

Central Pollution Control Board

- The Central Pollution Control Board (CPCB) of India is a statutory organization under the Ministry of Environment, Forest and Climate Change (MoEF).
• It was established in 1974 under the Water (Prevention and Control of pollution) Act, 1974.
- The CPCB is also entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.
- It serves as a field formation and also provides technical services to the Ministry of Environment and Forests under the provisions of the Environment (Protection) Act, 1986.
- It Co-ordinates the activities of the State Pollution Control Boards by providing technical assistance and guidance and also resolves disputes among them.
- It is the apex organization in country in the field of pollution control, as a technical wing of MoEF.
- The board is led by its Chairperson, who is generally a career civil servant from the Indian Administrative Service appointed by the Appointments Committee of the Cabinet of the Government of India.
- CPCB has its head office in New Delhi, with seven zonal offices and 5 laboratories.
- The board conducts environmental assessments and research.
- It is responsible for maintaining national standards under a variety of environmental laws, in consultation with zonal offices, tribal, and local governments.
- It has responsibilities to conduct monitoring of water and air quality, and maintains monitoring data.
- The agency also works with industries and all levels of government in a wide variety of voluntary pollution prevention programs and energy conservation efforts.

Serious Fraud Investigation Office

- SFIO is a multi-disciplinary organization under the Ministry of Corporate Affairs.
- SFIO was initially set up by the Government of India by way of a resolution dated 2nd July 2003.
- Section 211 of the Companies Act, 2013 has accorded statutory status to the SFIO.



- It consist of experts in the field of accountancy, forensic auditing, law, information technology, investigation, company law, capital market and taxation for detecting and prosecuting or recommending for prosecution white-collar crimes/frauds.
- SFIO has powers to arrest people for the violation of the Company law.
- SFIO can start an investigation into the affairs of a company under the following circumstances:
 1. On receipt of a report of the Registrar or inspector under section 208 (Report on Inspection made) of the Companies Act, 2013.
 2. On intimation of a special resolution passed by a company that its affairs are required to be investigated.
 3. In the public interest.
 4. On request from any department of the central government or a state government.

Railway Development Authority

- Government approved the constitution of the Rail Development Authority (RDA) in April, 2017.
- The role/mandate of RDA inter-alia includes providing expert advice to Government to make informed decision on:-
- Pricing of services commensurate with costs;
 1. Measures for enhancement of non-fare Revenue;
 2. Protection of consumer interests, by ensuring quality of service and cost optimization;
 3. Promoting competition, efficiency and economy;
 4. Creating positive environment for investment;
 5. Providing framework for non-discriminatory open access to the Dedicated Freight Corridor (DFC) infrastructure and others in future;
 6. Suggesting measures to absorb new technologies for achieving desired efficiency and performance standards;
 7. Suggesting measures for human resource development to achieve any of its stated objectives, etc.

SIDBI

- Small industrial Development Bank of India (SIDBI) is a development financial institution in India, headquartered at Lucknow and having its offices all over the country.
- It was established on April 2, 1990, through an Act of Parliament, It operates under the Department of Financial Services, Government of India.
- Its promotion & development program focuses on rural enterprises promotion and entrepreneurship development.
- Its purpose is to provide refinance facilities and short term lending to industries, and serves as the principal financial institution in the Micro, Small and Medium Enterprises (MSME) sector.
- SIDBI also coordinates the functions of institutions engaged in similar activities.
- SIDBI is one of the four All India Financial Institutions regulated and supervised by the Reserve Bank; other three are EXIM Bank, NABARD and NHB.
- But recently NHB is in government control by taking more than 51% stack.
- They play a salutary role in the financial markets through credit extension and refinancing operation activities and cater to the long-term financing needs of the industrial sector.
- State Bank of India is the largest individual shareholder of SIDBI with holding of 16.73% shares, followed by Government of India and Life Insurance Corporation of India.

APEDA

- Agricultural and Processed Food Products Export Development Authority (APEDA), is an authority established under an act of parliament and under the administrative control of Ministry of Commerce and Industry, Government of India.
- It has been mandated with the responsibility of export promotion and development of the scheduled products viz.
 1. Fruits, Vegetables and their Products,
 2. Meat and Meat Products, Poultry and Poultry Products,
 3. Dairy Products,
 4. Confectionery,
 5. Biscuits and Bakery Products,
 6. Honey, Jaggery and Sugar Products,
 7. Cocoa and its products, chocolates of all kinds,
 8. Alcoholic and Non-Alcoholic Beverages,
 9. Cereal and Cereal Products,
 10. Groundnuts, Peanuts and Walnuts,
 11. Pickles, Papads and Chutneys,
 12. Guar Gum,
 13. Floriculture and Floriculture Products,
 14. Herbal and Medicinal Plants.
- In addition to this, APEDA has been entrusted with the responsibility to monitor import of sugar.

Small Farmers Agribusiness Consortium

- It is pioneer in organizing small and marginal farmers as Farmers Interest Groups, Farmers Producers Organization and Farmers Producers Company for endowing them with bargaining power and economies of scale.
- It provides a platform for increased accessibility and cheaper availability of agricultural inputs to small and marginal farmers and in establishing forward and backward linkages in supply chain management.
- This initiative has triggered mobilization of farmers for aggregation across the country with ultimate aim of sustainable business model and augmented incomes.
- The Society has been entrusted with the task of implementation of the critically important Delhi Kisan Mandi and National Agriculture Market Scheme on e-platform to progressively free agricultural trade and offer price discovery to farmers.
- Currently there around 1000 FPOs/FPCs registered with SFAC.

National Institute of Social Defence

- The National Institute of Social Defence (NISD) is an Autonomous Body and is registered under Societies Act XXI of 1860 with the Government of National Capital Territory (NCT), Delhi.
- It is a central advisory body for the Ministry of Social Justice and Empowerment.
- It is the nodal training and research institute in the field of social defence.
- The institute currently focuses on human resource development in the areas of drug abuse prevention, welfare of senior citizens, beggary prevention, transgender and other social defence issues.



- The mandate of the institute is to provide inputs for the social defence programmes of the Government of India through training, research & documentation.

Indian Council of Forestry Research and Education

- The Indian Council of Forestry Research and Education (ICFRE) is an autonomous organization or governmental agency under the Ministry of Environment and Forests.
- It is headquartered in Dehradun.
- Its functions are to conduct
 1. Forestry research.
 2. Transfer the technologies developed to the states of India and other user agencies.
 3. To impart forestry education.
- The council has 9 research institutes and 4 advanced centers to cater to the research needs of different bio-geographical regions.
- These are located at Dehradun, Shimla, Ranchi, Jorhat, Jabalpur, Jodhpur, Bangalore, Coimbatore, Allahabad, Chhindwara, Aizawl, Hyderabad and Agartala.

ICOIS

- INCOIS is an autonomous body under the Ministry of Earth Sciences (MoES), headquartered at Hyderabad.
- It is mandated to provide the best possible ocean information and advisory services to society, industry, government agencies and the scientific community through sustained ocean observations and constant improvements through systematic and focused research.
- Indian Space Research Organization (ISRO) has developed the methodology for the generation of fishery advisories and transfer to Indian National Centre for Ocean Information Services (INCOIS) since 2002 as an operational service for providing Potential Fishing Zone (PFZ) advisories.
- This INCOIS utilizes data on chlorophyll concentration (Chl) obtained from ISRO's Oceansat-2 satellite and the sea surface temperature from National Oceanic Atmospheric Administration (NOAA / USA satellites).
- The INCOIS uses these satellite datas to prepare the PFZ advisories on the potential rich fishing areas and provide to the sea faring fishermen in all states.
- PFZ advisories helped fishermen in avoiding the unwanted search for fish shoals, this reduces their fuel consumption.

19. INTERNATIONAL ORGANISATIONS

Biological Weapons Convention

- Biological Weapons Convention was the first multilateral disarmament treaty banning the production of an entire category of weapons.
- The Convention was the result of prolonged efforts by the international community to establish a new instrument that would supplement the 1925 Geneva Protocol.
- The Geneva Protocol prohibits use but not possession or development of chemical and biological weapons.
- It commits the 183 states which are party to it as of August 2019 to prohibit the development, production, and stockpiling of biological and toxin weapons.
- There is no formal verification regime to monitor compliance and effectiveness of the Convention.
- 45th anniversary of the Biological Weapons Convention's entry into force has commemorated recently.



UHRC Resolution

- The United Nations Human Rights Council is a United Nations body whose mission is to promote and protect human rights around the world.
- The UNHRC was established by the UN General Assembly on March 15, 2006 to replace the UN Commission on Human Rights (UNCHR, herein CHR) that had been strongly criticized for allowing countries with poor human rights records to be members.
- The UNHRC has 47 members elected for staggered three-year terms on a regional group basis.
- The headquarters of UNHRC is in Geneva, Switzerland.
- The UNHRC investigates allegations of breaches of human rights in UN member states, and addresses important thematic human rights issues such as
 1. Freedom of association and assembly,
 2. Freedom of expression,
 3. Freedom of belief and religion,
 4. Women's rights,
 5. LGBT rights,
 6. Rights of racial and ethnic minorities.
- Recently Sri Lankan govt's decided to withdraw from UNRC resolution with regard to 'promoting reconciliation, accountability and human rights in the country.'
- UNHRC Resolution was co-sponsored by previous government in 2015 in a bid to address war crimes and human rights issues.

Merchant Shipping Act, 1958

- The provision of Prevention and Containment of Pollution of the sea by oil is covered under Chapter XIA of Merchant Shipping Act, 1958.
- This provision is applicable to all ships registered under this Act and compliance is monitored and regulated by the Directorate General of Shipping (DGS).
- The Rules developed by Central Government under the Power granted by Section 356E of Merchant Shipping Act, 1958 is to deal with pollution of seas from ship-generated pollution sources.
- Ships are subjected to initial inspection once they are constructed to ensure that the ship is fitted with all necessary equipment to prevent pollution of seas.
- Surprise inspections are also conducted by Surveyors stationed at various Mercantile Marine Department on Indian and Foreign Flag vessels through powers granted under Section 356G of the Merchant Shipping Act, 1958.
- The DGS as a proactive measure and also being custodian of Merchant Shipping Act, 1958 has developed a centralized online portal called "SwachhSagar" for request and provisioning of waste reception facilities.

MARPOL Convention

- The International Convention for the Prevention of Pollution from Ships 1978, is one of the most important international marine environmental conventions.
- It was developed by the International Maritime Organization with an in an objective to minimize pollution of the oceans and seas, including dumping, oil and air pollution.
- The original MARPOL was signed in 1973, but did not come into force at the signing date.
- The current convention is a combination of 1973 Convention and the 1978 Protocol, which entered into force on 2 October 1983.



- All ships flagged under countries that are signatories to MARPOL are subject to its requirements, regardless of where they sail and member nations are responsible for vessels registered on their national ship registry.
- The MARPOL Convention has six annexes (I to VI) and it deals with prevention of Pollution from ships by Oil, Noxious liquid substances, Dangerous goods in packaged form, Sewage, Garbage and Air pollution from ships respectively.
- To reduce pollution of air by sulphur oxide, MARPOL (Prevention of Air Pollution) has been amended and now requires that Sulphur content of fuel used on board ships should not exceed 0.5% mass/mass.
- India has signed the International Convention for the Prevention of Pollution from Ships (MARPOL).
- With respect to prevention and control of pollution in inland-waterways, the Inland Waterways Authority of India (IWAI) regulates the same through the State Maritime Authorities concerned.

TRAFFIC

- TRAFFIC, the Wildlife Trade Monitoring Network, is the leading non-governmental organization working globally on the trade of wild animals and plants in the context of both biodiversity and sustainable development.
- It was founded in 1976 as a strategic alliance of the World Wide Fund for Nature (WWF) and the International Union for the Conservation of Nature (IUCN).
- TRAFFIC's headquarters are located in Cambridge, United Kingdom.
- The organization's aim is to 'ensure that trade in wild plants and animals is not a threat to the conservation of nature'.
- It states that through research, analysis, guidance and influence, it promotes sustainable wildlife trade (the green stream work) and combats wildlife crime and trafficking (the red stream work).
- Recently a report of TRAFFIC titled "Assessment of illegal trade-related threats to Red Panda in India and selected neighboring range countries" has looked at a ten-year period from July 2010 to June 2019, and analyzed poaching and illegal trade of the species.

SAWEN

- South Asia Wildlife Enforcement Network (SAWEN) is an inter-governmental wildlife law enforcement support body of South Asian countries namely - Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.
- SAWEN was officially launched in 2011 in Paro Bhutan, it operates from Kathmandu, Nepal.
- It provides a platform for its member countries to cooperatively work together in the fight against the burgeoning wildlife crime.
- It focuses on harmonization of policies and laws; strengthening institutional capacity; sharing of knowledge, experiences and technologies among the member countries; and promoting collaboration with national, regional and international partners to enhance the wildlife law enforcement in the region.

20. INTERNATIONAL ISSUES AND EVENTS

Period Poverty

- 'Period poverty' according to Scottish definition are some circumstances that make menstruation a "difficult experience" for women.
- These include homelessness, coercive, controlling and violent relationships and health conditions such as endometriosis.
- As of now, in Scotland, the provision of free sanitary products is already available in schools, universities and colleges.



- Recently Scottish parliament passed the Period Products (Free Provision) (Scotland) Bill that aims to make sanitary products free for women of all age groups.
- By this Scotland may become the first country in the world to end 'period poverty'.
- Referring to "period dignity", the legislation aims to develop a universal system in Scotland, which will provide free sanitary products for "anyone who needs them".
- One of the primary aims of the Bill is to ensure that those who menstruate have "reasonably convenient" access to period products free of charge.
- Essentially, the Bill places a duty on Scottish ministers to ensure that period products are made available free of charge on a universal basis.
- It also requires education providers to make period products available free of charge in on-site toilets.

Olympic Flame

- The Olympic Flame for the 2020 Tokyo Games has been lit in Olympia in Greece, where the Ancient Olympic Games used to take place.
- The ceremony is held in front of the ruins of the Temple of Hera, and the flame is lit by actresses who play the part of the priestesses.
- It is lit in the traditional method of using the sun's rays reflected on a parabolic mirror.
- A flame is lit during a rehearsal ceremony, in case it turns out there is no sun on the day of the official event, this flame is used to light the Olympic Fire.
- The Olympic Flame emphasizes the link between the Ancient and Modern Games, and is usually carried by runners on foot from Olympia to its final destination (Japan, this year).
- During the relay, the torch must never go out.
- However, other modes of transportation may also be used, by air for instance, in which case the flame is sheltered in a security lamp and at night time kept in a special cauldron.
- It is carried to the host city usually by celebrities or athletes.
- Among the thousands of torch-bearers who carry the flame from Olympia to the host country, the first and the last torchbearers are particularly important.
- The last torchbearer is responsible for lighting the cauldron in the stadium during the opening ceremony of the Games.
- The flame is kept lit for the duration of the Games and is extinguished only at the closing ceremony.

IBM's Summit and COVID-19

- As coronavirus pandemic continues with infections continuing to rise across the world, including in India, scientists are still searching for a cure to the COVID-19.
- IBM's supercomputer Summit, the world's most powerful one, has also been utilized in search for drugs that might be most effective against the virus.
- US Department of Energy's Oak Ridge National Laboratory (ORNL) have used IBM Summit to explore a possible cure for the virus.
- The Summit has already identified 77 small-molecule drug compounds, which could help in the fight against the SARS-CoV-2 coronavirus that is responsible for the pandemic.
- However, given the exact structure of the virus is still not clear, scientists do caution that they will need more research and experiments to verify and confirm which chemicals will be able to fight the virus.



21. ECONOMY

Virtual Currency

- Recently Supreme Court set aside a ban by the Reserve Bank of India (RBI) on banks and financial institutions from dealing with virtual currency holders and exchanges.
- The court held that the ban did not pass the “proportionality” test.
- The test of proportionality of any action by the government, the court held, must pass the test of Article 19(1)(g), which states that all citizens of the country will have the right to practice any profession, or carry on any occupation or trade and business.
- In a circular in 2018, the RBI had banned banks from dealing with virtual currency exchanges and individual holders on the grounds that these currencies had no underlying fiat and that it was necessary in the larger public interest to stop banks from providing any services related to these.
- There is no globally accepted definition of what exactly is virtual currency.
- Some agencies have called it a method of exchange of value; others have labelled it a goods item, product or commodity.
- The underlying technology of virtual currencies are called blockchain, defined bitcoins as “a new electronic cash system that’s fully peer-to-peer, with no trusted third party”.
- This essentially meant there would be no central regulator for virtual currencies as they would be placed in a globally visible ledger, accessible to all the users of the technology.
- All users of such virtual currencies would be able to see and keep track of the transactions taking place.

AT-1 Bonds

- AT-1, short for Additional Tier-1 bonds, are a type of unsecured, perpetual bonds that banks issue to shore up their core capital base to meet the Basel-III norms.
- These bonds are perpetual and carry no maturity date.
- Instead, they carry call options that allow banks to redeem them after five or 10 years.
- But banks are not obliged to use this call option and can opt to pay only interest on these bonds for eternity.
- Banks issuing AT-1 bonds can skip interest payouts for a particular year or even reduce the bonds’ face value without getting into hot water with their investors, provided their capital ratios fall below certain threshold levels, These thresholds are specified in their offer terms.
- If the RBI feels that a bank is tottering on the brink and needs a rescue, it can simply ask the bank to cancel its outstanding AT-1 bonds without consulting its investors.
- AT-1 bonds are complex hybrid instruments, ideally meant for institutions and smart investors who can decipher their terms and assess if their higher rates compensate for their higher risks.
- But in India, these bonds seem to have been sold to a fair number of retail investors as fixed deposit or NCD substitutes.
- AT-1 bonds carry a face value of ₹10 lakh per bond.
- There are two routes through which retailers have acquired these bonds
- Initial private placement offers of AT-1 bonds by banks seeking to raise money; or
- Secondary market buys of already-traded AT-1 bonds based on recommendations from brokers.



Basel III Norms

- After the global financial crisis in 2008, central banks got together and decided to formulate new rules called the Basel-III norms to make banks maintain stronger balance sheets.
- The Basel III norms limit the amount of debt a bank can owe even further, this is called the Leverage Ratio.
- This is especially applicable for banks that trade in high-risk assets like derivatives.
- Capital is money that is invested in assets like equity or government bonds.
- In India, one of the key new rules brought in was that banks must maintain capital at a minimum ratio of 11.5 per cent of their risk-weighted loans.
- Of this, 9.5 per cent needs to be in Tier-1 capital and 2 per cent in Tier-2.
- Tier-1 capital refers to equity and other forms of permanent capital that stays with the bank, as deposits and loans flow in and out.

Circuit Breakers

- Circuit breakers are triggered to prevent markets from crashing, which happens when market participants start to panic induced by fears that their stocks are overvalued and decide to sell their stocks.
- This index-based market-wide circuit breaker system applies at three stages of the index movement, at 10, 15 and 20 per cent.
- In June 2001, the Securities and Exchange Board of India (SEBI) implemented index-based market-wide circuit breakers.
- When triggered, these circuit breakers bring about a coordinated trading halt in all equity and equity derivative markets nationwide.
- For instance, if the S&P BSE Sensex were to fall more than 10 per cent before 1 pm on a given day, circuit breakers would be triggered for a period of 45 minutes; in case it fell more than 15 per cent on or after 2 pm, circuit breakers would be triggered for the remainder of the day and in case it fell more than 20 per cent at any time of the day, the trading would be halted for the remainder of the day.
- Since the indexes plunged more than 10 per cent each day earlier, a circuit breaker was triggered for the first time since 2009 halting trading for 45 minutes.
- Recently Bombay Stock Exchange (BSE) experienced the second biggest single-day fall in its history as it fell by 8.2 per cent, slightly lower than the 11 per cent fall it saw during the 2008 financial crisis.
- This fall began in January, when China started reporting a sharp increase in the number of COVID-19 cases.

Nidhi Companies

- Nidhi Company is a class of Non-Banking Financial Company (NBFC) and Reserve Bank of India (RBI) has powers to issue directives for them related to their deposit acceptance activities.
- However, since these Nidhis deal with their shareholder-members only, RBI has exempted them from the core provisions of the RBI Act and other directions applicable to NBFCs.
- Under Nidhi Rules, 2014, Nidhi is a company which has been incorporated as a Nidhi with the object of cultivating the habit of thrift and saving amongst its members, receiving deposits from, and lending to, its members only, for their mutual benefit.
- It is a company registered under the Companies Act, 2013.
- It works on the principle of mutual benefits that are regulated by the Ministry of Corporate Affairs.
- Recently, union government has amended the provisions related to Nidhi companies under the Companies Act, 2013 and the Rules.
- The amendments have been made to make the regulatory regime for Nidhi Companies more effective.



- This will accomplish the objectives of transparency & investor friendliness in the corporate environment of the country.

National Sports Development Fund

- NSDF was established in 1998 under the Charitable Endowments Act, 1890.
- Purpose of its creation was to impart momentum and flexibility in assisting the cause of sports.
- The Fund helps sportspersons excel by providing those opportunities to train under coaches of international repute with technical, scientific and psychological support and giving them exposure to international competitions.
- It also provides financial assistance for the development of infrastructure and other activities for the promotion of sports.
- The Fund is managed by a Council constituted by the Central Government.
- It is chaired by Union Minister in charge of Youth Affairs and Sports.
- Recently Security Printing & Minting Corporation of India Limited (SPMCIL) has contributed ₹1 crore to the National Sports Development Fund under the corporate social responsibility (CSR) initiatives.

Demand of Grants

- Demand for Grants is the form in which estimates of expenditure from the Consolidated Fund.
- The Demand for Grants includes provisions with respect to revenue expenditure, capital expenditure, grants to State and Union Territory governments together with loans and advances.
- Usually, only one Demand for Grant is presented by each Ministry or Department.
- However, if necessary, the Ministry or Department can present more than Demand for Grant.
- According to Article 113 of the Indian Constitution, estimates of expenditure from the Consolidated Fund of India in the Annual Financial Statement are to be voted in the Lok Sabha.
- These expenditures are submitted in the lower house of Parliament in the form of Demand for Grants.
- Each Demand gives the totals of “voted” and “charged” expenditure and also the grand total of the amount of expenditure for which the demand is presented.

CARES Fund

- The government has set up the Prime Minister’s Citizen Assistance and Relief in Emergency Situations Fund (PM-CARES Fund) to deal with any kind of emergency or distress situation like posed by the COVID-19 pandemic.
- This Fund has been set up owing to a number of requests made by the people to support the government in the wake of the COVID-19 emergency.
- The Fund is a public charitable trust with the Prime Minister as its Chairman.
- Other Members include Defence Minister, Home Minister and Finance Minister.
- The Fund enables micro-donations as a result of which a large number of people will be able to contribute with the smallest of denominations.
- The Fund will strengthen disaster management capacities and encourage research on protecting citizens.
- The Ministry of Corporate Affairs has clarified that contributions by companies towards the PM-CARES Fund will count towards mandatory Corporate Social Responsibility (CSR) expenditure.



Prime Minister's National Relief Fund

- PMNRF is the only existing fund similar to CARES Fund.
- This fund was instituted in 1948 by then Prime Minister Jawaharlal Nehru, to assist displaced persons from Pakistan.
- The fund is currently used primarily to tackle natural calamities like floods, cyclones and earthquakes.
- The fund is also used to help with medical treatment like kidney transplantation, cancer treatment and acid attack.
- The fund consists entirely of public contributions and does not get any budgetary support.
- It accepts voluntary contributions from Individuals, Organizations, Trusts, Companies and Institutions etc.
- The corpus of the fund is also invested in various forms with scheduled commercial banks and other agencies.
- Disbursements are made with the approval of the Prime Minister.
- The fund is recognized as a Trust under the Income Tax Act and the same is managed by the Prime Minister or multiple delegates for national causes.
- Contributions towards PMNRF are notified for 100% deduction from taxable income under section 80(G) of the Income Tax Act, 1961.

Volatility Index

- VIX (Volatility index) is an index used to measure the near term volatility expectations of the markets.
- Volatility signifies the rate and magnitude of change in the stock price or index value.
- The movement in the VIX index reflects the overall market volatility expectations over the next 30 days.
- Given the nature of the index, it is also known as 'fear gauge' or 'fear index'.
- The VIX index was first created by the Chicago Board Options Exchange (CBOE) and introduced in 1993 based on the prices of S&P 500 index.
- The India VIX was launched by National Stock Exchange (NSE) in 2010 and is based on the computation methodology of CBOE though amended to align with the Indian markets.
- India VIX indicates the Indian market's volatility from the investor's perception.
- Volatility and the value of India VIX move parallel. i.e a spike in the VIX value means the market is expecting higher volatility in the near future and vice versa.
- India VIX also has a strong negative correlation with Nifty. i.e every time India VIX falls, Nifty rises and when India VIX rises, Nifty falls.
- VIX value is among the important parameters that are taken into account for pricing of options contracts, which are one of the most popular derivative instruments.
- In the current calendar year, the India VIX index has jumped fivefold, from around 12 levels to the current 67 levels, which clearly hints that the market perceives that volatility will only increase in the coming days.
- Incidentally, the index is currently trading at record highs and on some days in the recent past, saw a surge of more than 20% in a single day.

Re-Capitalization of RRBs

- Recently, the Centre has approved a ₹1,340-crore recapitalization plan for Regional Rural Banks (RRBs).
- The move is crucial to ensure liquidity in rural areas during the lockdown due to the COVID-19 crisis.



- This recapitalization (a strategy of enhancing the financial base of an entity to overcome a rough financial situation) would improve their capital-to-risk weighted assets ratio (CRAR) and strengthen these institutions for providing credit in rural areas.
- The step will help those RRBs which are unable to maintain a minimum CRAR of 9%, as per the regulatory norms prescribed by the RBI.
- The recapitalization process of RRBs was approved by the cabinet in 2011 based on the recommendations of a committee set up under the Chairmanship of K C Chakraborty.
- The National Bank for Agriculture and Rural Development (NABARD) identifies those RRBs, which require recapitalization assistance to maintain the mandatory CRAR of 9% based on the CRAR position of RRBs, as on 31st March of every year.
- The scheme for recapitalization of RRBs was extended up to 2019-20 in a phased manner post 2011.

22. ENVIRONMENT

Legacy Waste

- Legacy wastes are the wastes that have been collected and kept for years at some barren land or a place dedicated for Landfill (an area to dump solid waste).
- Legacy wastes not only occupy large space, but also become a breeding ground for pathogens, flies, malodours and generation of leachate, which may lead to water contamination.
- They also contribute to generation of greenhouse gases and pose risk of uncontrollable fire.
- This waste can be roughly grouped into four categories:
 1. Contained and/or stored waste (contained or stored waste are wastes in tanks, canisters, and stainless steel bins).
 2. Buried waste.
 3. Contaminated soil and groundwater
 4. Contaminated building materials and structures.
- Bio-mining method has been proposed by the Central Pollution Control Board (CPCB) for the effective disposal of legacy wastes.
- Recently, the National Green Tribunal (NGT) has directed a committee to assess the amount of damage caused to the environment due to the dump sites (legacy waste) in Delhi.
- The committee comprises representatives from the Central Pollution Control Board, National Environmental Engineering Research Institute (NEERI) and IIT Delhi.

Biomining

- Biomining or bioremediation is the process of using microorganisms (microbes) to extract metals of economic interest from rock ores or mine waste.
- Biomining techniques may also be used to clean up sites that have been polluted with metals.
- It is usually used for old dumped waste that remains in a partly or fully decomposed state with no segregation in existence between wet and dry waste.
- In the cost effective method of bioremediation, treatment is done by dividing the garbage heap at the site into suitable blocks to let the air percolate in the heap.
- As a result, the leachate which is the water in the heap with suspended solid particles is drained off and microbes are sprayed in the heap to initiate biological decompositions.



- The waste is turned over several times in order to devoid the waste to leachate as much as possible.
- This biological decomposition of the waste decreases the volume of the waste by 40%.

Tadoba Andhari Tiger Reserve

- Tadoba Andhari tiger reserve (TATR) is located in Chandrapur district of Maharashtra state in India.
- It is Maharashtra's oldest and largest national park.
- Created in 1995, the Reserve includes the Tadoba National Park and the Andhari Wildlife Sanctuary.
- The Reserve consists of 577.96 square kilometres (223.15 sq mi) of reserved forest and 32.51 square kilometres (12.55 sq mi) of protected forest.
- It is Maharashtra's largest reserve for the wild cat/Tiger .
- The reserve also hosts other wild animals, such as leopard, wild dog, sloth bear, gaur, sambhar, cheetal, besides the rarely spotted ratel, flying squirrel, pangolin and rusty spotted cat.
- A dam proposed on the river Human (pronounced Hooman) at Tadoba Andhari Tiger Reserve (TATR) in Chandrapur district threatens to submerge more than 90 per cent of a 7-km forest area.
- The project not only falls in TATR buffer zone, but also the eco-sensitive zone of Ghodazari Wildlife Sanctuary closeby.
- It will break the only linking corridor for tiger movement between TATR, Ghodazari and Umred-Karhandla wildlife sanctuaries in the state.
- Indravati Tiger Reserve in Chhattisgarh is in east of TATR and Kawal Tiger Reserve in Telangana is in south west.

Kanha National Park and Tiger Reserve

- KNPTR is on the Maikal range of the Satpura hills.
- It is spread over an area of 940 square kilometres between Mandla and Balaghat districts of Madhya Pradesh.
- The swamp deer is endemic to KNPTR.

Dolphin Census

- The dolphin census in Odisha coast was taken up by the Chilika Development Authority (CDA).
- According to last year's census, the Irrawaddy dolphin population in Chilika was 151, by which Chilika is considered as the highest single lagoon dolphin population in the world.
- According to recent census only 62 humpback dolphins were spotted at Gahirmatha down from 126 in 2019, their number was pegged at 307 in 2015.
- Officials conducted a dolphin census for the first time in Gahirmatha in 2015.
- The census in 2016 and 2017 had been cancelled due to bad weather.
- The 2020 census was the fourth such dolphin census undertaken in the marine sanctuary.
- The census was conducted using hydrophones.
- A hydrophone is a microphone designed to be used underwater for recording or listening to underwater sound.
- Most hydrophones are based on a piezoelectric transducer that generates an electric potential when subjected to a pressure change, such as a sound wave.
- A hydrophone can detect airborne sounds, but will be insensitive because it is designed to match the acoustic impedance of water, a denser fluid than air.



Gahirmatha Marine Sanctuary

- Gahirmatha Marine Sanctuary is a marine wildlife sanctuary located within Bhitarkanika National Park in Odisha's Kendrapara district.
- It is the world's largest nesting beach for Olive Ridley Turtles.
- It extends from Dhamra River mouth in the north to Brahmani river mouth in the south.

SPECIES IN NEWS

List of migratory species of India

- The Zoological Survey of India (ZSI) had for the first time compiled the list of migratory species of India under the CMS before the Conference of Parties (COP 13) held in Gujarat recently.
- ZSI's list had 451 species of migratory animals found in India, recently six species has been added which are as follows,
 1. Asian elephant,
 2. Great Indian bustard,
 3. Bengal florican,
 4. Oceanic white-tip shark,
 5. Urial hammerhead shark,
 6. Smooth hammerhead shark.
- Globally, more than 650 species are listed under the CMS appendices and India, with over 450 species, plays a very important role in their conservation.
- **Birds** - Birds make up the bulk of migratory species, the bird family Muscicapidae has the highest number of migratory species.
- The next highest group of migratory birds is raptors or birds of prey, such as eagles, owls, vultures and kites which are from the family Accipitridae.
- India has migratory birds has three flyways (flight paths used by birds):
 1. The Central Asian flyway,
 2. East Asian flyway
 3. East Asian–Australasian flyway.
- Another group of birds that migrate in large numbers are waders or shore birds.
- In India, their migratory species number 41, followed by ducks (38) belonging to the family Anatidae.
- **Mammals** - The estimate of 44 migratory mammal species in India has risen to 46 after COP 13.
- The Asian elephant was added to Appendix I and the Urial to Appendix II.
- The largest group of mammals is definitely bats belonging to the family Vespertilionidae.
- Dolphins are the second highest group of mammals with nine migratory species of dolphins listed.
- **Fishes** - Fishes make up another important group of migratory species.
- Before COP 13, the ZSI had compiled 22 species, including 12 sharks and 10 ray fish.
- The oceanic white-tip shark and smooth hammerhead shark were then added, the total number of migratory fish species from India under CMS now stands at 24.
- **Reptiles** - Seven reptiles, which include five species of turtles and the Indian gharial and salt water crocodile, are among the CMS species found in India. There was no addition to the reptiles list.

National Genetic Wildlife Bank

- Laboratory for Conservation of Endangered Species (Lacones) is building up National Genetic Wildlife Bank.



- It now has the germplasm of 23 species, including red panda, pygmy hog, Asiatic lion and gharials.
- It is one of the few frozen zoos in the world where a repository of germplasm is stored in cryogenic conditions for possible future use.

Humpback Dolphin Vs Irrawaddy Dolphin

- Humpback dolphin is a coastal dolphin found in Gahirmatha Wildlife Sanctuary.
- It is found along the coasts of Indian Ocean and coasts of West Africa.
- It is listed under appendix I and II of the convention on the conservation of migratory species of wild animals.
- Reduction in the humpback dolphin count in Gahirmatha could be due to their migration from Gahirmatha to Chilika Lake and towards the deep sea.
- Climate change and bad weather could have also pushed them towards deep sea.
- Sometimes, dolphins are trapped in fish nets or hit by propellers of fishing trawlers.
- Irrawaddy dolphins reside in estuaries of Chilika Lake, Humpback dolphins live in sea water near the coast at Gahirmatha.
- Irrawaddy dolphin is an example of euryhaline species, this means that it is able to tolerate a wide range of salinities.

Swamp Wallaby

- Swamp wallaby, is a marsupial related to the kangaroo.
- It is likely the only mammal pregnant and lactating all lifelong.
- It typically conceives a new embryo days before delivering the newborn from its previous pregnancy.
- Female wallabies and kangaroos have two uteri and two separate ovaries.
- At the end of a pregnancy in one uterus, a new embryo develops in the other uterus.
- Kangaroos and wallabies regularly have an embryo in the uterus, a young joey in the pouch, and a third semi-dependent young at foot, still drinking its mother's milk.
- In kangaroos, the new embryo is conceived a day or two after the previous birth.
- In the swamp wallaby (*Wallabia bicolor*), the new conception happens one or two days before the previous joey is delivered.
- As soon as the mature fetus is born and settles in the pouch, the swamp wallaby arrests the development of the new embryo.
- This is called embryonic diapause, which happens in many animals to pause reproduction until the conditions are right — season, climate, food availability.

Red Panda

- The red panda is a small arboreal mammal found in the forests of India, Nepal, Bhutan and the northern mountains of Myanmar and southern China.
- In India, it is found in Sikkim, western Arunachal Pradesh, Darjeeling district of West Bengal and parts of Meghalaya.
- It is also the state animal of Sikkim.
- Red pandas have been reported from 11 districts of Arunachal Pradesh, which is presumed to hold the largest red panda population in the country.

- It is survival is crucial for the eastern and north-eastern Himalayan subalpine conifer forests and the eastern Himalayan broadleaf forests.
- The only living member of the genus Ailurus, the Red Panda is listed as ‘endangered’ on the IUCN Red List of threatened species.
- The animal has been hunted for meat and fur, besides illegal capture for the pet trade.
- An estimated 14,500 animals are left in the wild across Nepal, Bhutan, India, China and Myanmar.
- In recent times Red Panda has fewer hunters because the younger generations of people across its Himalayan habitat are losing interest in animal products.

Waterwheel plant

- *Aldrovanda vesiculosa* or the waterwheel plant is a carnivore with well-equipped traps for capturing unsuspecting prey.
- The traps are arranged in whorls around a central, free-floating stem, giving rise to the common name.
- This is one of the few plant species capable of rapid movement.
- Instead of bladders, the waterwheel produces snap traps that closely resemble those of the Venus fly trap (*Dionaea muscipula*).
- These traps function in a similar way, when zooplankton or even a small fish trigger the bristles along the rim, the trap snaps shut and begins the digestion process.
- At one point in time, the waterwheel was found growing in wetland habitats throughout Africa, Europe, Asia, and even Australia.
- Now it is considered at risk of extinction (IUCN has deficient data about the plant).
- Most often this plant reproduces vegetative, reducing genetic diversity, sexual reproduction in the waterwheel is a rare event.
- Its numbers have been severely reduced due to wetland degradation and destruction.
- Agricultural and industrial runoff are exacting a significant toll on its long term survival.



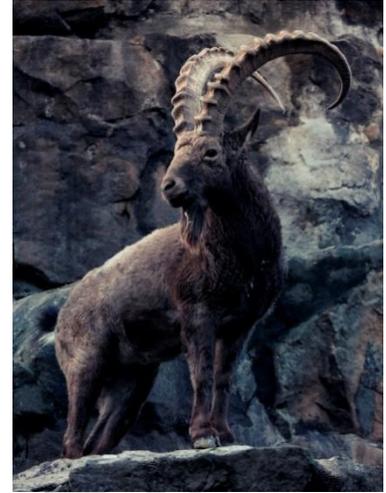
Carissa Kopilii

- *Carissa kopilii* is a multi-utility wild berry, greenish and sour when raw and blackish and sweet when ripe.
- The fruits were difficult to find amid a profusion of thorns.
- The “sun-loving” plant was distributed sparsely, rooted in rocky crevices along the Kopili riverbed (in Central Assam) at altitudes ranging from 85-600 meters above sea level.
- The plant is threatened due to hydroelectric project on the river and water turned acidic because of coal mining in Meghalaya upstream.
- The *Carissa carandas* (distant cousin of *Carissa kopilii*), was also among several thorny plants the British had grown 140 years ago for a 1,100-mile barrier apparently to enforce taxes and stop the smuggling of salt.
- *Carissa carandas* has been used as a traditional herbal medicine for a number of ailments such as diarrhoea, anaemia, constipation, indigestion, skin infections and urinary disorders.
- The leaves have been used as fodder for silkworms while a paste of its pounded roots serves as a fly repellent.
- *Carissa kopilii*, yielding white flowers from August-October and fruits from November-January, should have all the medicinal and utilitarian properties of *Carissa carandas*.



Siberian Ibex

- Siberian Ibex is a species of wild goat and is distributed in diverse habitats, ranging from cold deserts, rocky outcrops, steep terrain, high-land flats and mountain ridges to low mountains and foothills.
- It is in Least Concern category under IUCN.
- From Mongolia, its distribution extends towards Altai, Hangai, Gobi-Altai, the Huruq mountain ranges as well as Sayan Mountains near Russia and scattered populations in the small mountains of Trans-Altai Gobi.
- In Asia, Ibex is distributed in the montane habitats, ranging in elevations from 500 m to 6,700 m in countries like India, Kazakhstan, Tajikistan, Mongolia, Pakistan, Southern Siberia and China.
- In India, the Ibex is distributed mainly in the trans-Himalayan ranges of the Union Territories of Ladakh and Jammu and Kashmir and Himachal Pradesh up to the river Sutlej.



23. SCIENCE AND TECHNOLOGY

SPACE

2020 AV2

- First asteroid found to orbit entirely within the orbit of Venus named 2020 AV2 is discovered recently.
- The asteroid spans about 1 to 3 kilometers and has an elongated orbit tilted about 15 degrees relative to the plane of our solar system.
- 2020 AV2 belongs to a small class of asteroids known as Atiras, which are bodies with orbits that fall within the orbit of Earth.
- More specifically, it is the first "Vatira" asteroid, with the "V" standing for Venus.
- Vatira asteroids, which were only hypothesized until now, have orbits that fall entirely inside the orbit of Venus.
- It is discovered by Zwicky Transient Facility, or ZTF, a survey camera based at Palomar Observatory.
- The ZTF camera is particularly adept at finding asteroids because it scans the entire sky rapidly and thus can catch the asteroids during their short-lived appearances in the night sky.
- Because Vatiras orbit so close to our sun, they are only visible at dusk or dawn.
- According to the findings the asteroid must have migrated in toward Venus from farther out in the solar system.
- The only way it will ever get out of its orbit is if it gets flung out via a gravitational encounter with Mercury or Venus, but more likely it will end up crashing on one of those two planets.

OceanSat-2

- ISRO's launched OceanSat-2 in 2009, to provide service continuity for the operational services of Oceansat-1 with enhanced application potential.
- Its main objectives are to study surface winds and ocean surface strata, observation of chlorophyll concentrations, monitoring of phytoplankton blooms, study of atmospheric aerosols and suspended sediments in the water.



Habitable conditions of a Planet

- Water vapor has been detected in the atmospheres of a number of exoplanets but, even if the planet is in the habitable zone, that doesn't necessarily mean there are habitable conditions on the surface.
- To establish the prospects for habitability, it is important to obtain a unified understanding of the interior and atmospheric conditions on the planet in particular, whether liquid water can exist beneath the atmosphere.
- The K2-18b was expected to have a hydrogen 'envelope' surrounding a layer of "high-pressure water", with an inner core of rock and iron.
- If the hydrogen envelope is too thick, the temperature and pressure at the surface of the water layer beneath would be far too great to support life.
- Despite the size of K2-18b, its hydrogen envelope is not necessarily too thick and the water layer could have the right conditions to support life.

NASA's Artemis Mission

- NASA's Artemis mission is the next chapter in the US agency's space exploration program.
- It aims to send first woman and next man on the Moon by 2024 and establish sustainable exploration by 2028.
- The mission will then act as the footstep for future missions like sending astronauts to Mars.
- NASA recently completed the final round of testing for its Orion spacecraft.
- It is meant to fly the Artemis mission that is expected to "return the next American man and deliver the first American woman to the surface of the Moon by 2024".

Psyche Mission

- NASA and SpaceX are collaborating for a space mission that involves a journey to a unique metal-rich asteroid called Psyche.
- Psyche is orbiting the Sun between Mars and Jupiter.
- The Psyche mission is targeted to launch in July 2022 on a Falcon Heavy rocket from Cape Canaveral Air Force Station in Florida, NASA said in a statement.
- The Psyche asteroid is considered unique because it appears to largely be made of the exposed nickel-iron core of an early planet.
- Metallic cores are believed to be present deep within rocky, terrestrial planets like our Earth.
- However, since these lie unreachable far below the planet's rocky mantles and crusts, we are unable to reach there.
- As one cannot see or measure Earth's core directly, the mission to Psyche asteroid offers a unique window to scientists.
- It may even reveal the violent history of collisions and accretion that created terrestrial planets in the first place.
- Launch of Psyche will include two secondary payloads– Escape and Plasma Acceleration and Dynamics Explorers (EscaPADE) and Janus.
- While EscaPADE will study the Martian atmosphere, the Janus will study binary asteroids.

NASA Perseverance

- NASA's Mars rover for the 2020 mission is named as Perseverance.
- NASA's last rover sent to Mars was Curiosity, back in 2012.



- The rover has is a robotic scientist and weighs just under 1,043 kilograms.
- The Perseverance rover will be managed by NASA's Jet Propulsion Labs (JPL) and will hunt for signs of past microbial life on Mars.
- Perseverance will also characterize the planet's climate and geology, and collect samples of Martian rocks and dust.
- NASA has plans for a future mission which could bring these samples back to Earth.
- The rover is targeted to land on Mars' Jezero Crater a little February 18, 2021.
- The Mars 2020 is part of a larger program that includes missions to the Moon as a way to prepare for human exploration of the planet.
- NASA plans to put the next man and first woman on the moon by 2024 and wants a sustained human presence on the Moon by 2028 with its Artemis program.

HEALTH

Merkel Cell Polyoma Virus

- Merkel cell carcinoma is a rare and aggressive type of skin cancer.
- Merkel cell carcinoma is associated with old age, excessive exposure to ultraviolet light and a weak immune system.
- Merkel cell polyomavirus can get integrated in the human genome and undergo a mutation which causes it to promote the cancer.
- Earlier studies have shown that the Merkel cell carcinoma caused by the virus is less aggressive and progresses slower than that caused by excessive exposure to ultraviolet light.
- National Centre for Biological Sciences, Bengaluru, has developed a diagnostic system to detect the presence of Merkel cell polyomavirus in Merkel cell carcinoma tumours.
- The researchers have developed a test using the CRISPR-CAS12 technology that can identify the virus in the tumour and give off a fluorescence to indicate the presence of the virus.
- This is an important development, both, from the point of view of diagnostics and giving a prognosis for the condition.

DETECTR system

- National Centre for Biological Sciences developed diagnostic system for Merkel Cell polyoma virus adapted a system named DETECTR (DNA endonuclease-targeted CRISPR Trans reporter) to help them in this endeavor.
- The system consists of three components:
 1. **Identifier** - It is a guide RNA which can recognize and bind to a section of the Merkel cell polyoma virus.
 2. **Switch** - It is a DNA-cutting enzyme known as Cas-12a which gets attached to the guide RNA after it finds its target DNA.
 3. **Reporter** - It consists of a single stranded DNA tagged with a fluorescent molecule.
- When the guide RNA attaches itself to the viral DNA segment, the attached Cas-12a enzymes get activated and start cutting the "target" virus DNA.
- They also are enabled to cut up the single-stranded DNA tagged with fluorescent molecule.
- This then causes the fluorescent molecules to glow, which can be detected.
- Also, the strength of the glow depends on the number of activated Cas-12a molecules, which in turn depends on the number of virus DNA copies recognised in the tumour DNA.
- This therefore gives a measure of the number of viruses in the tumour.

Sepsis

- Sepsis is a life-threatening organ dysfunction caused by the body's immune system overreacting in response to an infection.
- This overactive, toxic response can lead to tissue damage, multiple organ failure and death.
- Despite the high incidence of sepsis, knowledge about sepsis prevention and early detection in Germany is significantly lower than in comparable industrialized countries.
- Viruses, bacteria, fungi or parasites sepsis can be triggered by a variety of pathogens.
- The causes of sepsis are usually pneumonia, wound infections, urinary tract infections or infections in the abdominal cavity.
- In addition to the known seasonal influenza viruses, other viruses that are highly infectious, such as coronaviruses, Ebola and yellow fever viruses, dengue, swine flu or bird flu viruses can also cause sepsis.
- In addition to the typical signs of infection, there are several stand out symptoms that usually indicate possible sepsis – for example, a drop in blood pressure with a simultaneous rise in heart rate, fever, rapid, heavy breathing, an unusually strong feeling of illness and sudden confusion.
- Septic shock is the most severe stage and is diagnosed when blood pressure drops to dangerous levels.
- In the event of such alarm signals, emergency care should be sought immediately.

Blood

- Blood is a fluid connective tissue that consists of plasma, blood cells and platelets.
- It helps to circulate oxygen and nutrients to various cells and tissues.
- Red Blood Cell – they also known as Erythrocytes, contain the iron-rich protein called hemoglobin that gives blood its red color.
- RBCs are the most copious blood cell produced in bone marrows, their main function is to transport oxygen from and to various tissues and organs.
- The White Blood Cells (WBCs) are also known as Leucocytes and are the colorless blood cells as it is devoid of hemoglobin.
- It mainly contributes to immunity and defence mechanism.

Spanish Flu

- As COVID-19 declared a global health crisis, parallels are being drawn with the Spanish influenza of 1918-19, which is considered the most devastating pandemic in recent history.
- Spanish flu was caused by an H1N1 influenza virus.
- There is no universal consensus regarding where the virus originated, It is believed that World War I was partly responsible for it's spread.
- Spain was one of the earliest countries where the epidemic was identified, but historians believe this was likely a result of wartime censorship.
- Spain was a neutral nation during the war and did not enforce strict censorship of its press, which freely published early accounts of the illness.
- As a result, people falsely believed the illness was specific to Spain, and the name "Spanish flu" stuck.

Anosmia

- Anosmia, the loss of sense of smell, and Ageusia, an accompanying diminished sense of taste, have emerged as peculiar telltale signs of COVID-19, the disease caused by the coronavirus, and possible markers of infection.



- According to recent findings significant numbers of coronavirus patients experienced anosmia, saying that in South Korea, where testing has been widespread, 30% of 2,000 patients who tested positive experienced anosmia as their major presenting symptom (these were mild cases).
- Researchers has advised adults who lose their senses of smell to isolate themselves for seven days, even if they have no other symptoms, to slow the disease's spread.

Hanta Virus

- According to Chinese media source, a person from Yunnan Province who tested positive for the Hantavirus has died recently.
- The Hantavirus is not novel and its first case dates back to 1993, according to the US Centre for Disease Control (CDC).
- It is contracted by humans from infected rodents.
- Cases of the Hantavirus in humans occur mostly in rural areas where forests, fields and farms offer suitable habitat for infected rodents, CDC explains.
- In the Americas, the family of viruses is known as 'New World hantaviruses'.
- It is the cause of Hantavirus pulmonary disease (HPS), a severe respiratory disease.
- The CDC maintains that HPS can be fatal and has a mortality rate of 38 per cent.
- It remains unclear whether human-to-human transmission of the virus is possible.
- A person infected with the virus may show symptoms within the first to eighth week after they have been exposed to fresh urine, faeces or the saliva of infected rodents.
- Symptoms may include fever, fatigue, muscle aches, headaches, chills and abdominal problems.
- Four to ten days after being infected, late symptoms of HPS may start to appear, which include coughing and shortness of breath.

Made in India COVID19 Test Kit

- India-based Mylab has discovered (Covid-19) diagnostic test kits, called reverse transcription polymerase chain reaction (RT-PCR) tests.
- It is First 'Made in India' COVID19 Test Kit to diagnose COVID-19 gets the commercial approval from the Central Drugs Standard Control Organization (CDSCO).
- The testing kit has been commercially approved by the Indian FDA / Central Drugs Standard Control Organization (CDSCO).
- The approval is expected to help increase testing in the country.
- RT-PCR kits can study 1000 samples from large labs and 200 from smaller labs.
- According to the developers, it would cost nearly one-fourth of the current procurement cost and is faster as it screens and detects the infection within 2.5 hours as compared with over 7 hours by others.

Herd Immunity

- Herd immunity refers to preventing an infectious disease from spreading by immunizing a certain percentage of the population.
- While the concept is most commonly used in the context of vaccination, herd community can also be achieved after enough people have become immune after being infected.
- The premise is that if a certain percentage of the population is immune, members of that group can no longer infect another person.



- This breaks the chain of infection through the community (“herd”), and prevents it from reaching those who are the most vulnerable.
- The scientific principle is that the presence of a large number of immune persons in the community, who will interrupt the transmission, provides indirect protection to those who are not immune.
- To estimate the extent of spread and immunity, epidemiologists use a measure called the ‘basic reproductive number’ (RO).
- This indicates how many persons will be infected when exposed to an single case; an RO of more than 1 indicates one person can spread the infection to multiple persons.
- Scientific evidence shows that a person with measles can infect around 12-18 persons; and a person with influenza can infect around 1.2-4.5 persons, depending on the season.
- On the basis of the available evidence from China, and according to various experts, RO COVID-19 ranges between 2 and 3.
- Recently the UK government plans that it wanted the entire population to be exposed to the novel coronavirus infection, so that the majority could develop immunity to COVID-19.
- International community fears that Herd immunity as a strategy against COVID-19 questionable is very risky to seek herd immunity by allowing a large proportion of the population to get infected.
- Such a strategy at this stage, experts have underlined, would be based on many unknowns and variables.

OTHERS

In-Flight Wi-Fi

- Union government has permitted airlines operating in India to provide in-flight Wi-Fi services to passengers.
- Telecom Commission had given its green signal to in-flight connectivity of Internet and mobile communications on aircraft in Indian airspace in 2018.
- By this the pilot of an aircraft may permit the access of Internet services by passengers on board an aircraft in flight, through Wi-Fi on board, when laptop, smartphone, tablet, smartwatch, e-reader or a point of sale device is used in flight mode or airplane mode.
- Broadly, in-flight connectivity systems use two kinds of technologies.
- An onboard antenna picks up signals from the nearest tower on the ground, and unless the aircraft flying over a large space with no towers (such as a water body), the connection will remain seamless up to a certain altitude.
- Satellites can be used to connect to ground stations in the same way that satellite TV signals are transmitted.
- Data is transmitted to a personal electronic device through an onboard router, which connects to the plane’s antenna.
- The antenna transmits the signals, through satellites, to a ground station, which redirects the traffic to a billing server that calculates the data consumption.
- It is then relayed to the intercepting servers, and to the World Wide Web.
- Once flight mode is activated, the plane’s antenna will link to terrestrial Internet services provided by telecom service providers; when the aircraft has climbed to 3,000 m (normally 4-5 minutes after take-off), the antenna will switch to satellite-based services.
- In general, Wi-Fi on a plane is slower than on the ground.

Security Ink

- CSIR-National Physical Laboratory has developed a bi-luminescent security ink.
- The ink glows in red and green colors when illuminated by two different excitation sources at 254 Nano meters (nm) and 365 nm, respectively.

- The ink was prepared in a batch of 1kg and given to Bank Note Press (BNP), a unit of Security Printing Minting Corporation of India Ltd. (SPMCIL), New Delhi.
- The ink is found comparable to the standards that are in use.
- The formulation can be used to check the authenticity of passports, Government documents, tamper evident labels, identity cards, etc.

Zn-Air Battery

- Zinc–air batteries (non-rechargeable), and zinc–air fuel cells (mechanically rechargeable) are metal–air batteries powered by oxidizing zinc with oxygen from the air.
- These batteries have high energy densities and are relatively inexpensive to produce.
- Sizes range from very small button cells for hearing aids, larger batteries used in film cameras that previously used mercury batteries, to very large batteries used for electric vehicle propulsion.
- The fabricated Zn-air battery had been displayed in INDIA Nano Expo.
- It uses Metal-Organic Framework (MOF) derived core-shell nanocomposite as a cathode material.
- It is trifunctional in nature, which means active for
 1. ORR (Oxygen reduction reaction),
 2. OER (Oxygen evolution reaction)
 3. HER (Hydrogen evolution reaction) catalytic reactions.
- The fabricated Zn-air battery is safe, lightweight, and is recharged electrically as well as mechanically.
- Along with this, to exploit the HER activity, the same material was used as anode and cathode in water electrolyser which is powered by the fabricated Zn-air battery and thus showing self-powered overall water splitting process.

Nanocomposite Coatings

- International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI), an autonomous R&D center of the Department of Science & Technology (DST) has developed a process for size-selective deposition of nanocomposite coatings.
- Nanocomposite coatings are formed by mixing two or more dissimilar materials at nanoscale to improve the physical, chemical and physicochemical properties of the new materials.
- The scientists have found that nickel tungsten-based coatings with infusion of particular sized Silicon Carbide (SiC) submicron particles using a pulsed electroplating can provide an excellent combination of wear and corrosion resistance.
- Several aerospace, defence, automobile, space devices need to reduce friction, wear, and tear to enhance the life of components.
- Lubricating these dynamic systems add to the cost, complexity, and weight of these systems.
- The nanocomposite demonstrated excellent tribological behavior (science and engineering of interacting surfaces in relative motion, which includes principles of friction, lubrication, and wear) compared to other wear-resistant coatings.

Sodium Hypochlorite

- In several places migrant workers travelling to their home states, or their belongings, were sprayed with sodium hypochlorite solution, apparently to sanitize them.
- World Health Organization's had also recommended to use homemade bleach solutions of about 2-10% concentration to clean hard surfaces to clear them of any presence of the novel coronavirus.



- As a common bleaching agent, sodium hypochlorite is used for a variety of cleaning and disinfecting purposes in swimming pools.
- It releases chlorine, which is a disinfectant.
- This chemical is also being used in Gujarat, Maharashtra and Punjab, for disinfecting buildings and solid surfaces in a bid to wash away any presence of novel coronavirus.
- The concentration of the chemical in the solution varies according to the purpose it is meant for, such as
- Large quantities of chlorine can be harmful, a normal household bleach usually is a 2-10% sodium hypochlorite solution.
- At a much lower 0.25-0.5%, this chemical is used to treat skin wounds like cuts or scrapes.
- An even weaker solution (0.05%) is sometimes used as a hand wash.
- In Delhi, officials have said a 1% sodium hypochlorite solution was used in the spray applied on migrant workers' belongings.
- The harmful effects of the solution when applied on human skin are as follows
 1. A 1% solution can cause damage to the skin of anyone who comes in contact with it.
 2. If it gets inside the body, it can cause serious harm to lungs.
 3. Sodium hypochlorite is corrosive, and is meant largely to clean hard surfaces.
 4. It is not recommended to be used on human beings, certainly not as a spray or shower.
 5. Even a 0.05% solution could be very harmful for the eyes.

24. INDEX AND REPORT

QS World Rankings

- QS World University Rankings is an annual publication of university rankings by Quacquarelli Symonds (QS).
- It is previously known as Times Higher Education–QS World University Rankings, the publisher had collaborated with Times Higher Education (THE) magazine to publish its international league tables from 2004 to 2009 before both started to announce their own versions.
- The QS system now comprises the global overall and subject rankings (which name the world's top universities for the study of 48 different subjects and five composite faculty areas), alongside five independent regional tables (Asia, Latin America, Emerging Europe and Central Asia, the Arab Region, and BRICS).
- According to newly released QS World Rankings five institutions from India have been ranked among the top 100 this year, while in 2019 there were three, IIT Bombay, IIT Delhi and IIT Madras.
- This year IIT Kharagpur (IIT-KGP) is at 86th, IIT Madras (IITM) at 88 and IIT Kanpur (IITK) at 96.
- Indian Institute of Technology (IIT) in Mumbai and Delhi are among the top 50 engineering colleges across the globe, according to subject-wise QS World Ranking.
- In arts and humanities, the Jawaharlal Nehru University (JNU) has been ranked at the 162nd position while the Delhi University has been ranked at 231 spot.

Freedom in the World 2020 Report

- Freedom in the World report is released by Freedom House, a US-based watchdog.
- The report derives its methodology from the Universal Declaration of Human Rights, adopted by the United Nations General Assembly in 1948.



- It covers 195 countries, awarding scores based on political rights indicators such as the electoral process, political pluralism and participation and government functioning, as well as civil liberties indicators related to freedom of expression and belief associational and organizational rights, the rule of law and personal autonomy and individual rights.
- According to the report Finland, Norway, Sweden, the Netherlands and Luxembourg are the top five countries in the free category.
- The report has placed India at 83rd position along with Timor-Leste and Senegal among the bottom five of “free democracies”.
- India witnessed the worst score decline among the world’s 25 largest democracies.
- India’s overall score declined from 75 in 2019 to 71 in 2020, with civil liberties taking the biggest hit.
- The annulment of autonomy and the subsequent shutdown of Kashmir, the National Register of Citizens and the Citizenship (Amendment) Act, as well as the crackdown on mass protests have been listed as the main signs of declining freedom in the report.
- These three actions have shaken the rule of law in India and threatened the secular and inclusive nature of its political system.
- It advises the central government to prevent and control water and air pollution.

A New Era for Girls: Report

- ‘A New era for girls: Taking stock on 25 years of progress is a report recently unveiled by UNICEF, Plan International and United Nations Women.
- The report reveals that though the rate of drop-outs for girls in schools has decreased from 20% to 13.5% from 2008 to 2018, a greater empowerment has not taken place.
- It also states that many girls still face an unequal violent environment and one in every 20 girls in the age group of 15-20 has experienced rape, both within and outside marriage.
- According to the report Gender disparities in the number of out-of-school children have narrowed substantially over the past two decades.
- At the secondary level, they have shifted to the disadvantage of boys.
- Still, despite the remarkable gains made for girls in the past two decades, they are still more disadvantaged at the primary level, with 5.5 million more girls than boys of this age out of school worldwide.
- The report mentions a term called “learning crisis”; this means, even when girls are in school, many do not receive a quality education.

Gender Parity Index

- The Gender Parity Index (GPI) is a socioeconomic index usually designed to measure the relative access to education of males and females, released by UNESCO.
- It is calculated as the quotient of the number of females by the number of males enrolled in a given stage of education (primary, secondary, etc.).
- A GPI equal to one signifies equality between males and females.
- A GPI less than one is an indication that gender parity favors males while a GPI greater than one indicates gender parity that favors females.
- The closer a GPI is to one, the closer a country is to achieving equality of access between males and females.
- It is used by international organizations, particularly in measuring the progress of developing countries.
- The World Economic Forum's Global Gender Gap Report 2016 allows users to look at and compare country GPI data.

Highlights of World Happiness Report

- The World Happiness Report is an annual publication of the United Nations Sustainable Development Solutions Network.
- It contains articles, and rankings of national happiness based on respondent ratings of their own lives, which the report also correlates with various life factors.
- Researchers for the World Happiness Report asked people in 156 countries to evaluate their own levels of happiness, and took into account measures such as GDP, social support, personal freedom and levels of corruption to give each nation a happiness score.
- According to the report Finland's residents enjoy a high quality of life, security and public services, with rates of inequality and poverty among the lowest of all OECD countries
- As in each of the previous seven reports, Nordic states dominated the top ten, along with countries such as Switzerland, New Zealand and Austria.
- Luxembourg also edged into the tenth spot for the first time this year.
- The happiest countries are those "where people feel a sense of belonging, where they trust and enjoy each other and their shared institutions.
- There is also more resilience, because shared trust reduces the burden of hardships, and thereby lessens the inequality of well-being.
- Meanwhile, the countries at the bottom of this year's ranking are those afflicted by violent conflicts and extreme poverty, with Zimbabwe, South Sudan and Afghanistan classed as the world's least happy countries.
- The data for this year's World Happiness Report was collected in 2018 and 2019, and is therefore not impacted by the widespread restrictions imposed by many countries to stem the spread of the new coronavirus.
- However, the report's authors predict that the lockdown conditions many of the world's residents are now living under could, paradoxically, boost happiness in future.
- The most frequent explanation seems to be that people are pleasantly surprised by the willingness of their neighbors and their institutions to work in harness to help each other.

25. DEFENCE

INS Hansa

- INS Hansa is an Indian naval air station located near Dabolim in Goa.
- It was commissioned in September 1961.
- It serves as the Indian Navy's one of the largest air bases and has grown to become a full-fledged airfield that handles both domestic as well as international flights round the clock.

Innovation for Defence Excellence Initiative

- iDEX is an initiative taken by the government to contribute towards modernization of the Defence Industry.
- It was launched by the Government in April 2018.
- iDEX aims to promote innovation and technology development in Defence and Aerospace by engaging Industries (which includes MSMEs, start-ups, individual innovators, R&D institutes & academia).
- iDEX will provide the engaging industries with funding and other support to carry out Research & Development.
- iDEX will be funded and managed by Defence Innovation Organization (DIO), and will function as the executive arm of DIO.

***Defence Innovation Organization***

- DIO is a 'not for profit' company registered under Section 8 of the Companies Act 2013.
- Its two founding members are Hindustan Aeronautics Limited (HAL) & Bharat Electronics Limited (BEL) - Defence Public Sector Undertakings (DPSUs).
- HAL and BEL are navratna companies.

Defence Artificial Intelligence Project Agency

- Defence Artificial Intelligence Project Agency (DAIPA) was created in March, 2019.
- DAIPA aims for greater thrust on Artificial Intelligence (AI) in Defence, formulation of an AI roadmap for each Defence PSU and Ordnance Factory Board to develop AI-enable products.
- DAIP was setup after the recommendations of N Chadrachekharan Task Force 2018, which studies implications of AI in national security.

Mission Raksha Gyan Shakti

- Mission Raksha Gyan Shakti was launched in 2018 by the Ministry of Defence with the objective of creating greater Intellectual Property (IP) in Defence Production Ecosystem.
- The Directorate General of Quality Assurance (DGQA) has been entrusted with the responsibility of coordinating and implementing the programme.
- The Directorate General of Quality Assurance (DGQA) is under the Department Of Defence Production, Ministry of Defence.
- The organization provides Quality Assurance (QA) cover for the entire range of Arms, Ammunitions, Equipment and Stores supplied to Armed Forces.
- It aims to achieve the goal of self-reliance in the defense sector to generate Intellectual Property in India and marks a departure from the culture of seeking Transfer of Technology (ToT) from foreign sources.