

IQRA IAS



CURRENT AFFAIRS

MAY 2020

INDEX

1) Polity and Governance	Pg 04-13
2) International Relations	Pg 14-24
3) Security and Defence	Pg 25-36
4) Economy	Pg 37- 63
5) Science and Technology	Pg 64-76
6) Ecology and Environment	Pg 77-81
7) Social Issues	Pg 82-90
8) Miscellaneous and Schemes	Pg 91-92

ADD ON NOTES

DRAFT

POLITY AND GOVERNANCE

**Paper II: This section is relevant to Polity and Governance Section of GS
Paper II**

1.1 PM CARES FUND & PM NATIONAL RELIEF FUND

Why in News: In light of the institution of new PM-CARES fund, this article explores the two funds in the name of the Prime Minister.

Background

- Towards the end of March, Prime Minister Narendra Modi instituted a new PM-CARES Fund, on popular demand, to help fight the novel corona virus.
- There is another fund which exists under the name of the Prime Minister - the Prime Minister's National Relief Fund (PMNRF).

PM-CARES Fund

- As India's fight against Covid-19 started picking pace, people from all walks of life wrote to the PM expressing their desire to donate to India's war against COVID-19.
- Respecting that spirit, the Prime Minister's Citizen Assistance and Relief in Emergency Situations (PM-CARES) Fund has been constituted.
- PM-CARES Fund was set up as a public charitable trust.

Management of the fund

- The Prime Minister chairs the fund in his official capacity, and can nominate three eminent persons in relevant fields to the Board of Trustees.
- The Ministers of Defence, Home Affairs and Finance are ex-officio Trustees of the Fund.

How it will be used

- PM said that the fund will go a long way in creating a healthier India. He said it will also strengthen disaster management capacities and encourage research on protecting citizens.
- The fund will also cater to similar distressing situations if they occur in the times ahead.

Voluntary contributions

- The fund receives voluntary contributions from individuals and organisations and does not get any budgetary support.
- Donations have been made tax-exempt.
- The fund accepts micro-donations also.
- It is also exempt from the Foreign Contribution (Regulation) Act, 2010, and accepts foreign contributions.

CSR funds can be sent to PM-CARES

- The ministry of corporate affairs (MCA) said that donations to PM-CARES will qualify as corporate social responsibility (CSR) spending that companies are mandated to make under the Companies Act 2013.
- The ministry of corporate affairs (MCA) had recently clarified that firms could spend their CSR funds to fight the corona virus disease, which has been notified as a disaster.

Prime Minister's National Relief Fund (PMNRF)

- The Prime Minister's National Relief Fund (PMNRF) was set up in January 1948, originally to accept public contributions for the assistance of Partition refugees.
- It is now used to provide immediate relief to the families of those affected by natural and man-made disasters.
- Natural disasters covered under this include flood, cyclone, earthquake etc.
- Man-made disasters include major accidents, acid attacks, riots etc.
- PMNRF accepts voluntary contributions from Individuals, Organizations, Trusts, Companies and Institutions etc.
- Conditional contributions, where the donor specifically mentions that the amount is meant for a particular purpose, are not accepted in the fund.
- All contributions towards PMNRF are exempt from Income Tax under section 80(G).
- PMNRF has also received foreign contributions as a public trust since 2011.
- As of December 2019, the PMNRF had an unspent balance of Rs 3,800 crore in its corpus.
- The PMNRF provides annual donation and expenditure information but without any detailed break-up.

Management of the fund

- The PMNRF was initially managed by a committee which included the Prime Minister, the Finance Minister, and the Congress President, a representative of the Tata Trustees and an industry representative.
- However, in 1985, the committee entrusted the entire management of the fund to the Prime Minister.
- Currently, the Prime Minister has the sole discretion for fund disbursement. A joint secretary in the PMO administers the fund on an honorary basis.

Objections to the PM-CARES fund

Necessity

- Opposition leaders have questioned the need for a new PM CARES Fund, given that the PMNRF has similar objectives.
- States also have similar Chief Minister's Relief Funds, and State governments have appealed for donations noting that they bear the major burden of implementing COVID-19 relief operations.

Transparency

- It is not clear whether the fund comes under the ambit of the RTI Act or oversight by the Comptroller and Auditor General of India, although independent auditors will audit the fund.
- The PM CARES web page is opaque regarding the amount of money collected so far, names of donors, the expenditure of the fund so far, or names of beneficiaries.

Receiving of CSR funds

- PM-CARES can receive uncapped corporate donations as CSR expenditure.
- Some opponents say that this goes against previous guidelines stating that CSR should not be used to fund government schemes.
- Such a facility has not been provided to PMNRF or the CM's Relief Funds, and they cannot receive CSR funds.

Why government has then set up this separate fund?

- **Specific purpose:** While PMNRF is for all kinds of natural disasters, PM CARES fund is specially meant for COVID-19 similar pandemic situations.
- **Popular demand:** The Prime Minister's office was receiving spontaneous and innumerable requests for making generous donations to support the government in the wake of Covid-19 emergency.
- **Ease of access:** Any spending from the Consolidated Fund of India needs to be passed by the Parliament; therefore, creation of a donation-based fund means that legislature hurdle is taken care of.
- **More contributions:** A separate fund for COVID-19 relief would encourage more people to contribute in the fund because everyone is impacted by Corona virus outbreak.
- **Micro-donations:** The PM CARES Fund tries to differentiate itself from PMNRF by enabling micro-donations. One can donate as low as Rs 10 in the PM CARES Fund, while the minimum one can donate in PM National Relief Fund is Rs 100.

1.2 RELEASE OF PRISONERS

Why in News: Following an outbreak of novel corona virus infections in Mumbai Central Jail, a high-power committee was appointed for the emergency release on parole or bail of prison inmates. The committee recently decided to release around 17,000 prisoners from jails across the state. This is nearly half the prisoner strength of 35,239 across jails in Maharashtra.

Background

- In March 2020, the Supreme Court observed that the prisons in India are overcrowded making it difficult for the prisoners to maintain social distancing and directed decongesting of prisons.
- Following the Supreme Court order, most states have constituted a high-powered committee and come up with their respective categories of prisoners eligible for release.
- Committees across the country can recommend release of 14 categories of prisoners, including women and those with severe illnesses.

Release of Prisoners in Maharashtra

- Before the lockdown, the Maharashtra's jails were accommodating 50% over their capacity which is much higher than the national average occupancy in central prisons, which on an average house 13 prisoners against a capacity of 10.
- With many Maharashtra jails severely overcrowded, housing prisoners four to five times their capacities, the state government became the first to take a move in that direction.
- On 25th March, a high-powered committee headed by high court Justice Amjad Sayed recommended release of under trials charged with offences punishable up to seven years. It also directed release of convicts on emergency parole with a few conditions.
- On 28th March, officials of the District Legal Services Authority began facilitating release of under trials.
- Following the outbreak in the Mumbai Central Jail, on 8th May the state government amended the Maharashtra Prisons (Mumbai Furlough and Parole) Rules, and issued a notification enabling the release of certain categories of convicts.

Summary

- Over the last several days, 184 persons (158 inmates and 26 staff) were found infected in Mumbai Central Jail (Arthur Road Jail), besides a 54-year old woman inmate at Byculla Jail.
- The Maharashtra government ordered for the release of all under trials, relaxing the earlier category of those facing up to seven years imprisonment.

- The under trials except those including those charged with murder, rape, kidnapping, bank frauds, major financial scams, money-laundering, anti-terror laws, child sexual abuse as well as all foreign nationals were not released.
- The notification also ordered inmates who reside outside the state can be released only after the lockdown period is over and public transportation is available.
- The release is temporary.
- Initially, both bail and parole are valid only for 45 days, or till the application of Epidemic Diseases Act from the state is revoked, whichever is earlier.
- The 45-day period would later be extended in blocks of 30 days each. But eventually, the prisoners are supposed to be back in the barracks.
- Note: The bail order is issued by a relevant court, while parole is sanctioned by authorized jail officer.

Covid-19 cases in other state's prisons and steps taken by them:

- States including Uttar Pradesh, Karnataka, Madhya Pradesh and Delhi have recorded Covid-19 cases in their prisons.
- The Supreme Court had said the categories for release should be determined but not be limited to the nature of offence, duration of sentence, and previous criminal record, most states have adhered to these and granted release only to those facing charges that involve punishment up to seven years in jail.
- Haryana and Odisha have directed the release of all prisoners above age 65 on a temporary basis, with exceptions.
- Goa has directed under trial review committees, set up in each district as per a previous Supreme Court order, to undertake the responsibility of releasing under trials.

1.3 STATES BORROWING AND FRBM ACT

Why in News: The Centre has agreed to the demand from states to allow them to borrow more funds to meet spending needs, amid a fall in revenue collection but made a large part of it contingent upon reforms.

Background

- Since the start of the lockdown in March to contain the spread of the disease, states have been clamoring for a relaxation in the amount of money they can borrow.
- This limit is set as per the Fiscal Responsibility and Budget Management Act at 3% of the gross state domestic product.

- Since the Union government has released little money and in fact even held back tax revenue due to the states, this borrowing would help states raise funds in order to fight the pandemic and tide over the severely reduced tax revenue as a result of lockdown.

FRBM Act

- The Fiscal Responsibility and Budget Management Act (FRBM Act), 2003, establish financial discipline to reduce fiscal deficit.
- The FRBM Bill was introduced by the then finance minister, Yashwant Sinha, in 2000.
- It was later approved by the Union Cabinet in 2003, became effective from July 5, 2004.
- The FRBM Act was enacted to introduce more equitable distribution of India's debt over the years.

Objectives of the FRBM Act

- **Aim:** To introduce transparency in India's fiscal management systems.
- **Long term objective:** To achieve fiscal stability and to give the Reserve Bank of India (RBI) flexibility to deal with inflation in India.
- In other words, the act aims that the current generation of the country's administrators must ensure that their management of the country's finances does not leave future generations saddled with the burden of having to service unsustainably high levels of inherited debt that would in turn affect their ability to provide a stable economic environment for contemporary society.

Key features of the FRBM Act

To achieve its aim, the Act envisages the setting of limits on the Central government's debt and deficits as well as mandating greater transparency in fiscal operations of the Central government and the conduct of fiscal policy in a medium-term framework.

The FRBM Act made it mandatory for the government to place the following along with the Union Budget documents in Parliament annually:

- Medium Term Fiscal Policy Statement
- Macroeconomic Framework Statement
- Fiscal Policy Statement

The FRBM Act proposed that revenue deficit, fiscal deficit, tax revenue and the total outstanding liabilities be projected as a Strategy percentage of gross domestic product (GDP) in the medium-term fiscal policy statement.

It requires the government to limit the fiscal deficit to 3% of the GDP by 31 March 2021 and the debt of the central government to 40% of the GDP by 2024-25, among others.

FRBM Act in States

- To ensure that the States too are financially prudent, the 12th Finance Commission's recommendations in 2004 linked debt relief to States with their enactment of similar laws.
- The States have since enacted their own respective Financial Responsibility Legislation, which sets the same 3% of Gross State Domestic Product (GSDP) cap on their annual budget deficits.

FRBM Act exemptions

- The law does contain what is commonly referred to as an 'escape clause'.
- However, on grounds of national security, calamity, etc, the set targets of fiscal deficits and revenue could be exceeded.
- Section 4(2) of the Act, the Centre can exceed the annual fiscal deficit target citing grounds that include national security, war, national calamity, collapse of agriculture, structural reforms and decline in real output growth of a quarter by at least three percentage points below the average of the previous four quarters.

News Summary

- The Union government did accede to the states demand of extra borrowings but with significant conditions.
- States can now borrow up to 5% but only if they agree the centers conditions.
- Of the extra 2%, only 0.5% is truly unconditional. However, after that states will only be allowed four increments of 0.25% if they meet specific conditions laid down by Centre.
- The final 0.5% will be awarded to states if they tick off three of four conditions set by the government.
- In other words, the states can borrow up to 3.5% of GSDP without undertaking any reforms, but the remaining headroom will only be available if they move ahead with steps required to implement three of the four reforms.

The four policy conditions are

- Implement the One Nation, One Ration Card scheme,
- Ensure reforms so that power distribution companies can clear their dues in time,
- undertake reforms of urban local bodies and
- Ensure that there is ease of doing business at the Grass root level.
- This is expected to help them raise an additional Rs 4.3 lakh crore this year.

States protest linking of additional borrowing limit to four reforms

- Some states have protested the Centre's move to link the increase in their borrowing limit to conditions such as reforms.
- Several states are expected to protest the move and are likely to convene a meeting to discuss the issue and draw up a strategy.

Arguments given by the states against the recent move

- It will set a new precedence of what he called "authoritarian intervention" of the Centre on how states can borrow and spend the funds.
- This is undermining the autonomy of elected governments of states by the Centre to make decisions on allocation of borrowings and called it an anti-federalist move.
- In effect, this seeks to weaken the constitutional scheme of separate policy areas for the Centre and states.

1.4 ELECTION PETITION

Why in News: Recently, the Gujarat High Court had cancelled the Gujarat education and law minister's 2017 election victory on grounds of malpractice and vote manipulation. On appeal, the Supreme Court has now stayed the order.

Background

A BJP Leader was elected from Dholka constituency of Gujarat after defeating the Congress candidate by a margin of 327 votes in the 2017 Assembly polls. An appeal was filed by an opposing Congress Candidate in the Gujarat High Court, alleging that the returning officer had illegally rejected 429 votes received via postal ballot. It was argued that the exclusion of the 429 votes materially affected the election result as the rejected votes were more than the victory margin (327). The candidate also alleged that the Election Commission's instructions were not followed while counting the postal votes. Gujarat High Court heard the matter and recently held the election of the MLA void because the court observed that the procedure adopted for counting of votes was against the orders of the Election Commission of India and the result of the election had been materially affected by the non-compliance of the provisions of Representation of People Act, 1951. Thus, the verdict invoked the Representation of the People Act 1951, including Section 100 of Act, which allows an election to be declared void on the ground of "corrupt practice".

Note: Corrupt practices are defined in Section 123(7) of the Representation of the People Act 1951, and include procuring the assistance of government officers by a candidate to help in their election.

Constitutional Provision for declaring an election void

The Constitution lays down that no election to the Parliament or the state legislature is to be questioned except by an election petition presented to such authority and in such manner as provided by the appropriate legislature.

Election Petition

- An Election petition is a procedure for inquiring into the validity of the election results of Parliamentary, Assembly or local government elections. In other words, it is a means under law to challenge the election of a candidate in a Parliamentary, Assembly or local election.
- Election petitions are filed in the High Court of the particular state in which the election was conducted. Therefore, only the High Courts have the original jurisdiction on deciding on election petitions.
- An election petition can be filed by any candidate, or an elector relating to the election personally, to the authorized officer of the High Court.
- Limitation Period for filing petition in High Court: An election petition calling in question an election shall be filed within the time period of forty-five days from the date of declaration of results.
- **Appeal:** An appeal shall lie to the Supreme Court on any question (whether of law and fact) from every order made by a High Court.
- Limitation period for filing an appeal in the Supreme Court: Every appeal shall be preferred within a period of thirty days from the date of the order of the High Court.
- However, the Supreme Court may entertain an appeal after the expiry of the said period of thirty days if it is satisfied that the appellant had sufficient cause for not preferring the appeal within such period.

Conditions for declaring the election of a particular candidate void

The election of a particular candidate can be declared void by the concerned High Court under section 100 of the Representation of People Act, 1951, if the High Court is of the opinion that - On the date of his election a returned candidate was not qualified or was disqualified to be chosen to fill the seat. Any corrupt practice has been committed by a returned candidate or his election agent or by any other person with the consent of a returned candidate or his election agent.

By improper acceptance of any nomination. By any improper reception, refusal or rejection of any vote or the reception of any vote which is void. By any non-compliance with the provisions of the Constitution or RPA or any rules or orders made under this act.

INTERNATIONAL RELATIONS

- ❖ **Paper II (GS): All the Articles of this section are relevant to the following topics:**
 - **India and its Neighbourhood – Relations**
 - **Bilateral, Regional and Global Groupings and Agreements involving India and / or affecting India's Interests**
- ❖ **Prelims Oriented Questions and Places in News for Maps/ Matching**

2.1 NAM (NON ALIGNED MOVEMENT)

Why in News: Virtual Non-Aligned Movement (NAM) summit was recently held among the member states to enhance coordination and discuss ways to jointly fight against the corona virus pandemic. NAM Leaders assessed the impact of Covid-19, identified needs and requirements for possible remedies and urged action-oriented follow-up measures.

NAM

- **Non-Aligned Movement (NAM) was created and founded during the collapse of the colonial system and the independence struggles of the peoples of Africa, Asia, Latin America and other regions of the world and at the height of the Cold War.**
- Two power blocs were forming during that time-NATO led by the United States and Warsaw led by the Union of Soviet Socialist Republics (USSR). The Non-Aligned Movement (NAM) is a forum of 120 developing world states that are not formally aligned with or against any major power bloc.
- Drawing on the principles agreed at the Bandung Conference in 1955, the Movement of Non-Aligned Countries was founded on a wider geographical basis at the First Summit Conference of Belgrade, which was held in September 1961. It was based on the initiative of three world leaders- the then Indian PM Jawaharlal Nehru, Yugoslavian President Josip Broz Tito and Egyptian President Gamal Abdel Nasser.
- **The term non-aligned movement first appears in the fifth conference in 1976, where participating countries are denoted as "members of the movement".**
- After the United Nations, it is the largest grouping of states worldwide. The countries of the Non-Aligned Movement represent nearly two-thirds of the United Nations' members and contain 55% of the world population.

Virtual NAM Summit

- The online NAM Contact Group Summit, on the theme 'United against Covid-19', was hosted by the current chairman of the grouping, Ilham Aliyev, President of the Republic of Azerbaijan.
- Modi was joined by over 30 other Heads of State and Government and other leaders, including from member states in Asia, Africa, Latin America and the Caribbean, and Europe at the meeting.

NAM is an inter-governmental and inter-regional organisation that mainly focuses on self-mastery, national independence and territorial integrity of its member countries.

NAM is an inter-governmental and inter-regional organisation that mainly focuses on self-mastery, national independence and territorial integrity of its member countries.



Not participating in any military and political bloc or group

Standing agency:
Coordination committee
which operates at
the ambassadorial level

- **A Platform for NAM countries:** He suggested of developing a platform for NAM countries to pool their “experiences, best practices, crisis-management protocols, research, and resources”.
- **WHO must boost healthcare capacity:** NAM should call upon the international community and the WHO to focus on building health-capacity in developing countries. Countries should ensure equitable, affordable and timely access to health products and technologies for all.
- **A new template of globalisation:** He added in the post-COVID world, a new template of globalization, based on fairness, equality, and humanity is needed. There is a need of international institutions that are more representative of today’s world.
- **Slammed Pakistan for “spreading terrorism”:** Without naming Pakistan, PM Modi said some countries are spreading “other deadly viruses” such as terrorism, fake news and doctored videos.

- **Ds have created a people's movement:** PM Modi told that India, as a developing country and free society, had shown during the crisis how democracy, discipline and decisiveness can together create a genuine people's movement.
- **Pharmacy of the world:** Modi also said in an effort to help and cooperate with other countries in their fight against the deadly novel corona virus, India has sent critical drugs and medical devices to 123 countries, including 59 members of NAM, showing India is 'pharmacy of the world' for essential medicines.

Other key announcements of the meeting

- Declaration underlining the importance of international solidarity: Following the Summit, leaders adopted a Declaration underlining the importance of international solidarity in the fight against COVID-19.
- Task force to identify requirements of member countries: The NAM leaders announced creation of a task force to identify requirements of member countries through a common database reflecting their basic medical, social and humanitarian needs in the fight against COVID-19.

India and NAM

- This was PM Modi's first appearance in a NAM meeting at the summit level.
- Earlier it was being speculated that India was moving away from the Cold War-era grouping. India's participation in the recent summit has been seen as a decisive foreign policy shift as PM Modi had not attended the previous two NAM summits in 2016 and 2019.

2.1 PERMANENT REPRESENTATIVE TO UN

Why in News: India has appointed diplomat T S Tirumurti, currently serving as Secretary in the Ministry of External Affairs, as its Permanent Representative to the United Nations. Tirumurti succeeds Syed Akbaruddin who is credited with effectively presenting India's position on a range of crucial issues at the global body's headquarters in New York for the last several years.

United Nations

- The United Nations is an international organization founded in 1945, established after World War II with the aim of preventing future wars, succeeding the ineffective League of Nations.

- With its headquarters in New York City, it is currently made up of 193 Member States. It is the largest, most familiar, most internationally represented and most powerful intergovernmental organization in the world.
- Based on the founding Charter, the organization's objectives include maintaining international peace and security, protecting human rights, delivering humanitarian aid, promoting sustainable development and upholding international law.
- **The UN has six principal organs:**
 - The General Assembly
 - The Security Council
 - The Economic and Social Council (ECOSOC)
 - The Trusteeship Council
 - The International Court of Justice
 - The UN Secretariat
- Furthermore, the UN System includes various specialized agencies, such as the World Bank Group, the World Health Organization, the World Food Program, UNESCO, and UNICEF.

Permanent Missions to the United Nations

- The Permanent Mission is the diplomatic mission that every member state deposes to the United Nations, and is headed by a Permanent Representative, who is also referred to as the UN ambassador.
- The Vienna Convention on the Representation of States in their Relations with International Organizations of a Universal Character defines a Permanent Mission as a mission of permanent character, representing the State, sent by a State member of an international organization to the Organization.
- UN Permanent Representatives are assigned to the UN headquarters in New York City, and can also be appointed to other UN offices in Geneva, Vienna, and Nairobi.

Permanent Mission to the UN as per the UN General Assembly resolution 1948

- Since the creation of the United Nations, the practice has developed of establishing, permanent missions of Member States, at the seat of the Organization.
- The presence of such permanent missions serves to assist in the realization of the purposes and principles of the United Nations.
- In particular, it helps to keep the necessary liaison (association) between the Member States and the Secretariat in periods between sessions of the different organs of the United Nations.

The Indian Permanent Mission at the UN

- India was among the founding members of the United Nations and signed the Declaration by United Nations in 1942. India also participated in the historic United Nations Conference on International Organization in the year 1945.
- The Permanent Mission of India to the United Nations is the formal title of the Indian delegation to the United Nations (UN).
- The Permanent Representative of India to the United Nations is the leader of the Indian Mission to the United Nations. He/ She also represent India in the Security Council of the United Nations.
- India's Permanent Mission also has a Deputy Permanent Representative, a Minister, three Counselors, five First Secretaries, five Second Secretaries and a Military Advisor.

2.3 VANDE BHARAT & SAMUDRA SETU

Why in News: India's evacuation operation of Indians stuck abroad during the Covid-19 pandemic has picked up pace via air and sea. Through the Vande Bharat Mission, air evacuation is taking place while Operation Samudra Setu by the Indian Navy is evacuating Indians stranded abroad using naval ships.

Vande Bharat Mission

- The Vande Bharat Mission has gained momentum, with five Air India flights from Singapore, Dhaka, Riyadh, Manama in Bahrain and Dubai—landing in various Indian cities.
- The Ministry of External Affairs has developed a dynamic online platform on which requests received by Indian Missions from Indian nationals wishing to return are regularly being uploaded. As of now, 67,833 requests for repatriation have been registered.
- India plans to expand the scope of the evacuation operations by next week, with Indians stranded in Russia, Germany, Thailand, France, Spain, Uzbekistan and Kazakhstan to be evacuated in the next phase.
- Further, 14 non-scheduled commercial flights are reserved for stranded Indians from Singapore, Malaysia and the Philippines.
- At the same time, seven flights shall take off for New York, Washington, DC, Chicago and San Francisco. Seven other flights will airlift Indians from London.

Operation Samudra Setu: A plan for repatriation of Indians aboard INS Jalashwa and INS Magar from the Maldives (Operation Samudra Setu) has also been announced, wherein the ships will make two voyages to Kochi and Tuticorin.

- In the current phase of evacuation effort (Operation Samudra Setu) from the Maldives, 1,800-2,000 Indians will be brought back, though 4,500 out of the 27,000 Indians have expressed desire to be evacuated.
- Priority is being given to important cases such as medical, senior citizens, family emergencies and jobless people.
- The entire effort is a very complex operation since Indians are spread over 200 islands across the 800 km length of the Maldives and there are restrictions in place on island to island movement.
- An evacuation service charge of \$40 per head would be collected from Indians boarding naval ships from Maldives to return to India. This marks the first time passengers being evacuated by the Navy are being charged.
- Further, two amphibious ships, INS Airawat and INS Shardul, are proceeding to the United Arab Emirates but the modalities for evacuation are still being worked out.

2.4 ORGANISATION OF ISLAMIC REPUBLIC (OIC)

Why in News: Maldives stood by the side of India and told the Organisation of Islamic Cooperation (OIC) that it would not support any action by the OIC which singled out India.

OIC

- The Organisation of Islamic Cooperation (OIC) is the second largest inter-governmental organization after the United Nations.
- The Organization claims to be the collective voice of the Muslim world.
- It was established during a summit of Islamic countries which took place in Rabat, Kingdom of Morocco in September 1969.

Membership

- It has a membership of 57 states spread over four continents. 56 of them are also member states of the United Nations, the exception being Palestine.
- It also has five observer members, including Russia and Thailand.

Aim: Safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony among various people of the world.

Objectives

- Preserve Islamic values, its culture and social fabric
- Safeguard and defend the national sovereignty and independence of member states

- Contribute to international peace and security
- Permanent delegations: It has permanent delegations to the United Nations and the European Union.

Official language: The official languages of the OIC are Arabic, English, and French.

Relationship between India and OIC

Individual relations: Individually, India has excellent relations with almost all member nations of the OIC, especially with the UAE and Saudi Arabia.

- Not a member OIC: India is neither a member nor an observer of the group, despite having the third largest Muslim population in the world.
- At the 45th session of the Foreign Ministers' Summit of OIC in May 2018, Bangladesh suggested that India should be given Observer status in OIC, but Pakistan opposed it and the proposal was dropped.

Participation of India in OIC: India's External Affairs Minister was first time invited as the Guest of Honour at the Inaugural Plenary of the 46th Session of the Council of Foreign Ministers of the OIC in March 2019, which was considered a significant diplomatic victory for India.

Criticism of India

- The OIC has been generally supportive of Pakistan's stand on Kashmir, and has repeatedly issued statements criticizing the alleged Indian atrocities in the state.
- Pakistan has regularly used the OIC to blame India, usually on the issue of Kashmir.
- OIC has in the recent years been increasingly hostile to India, often singling out India in the name of alleged discrimination against Muslims.

News Summary

Maldives, a member-state of OIC, has taken a position in favour of India before the Organization of Islamic Cooperation (OIC). The government of Maldives told the OIC in an address this week that singling out India for Islamophobia would not just be factually incorrect but also detrimental to religious harmony in South Asia. Maldives further declared that it would not support any action by the OIC which singled out India.

2.5 US-AFGAN DEAL

Why in News: A power sharing deal has been signed between Afghan President Ashraf Ghani and his main political rival Abdullah Abdullah, ending months of political uncertainty.

Background of the Political instability in Afghanistan

- In September 2019, tensions in Afghanistan had risen after Abdullah, who served as “chief executive” (from September 2014 to September 2019) in the Afghan government headed by Ghani, refused to accept the results of the polls which declared Ghani the winner.
- In March 2020, both Ghani and Abdullah Abdullah sworn themselves in as presidents in parallel ceremonies.
- They have been locked in a power struggle since then and the standoff complicated Afghan negotiations with the insurgents after the United States agreed with the Taliban to begin a phased troop withdrawal.
- As international pressure grew and the Taliban appeared to be benefiting from the political disarray, the two sides began talks to find a way out.

Background of U.S-Taliban talks over a peace deal

- Ending the 18-year long conflict has been considered too costly. Thus, the decision to talk to the Taliban was taken during the Obama presidency.
- The Doha office (in Qatar) of the Taliban was established for negotiations.
- The Taliban have long maintained that they would negotiate only with the US not with the Afghan government. However, the US has insisted that the Afghan government should be involved in the process.
- Thus, several attempts at holding discussions to end the war not progressed.
- By the middle of 2018, the US started pushing for direct talks with the Taliban urgently (in line with President Trump's agenda to withdraw troops from Afghanistan).
- **Note:** President Ashraf Ghani's government was not included in the US-Taliban talks as this was the Taliban precondition for the talks.
- The U.S and the Taliban have held several rounds of talks since 2018 with the objective is to narrow the gap between opposing positions and hold broader, more formal negotiations to end the war.

About US- Taliban Agreement

- The US and Islamic Emirate of Afghanistan/Taliban (not recognized by the United States as a state) agreement for “Bringing Peace to Afghanistan” was signed on 29th Feb 2020, which provides an exit route for the U.S. from its military campaign in Afghanistan than about ending violence in the country.

- Pact between U.S -Taliban: The pact was signed between Zalmay Khalilzad, US Special Representative for Afghanistan Reconciliation, and Mullah Abdul Ghani Baradar, political head of the Taliban.
- Joint Declaration between U.S.- Afghan Government: Separately, a joint declaration between the Afghan government (Islamic Republic of Afghanistan) and the US was issued in Kabul.

Key elements of the agreement

Troops withdrawal

- The US will draw down to 8,600 troops in 135 days and the NATO or coalition troop numbers will also be brought down, proportionately and simultaneously.
- All troops will be out within 14 months including the non-diplomatic civilian personnel (could be interpreted to mean “intelligence” personnel).

Taliban commitment

- The Taliban will not allow any of its members, other individuals or groups, including al-Qaeda, to use the soil of Afghanistan to threaten the security of the United States and its allies.
- However, the pact is silent on other terrorist groups such as anti-India groups Lashkar-e-Toiba or Jaish-e-Mohammed.

Sanctions removal

- UN sanctions on Taliban leaders to be removed
- Note: The sanctions will be out before much progress is expected in the intra-Afghan dialogue.

Prisoner release

It was considered as a “possible trouble spot” because the US-Taliban agreement and the joint declaration differ on this.

Joint Declaration

- The US to facilitate discussion with Taliban representatives on confidence building measures, to include determining the feasibility of releasing significant numbers of prisoners on both sides.
- No numbers or deadlines have been mentioned in the joint declaration.

Agreement

It says up to 5,000 imprisoned Taliban and up to 1,000 prisoners from “the other side” held by Taliban “will be released”.

Ceasefire

It has been Identified as another potential “trouble spot” as the agreement states ceasefire will be simply “an item on the agenda” when intra-Afghan talks start, and indicates actual ceasefire will come with the “completion” of an Afghan political agreement.

News Summary

The deal ends a political crisis that cast a major shadow over efforts to end the Afghanistan’s long war with the Taliban.

The new agreement splits up responsibilities between the leaders in a way that fits the two leaders’ strengths.

Key features of the agreement

- President Ashraf Ghani gave Abdullah the leading role in seeking peace with the Taliban in a new role as chairman of the High Council for National Reconciliation and the ability to name half the cabinet.
- The Reconciliation Council has been given the authority to handle and approve all affairs related to Afghanistan’s peace process.
- A High Council of Governance will be formed which will give major political leaders a role in advising the president in hopes of shaping a united front as Afghanistan seeks an endgame with the Taliban.
- Further, a technical team will work on the implementation of the agreement and details will be shared later.



SECURITY AND DEFENCE

❖ **Paper III: This section is relevant to the following topics:**

- **Linkages between development and spread of extremism.**
- **Role of external state and non-state actors in creating challenges to internal security.**
- **Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention**
- **Security challenges and their management in border areas; linkages of organized crime with terrorism**
- **Various Security forces and agencies and their mandate**

❖ **Prelims Oriented Questions**

3.1 KALAPANI ISSUE

Why in News: The Union defence minister has inaugurated 80 km long Kailash Mansarovar road link from Dharchula (Uttarakhand) to Lipulekh (China Border). Later Nepal claimed that the road cut across Nepalese territory. However, India has rejected its claims.



New route for Kailash Mansarovar yatra

- The Dharchula-Lipulekh road is an extension of Pithoragarh-Tawaghat-Ghatiabagarh road.
- The 80 km road starts from Ghatiabagarh and terminates at Lipulekh Pass, the gateway to Kailash Mansarovar.
- The altitude on this road rises from 6,000 feet to 17,060 feet.
- With the completion of this project, the arduous trek through treacherous high-altitude terrain can now be avoided by the pilgrims of Kailash-Mansarovar Yatra.
- The road was built by the Border Roads Organisation to help shorten the travel time to reach Kailash Mansarovar in Tibet.
- The biggest advantage of the new route over the earlier ones is that it is the shortest and cheapest route with just one-fifth distance of road travel as compared to others.
- With the completion of this road link, the yatra for pilgrimage to Kailash-Mansarovar could be completed in one week compared to 2-3 weeks it took earlier (through Sikkim or Nepal routes).

Territory under dispute

- Lipulekh in Kalapani is a strip of land on the northwestern edge of Nepal, lodged between Nepal, India and Tibet.
- India claims Kalapani as a part of Uttarakhand while Nepal depicts the area in its map.
- Note: Nepal has two tri-junctions with India and China. One is here at Kalapani. The second tri-junction is at Jhinsang Chuli in Nepal's east, bordering Sikkim.

Background of the Dispute

- **Under the Treaty of Sugauli** signed between Nepal and the British East India Company in 1816, the Kali River was decided as Nepal's western boundary with India.
- It, however, made no mention of a ridgeline and subsequent maps of the areas drawn by British surveyors showed the source of the Kali River at different places.
- India holds that a ridgeline to Kalapani's east is the border, thus Kalapani falls in India.

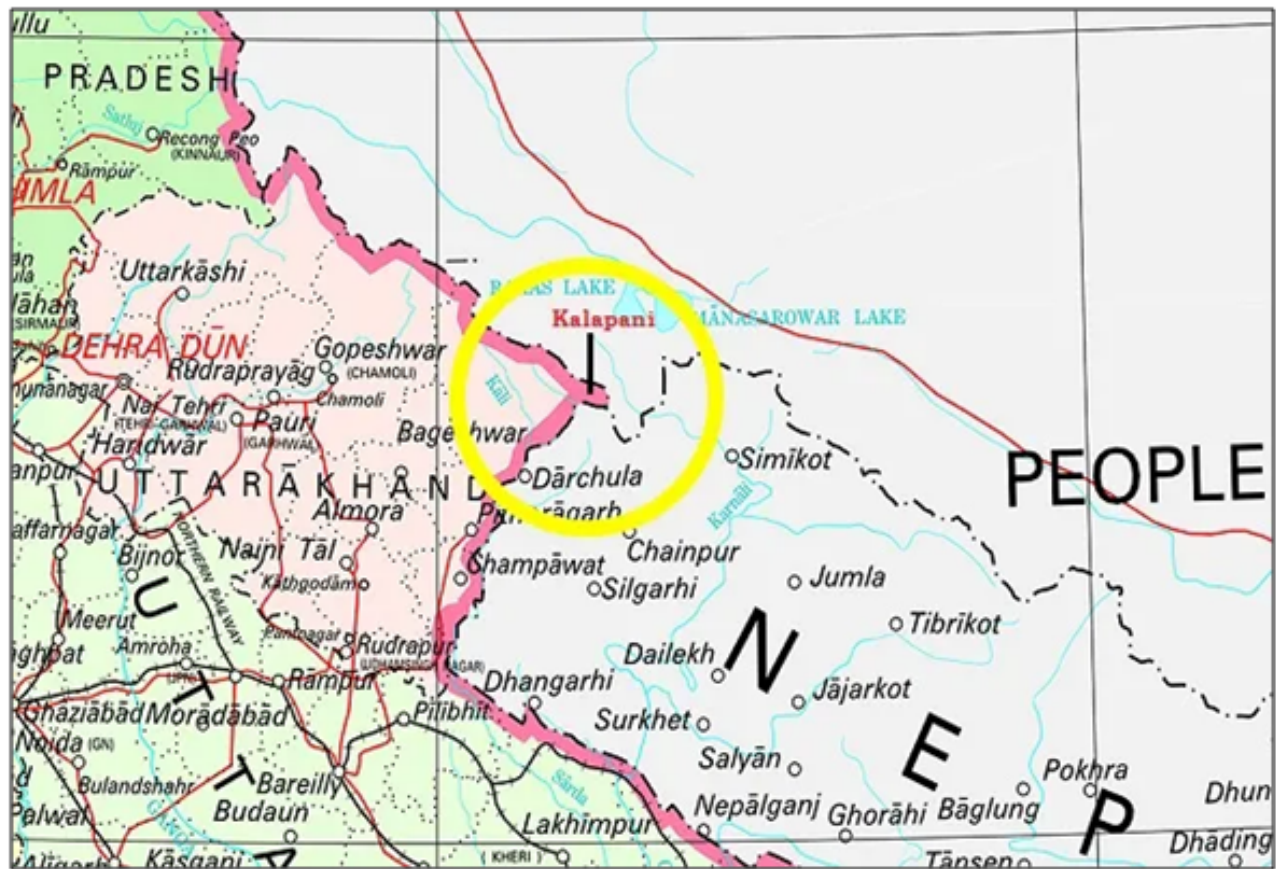
Nepal's Claim

- Nepal claims that as per the Sugauli Treaty (1816), all the territories east of Kali (Mahakali) River, including Limpiyadhura, Kalapani and Lipu Lekh, belong to Nepal.
- In 2014, an agreement between Prime Minister Narendra Modi and (then) Nepal PM Sushil Koirala was signed, requiring Foreign Secretaries to work out the “outstanding boundary issues” on Kalapani (where Lipulekh lies) and Susta.
- Nepal says the inauguration of this road by India as part of India is a unilateral act by India and it considers this against the understanding reached between the two that a solution to boundary issues would be sought through negotiation.

India rejected Nepal's claims

- India has rejected Nepal's claim saying the region lies completely within Indian borders.
- The road follows the pre-existing route used by the pilgrims of the Kailash Mansarovar Yatra. Under the present project, the same road has been made pliable for the ease and convenience of pilgrims, locals and traders.
- India has also assured that the boundary delineation exercise with Nepal is ongoing and India is committed to resolving outstanding boundary issues through diplomatic dialogue and in the spirit of our close and friendly bilateral relations with Nepal.
- Both sides are also in the process of scheduling Foreign Secretary level talks which will be held once the dates are finalized between the two sides after the two societies and

governments have successfully dealt with the challenge of COVID 19 emergency.



Significance of Lipulekh (Kalapani)

- Kalapani's significance is centuries-old for its location on the trade and pilgrim route to Tibet.
- Nepal has always sought that the old trade route be a major node for India-China trade.
- The high Lipulekh mountain pass in Kalapani is currently also of strategic interest to India.
- It helps India track Chinese movements in the region. Since 1962, it's been manned by the Indo-Tibetan Border Police.

3.2 LAC (CHINA BORDER ISSUE)

Why in News: Recently Indian and Chinese troops have clashed at two points along the Line of Actual Control (one in the Naku La sector which is a mountain pass in Sikkim and in a contested area near Pangong Tso, a lake in Ladakh,) leaving personnel injured on both sides.

After a week of the incident, tensions remain high in the region, as two Su-30MKI of the IAF from the Leh airbase were also airborne in the area and additional troops remain on alert for any contingency. However, the Indian Army has clarified that there is no build-up of armed troops in the area.

LAC

Line of Actual Control (LAC) is a 4,057-km porous border running through glaciers, snow deserts, mountains and rivers separate India and China.

Areas under LAC

The LAC traverses three areas — Western (Ladakh, Kashmir), middle (Uttarakhand, Himachal) and eastern (Sikkim, Arunachal).



- The LAC, starting from northwest of the Karakoram pass and ending at Arunachal Pradesh, has not been demarcated and is virtually passed on by word of mouth.
- This has led to differing perceptions regarding the alignment, with China making territorial claims in at following areas.
- These are those areas where regular incursions and face-offs take place. They include Asaphila, Longju, Namka Chu, Sumdorong Chu, and Yangste in Arunachal Pradesh, Barahoti in Uttarakhand, and Aksai China and Demchok and Pangong Lake in Ladakh.

- This has sharpened in last few years ever since India has started building military infrastructure along the LAC in response to China's defence build-up and deployment of troops.
- China illegally occupies 38,000sqkm of land in Jammu & Kashmir. It also holds 5,180km of Indian Territory in PoK under the Sino-Pak agreement of 1963.

India China dispute over Pangong Lake

- **The LAC cuts through Pangong Tso**, with the 45-km long western portion of the lake under Indian control and the rest under Chinese control but India and China do not agree on its exact location.
- The mountains sloping on the banks of the lake form finger-like structures.
- India claims that the LAC is co-terminus with Finger 8, but it physically controls area only up to Finger 4.
- Thus, India controls area only up to 'Finger 4', which is a bone of contention between India and China as both claim it to be a part of their territory. Chinese border posts are at Finger 8, while Indian border posts are located close to Finger 3.
- The Chinese claim that the LAC passes through Finger 2.
- The area between the two differing perceptions is the disputed territory which both armies try to dominate through regular patrolling.



- Due to the differing perceptions of the alignment of boundaries (between India and China) which are not resolved, there were two incidents at Eastern Ladakh (near Pangong Tso) and North Sikkim (Naku La sector).
- Aggressive behaviour was shown by both sides resulted in minor injuries to troops post which both sides disengaged after dialogue and interaction at local level.

- After the incident, two Su-30MKI of the IAF from the Leh airbase were also airborne in the area.
- However, IAF sources maintained there was no airspace violation by either side, and it undertook routine training flying in the area on May 5.
- **Note:** Under the existing arrangement between India and China, no fighter aircraft can come within 10 km of the LAC without prior intimation to either side. For helicopters, the distance to be maintained from the LAC is 1 km.

Recent steps taken by India and China to ensure peace at LAC

- Prime Minister Narendra Modi and Chinese President Xi Jinping, in their informal Summits in Wuhan (2018) and in Chennai (2019), had reaffirmed both sides will continue to make efforts to ensure peace in the border areas.
- The two leaders had also directed their militaries to implement confidence building measures agreed upon and strengthen institutional arrangements and information sharing mechanisms to prevent incidents in border regions.
- The two sides have established mechanisms to resolve such situations as and when they arise.

Way ahead

On account of difference in perception of the alignment of the Line of Actual Control, situations have arisen on the ground that could have been avoided if we had a common perception of the LAC.

3.3 INDIA'S STAND ON LAC (CHINA)

Why in News: In light of the standoff between Indian and Chinese troops along Line of Actual Control (LAC) with China, the Indian Prime Minister reviewed the situation with National Security Adviser (NSA), Chief of Defence Staff (CDS) and the three Service Chiefs.

Background of the increased tension between India and China

- Indian and Chinese troops have been involved few incidents in recent weeks along the undefined LAC.
- This also led to clashes between Indian and Chinese troops at two points along the Line of Actual Control (one in the Naku La sector which is a mountain pass in Sikkim and in a contested area near Pangong Tso, a lake in Ladakh,) leaving personnel injured on both sides.

- Following the incidence several areas in Ladakh and North Sikkim witnessed major military build-up by both the Indian and Chinese, in a clear signal of escalating tension and hardening of respective positions by the two sides.
- China also accused the Indian Army of trespassing into its territory and called it an attempt to unilaterally change the status of the Line of Actual Control (LAC) in Sikkim and Ladakh.
- India will remain firm on the ground in the ongoing troop confrontations in eastern Ladakh where China has violated the unresolved boundary and obstructed Indian patrols

Areas alongside LAC that have been witnessing minor clashes

Galwan valley in Ladakh region

- India's key "strategic asset" in the area is the 255-km Darbuk-Shyok-Daulat Beg Oldie (DSDBO) road which was completed last year.
- It provides access to Daulat Beg Oldie where the IAF re-activated an Advanced Landing Ground (ALG) in 2008.
- The ALG at DBO, the highest such airstrip in the world at an altitude of 16,614-feet, for instance, overlooks the strategic Karakoram Pass and is just a few kilo metres away from the LAC and the China-occupied Aksai Chin region beyond.
- The DSDBO road, which has 37 bridges, runs almost parallel to the LAC to provide easier access to the Depsang and Galwan Valley areas while ending near the strategically-important Karakoram Pass.
- It is linked at several places to troop and logistics bases in depth areas.
- Galwan valley is closest to this road from the LAC.
- China has objected to construction of a new road which branches off the Darbuk-Shyok-Daulat Beg Oldie (DSDBO) road along the riverbank towards the LAC.
- This, despite the fact that the road in the Galwan river area being built by India is well within Indian Territory.
- The site of the current construction is near the junction of Shyok and Galwan rivers.

Pangong Lake

The northern bank of Pangong Lake has been a point of contention where there are differing perceptions of the LAC.

Naku La

The contours of the LAC in Sikkim are broadly agreed to in this sector. However, the broader context for the tensions appears to be a changing dynamic along the LAC, as India plays catch-up in improving infrastructure there.

China is trying to “holding the line”


- As per India’s assessment, the Chinese are involved in what is known in military parlance as “holding the line”.
- While there is no agreed Line of Actual Control (LAC), both Chinese and Indian troops patrol up to their “claim lines” and then return.
- In the current situation, the Chinese have crossed their perception of LAC and are now camping at the spot in a bid to “hold the line”.
- This “holding the line” tactic is backed by a large number of Chinese troops — much more than ordinary patrols, which is usually has 25-30 soldiers.
- This is to give the impression that the Chinese are keen to stay and hold the new territory.

India’s LAC infra upgrade is unnerving China

- Though India still has a long way to go in matching China’s border infrastructure, it is now increasingly challenging China’s dominance in road and air connectivity in disputed high-altitude stretches along the 3,488-km LAC.
- China has been unnerved by India’s slow but steady improvement in border infrastructure for faster mobility of its troops and weapon systems in forward areas over the last few years.
- For example, one of the triggers for the ongoing troop confrontations in eastern Ladakh, for instance, is India’s completion of the 255-km Darbuk-Shyok-Daulat Beg Oldie (DBO) road last year and its fresh move to build some additional feeder link roads and bridges.
- India has also re-activated and upgraded old advance landing grounds (ALGs) in both eastern Ladakh (Nyoma, DBO and Fukche) and Arunachal (Pasighat, Mechuka, Walong, Tuting, Along and Ziro) over the last decade.
- The landings of C-17 Globemaster-III and C-130J “Super Hercules” aircraft at these makeshift airstrips allows India to move troops and equipment to threatened areas along the LAC much more quickly now.

But India has much more left to do

- But the overall situation along the LAC is still far from adequate.
- Only 35 of the 73 “strategic” all-weather roads (with more east-west lateral links as well as better access routes to strategic peaks and valleys) identified for construction almost two decades ago, have been fully completed till now.
- Even in eastern Arunachal, for instance, most road heads are around 20 to 70 km away from the LAC.

		AIR PLAN ➤ Upgrade forward airbases & advanced landing grounds STATUS GOOD PROGRESS ➤ ALGs in eastern Ladakh (Nyoma, DBO & Fukche) and Arunachal (Pasighat, Mechuka, Walong, Tuting, Along & Ziro) activated	
		RAIL PLAN ➤ Construct 14 'strategic' railway lines on fronts with China (9 lines) & Pakistan (5 lines) ➤ Approved by defence ministry in 2010 ➤ Army identified 3 lines in northeast & one in J&K as top priority STATUS ZERO PROGRESS	
BORDER INFRASTRUCTURE: REALITY CHECK The 430-m bridge built by BRO over River Shyok, lionking Durbuk & Daulat Beg Oldie, at an altitude of 15,000ft in Eastern Ladakh		ROAD PLAN ➤ Construct 73 'strategic' roads (totalling 4,643-km) along LAC for better troop mobility ➤ First approved in 1999. Decided in 2006 to complete all 73 roads by 2012 STATUS MEDIUM PROGRESS ➤ 35 of 61 (3,417-km) roads under BRO fully completed till now ➤ 11 more targeted for completion in 2020 ➤ All 61 roads by Dec 2022	
The 430-m bridge built by BRO over River Shyok, lionking Durbuk & Daulat Beg Oldie, at an altitude of 15,000ft in Eastern Ladakh			

Latest Update

- India to defend LAC from being unilaterally altered by China:
- India has always remained conscious of where the LAC lies; China has from time to time violated the unresolved boundary.
- India will work for a peaceful resolution of the dispute, while the troops in forward position will resist the Chinese intrusions along the Line of Actual Control (LAC).
- India intends to make it clear that it will not allow the LAC to be unilaterally altered.

Troop build-up in the Ladakh region

China

The Chinese, who crossed the LAC at three places in the Ladakh region, have refused to move out of Indian Territory or de-escalate the tensions. In Galwan valley, the Chinese have massed troops on their side of the LAC.

'WON'T ALLOW STATUS QUO TO BE CHANGED UNILATERALLY'

MONITORING SITUATION: Defence minister Rajnath Singh & NSA Ajit Doval monitor LAC situation closely. 'PLA soldiers have intruded 1-3 km into what India considers to be its territory,' says a source

WILL DEFEND INTERESTS: India will continue to 'defend its interests resolutely', deploy 'appropriate resources' and work for a peaceful resolution of the LAC dispute

EAGLE EYE ON PLA: India tracking troop reinforcements and fortifications by PLA at 4-5 confrontation sites on northern bank of Pangong Tso, Demchok and Galwan Valley region through

satellite pictures and surveillance platforms

TROOP MOVEMENT: Army has moved its battalions under Leh-based 3 Infantry Division (division has 10k-12k soldiers) forward to their 'operational alert areas', with units from other areas replacing them in 'traditional depth areas'

POLITICO-DIPLOMATIC TALKS: India actively looking at politico-diplomatic intervention to resolve the crisis after failure of several rounds of Major General and Brigadier-level talks at Chushul-Moldo and Daulat Beg Oldie-Tien Wien Dien border personnel meeting points

“ The Indian Army is clear that it will not allow the status quo to be changed unilaterally by PLA soldiers... Indian troops will not budge an inch from their forward positions but will take care not to unnecessarily provoke the PLA troops as per laid down protocols **— Govt sources**

India

- The Army had increased its presence on the boundary with China in North Sikkim, Uttarakhand, Arunachal Pradesh, along with Ladakh.
- India would not be scaling down its deployment in face of aggressive military posturing by China.
- In eastern Ladakh, India is matching the Chinese with its deployment of man and material.

Military level talks failed

- In Ladakh, at least six rounds of talks have been held between Indian and Chinese military commanders on the ground.
- But the talks have failed to achieve a breakthrough.

Way ahead

Politico-diplomatic intervention

India is now actively looking at politico-diplomatic intervention to resolve the crisis after several rounds of major general and brigadier-level negotiations have failed so far to break the deadlock.

This will happen alongside the military-to-military conversation taking place at the field level to “dis-engage” and “de-escalate” the situation.

Border mechanism talks activated

- India and China are learnt to have activated the “working mechanism” at the diplomatic level, which was established in 2012.
- The “Working Mechanism for Consultation & Coordination on India-China Border Affairs (WMCC)” was established in January 2012, and is headed by joint secretary-level officials from both sides.
- While joint secretary (East Asia) in the Ministry of External Affairs (MEA) leads the Indian side, the Chinese side is led by the Director General, Department of Boundary and Oceanic Affairs, Chinese Ministry of Foreign Affairs.
- They are entrusted to help the special representative (SR) for boundary talks.
- India's SR position is currently held by NSA Ajit Doval.
- These officials have had 14 meetings since 2012, the last one in July 2019, and meet more frequently than the special representatives.
- In the current situation, joint secretary (East Asia) is said to be leading the conversation at the diplomatic level.



ECONOMY

❖ **Paper III: The articles in this section are relevant to the following topics:**

- **Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.**
- **Inclusive growth and issues arising from it.**
- **Government Budgeting.**
- **Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.**
- **Infrastructure: Energy, Ports, Roads, Airports, Railways etc.**
- **Investment models.**

4.1 GLOBAL ENERGY REVIEW

Why in News: The International Energy Agency (IEA) has released a report, Global Energy Review 2020, detailing the impact of Covid-19 on global energy demands and CO2.

Report Summary

Covid-19 impact on global energy demands

Decline in overall Energy demand

- The IEA is forecasting a 6% decline in energy demand for the year.
- In absolute terms this is the largest on record.
- Percentage wise, it's the steepest decline in 70 years.
- The demand hit is expected to be seven times greater than the decline in the aftermath of the financial crisis in 2008.
- Under a faster return-to-business scenario, the IEA said demand loss could be limited to 3.8%, while a possible second wave of the virus could cause a greater than 6% decline.
- Countries in full lockdown: There is average decline of 25 per cent in energy demand per week
- Countries with a partial lockdown: The fall in energy demand is about 18 per cent per week.

Oil

- Oil has also been heavily impacted.
- Roughly 60% of global demand for crude stems from driving and flying, so with people at home and planes grounded demand has fallen off a cliff.
- The global demand for oil could drop by nine per cent on average this year, which will return oil consumption to 2012 levels.

Coal

Global coal demand was hit the hardest, falling by almost 8% compared with the first quarter of 2019.

Reasons

- China – a coal-based economy – was the country the hardest hit by Covid-19 in the first quarter.
- Cheap gas and continued growth in renewable elsewhere challenged coal.
- Mild weather also capped coal use.
- Coal demand could decline by eight per cent this year.

- The report expects increase in coal demand in some markets if recoveries are faster, such as in Southeast Asia, driven by Indonesia and Vietnam

Electricity

- Electricity demand has also contracted with factories shuttered and businesses closed as people work from home.
- For the full year, the IEA expects electricity demand to fall 5%, which would be the largest decline since the Great Depression.

Natural Gas

- Because of reduced demand in power and industry applications, the gas demand could also fall much further than in the first quarter of 2020.
- This decline is less than the anticipated fall in oil demand, reflecting the fact that natural gas is less exposed to the collapse in demand for transportation fuels.
- But it nonetheless represents a huge shock to a gas industry that is used to robust growth in consumption

Nuclear Power

Nuclear power demand would also fall in response to lower electricity demand.

Renewable energy

- The only energy source expected to grow this year is renewable.
- The demand for renewable is expected to increase because of low operating costs and preferential access for many power systems.
- The total global use of renewable energy is expected to rise by 1 per cent by 2020.
- Renewable sources of energy have been the “most resilient” to Covid-19 lockdown measures

Impact of slump in demand on energy markets

- Oil prices have slumped
- Brent crude trading near a 21-year low
- US oil futures being pushed into negative territory - a historic feat.
- The resultant glut in oil has overwhelmed the world’s limited storage facilities, with ships laden with surplus oil production idling at high seas.
- Also, the historic collapse in energy prices has also hit the global commodity markets, threatening to tip the sluggish global economy into a deep recession.

- **Note:** The projections are based on the assumption that shelter-in-place and social distancing measures will slowly ease in the coming months, with a gradual economic recovery following.

Covid-19 impact on CO2 emissions

- The worldwide halt in business has resulted in the largest drop in global CO2 emissions on record.
- The decline in CO2 emissions witnessed in 2020 is largest since the end of World War II.
- This year saw an 8 per cent decline in coal emissions, 4.5 per cent from oil and 2.3 per cent from natural gas.
- Overall, the emissions decline in 2020 could be 8 per cent lower than in 2019.
- It would be the lowest level of emissions since 2010 and the largest level of emission reduction (six times larger than what was witnessed during the 2009 financial crisis) and twice as large as the combined total of all reductions witnessed since World War II.
- The decline in CO2 emissions was more than the fall in global energy demand
- Reason for reduced demand: The most carbon-intensive fuels saw the biggest fall in demand.
- In the first quarter of this year, carbon emissions were five per cent lower than during the same time in 2019.
- For instance, there was an 8 per cent decline in emissions in China and Europe, and a 9 per cent decline in the US.
- It is expected that emissions will soar once economies restart, unless governments take a conscious decision to change the sources of energy.

Covid-19 impact on India's energy demands

- India's 40-day long lockdown has resulted in a 30% fall in the country's energy demand i.e. with each additional week of lockdown, annual energy demand is reduced by 0.6%.
- However, the impact on first quarter of 2020, energy demand in India was modest, with demand increasing by 0.3 relative to first quarter of 2019.
- As the lockdown continues, the impacts on energy demand are set to be notably larger second quarter of 2020.
- **Note:** China and India are the largest and third-largest electricity users in the world respectively, and coal use is dominant in both these countries shaping the global demand for this fuel.

4.2 LIQUIDITY FAILITY BY RBI

Why in News: The Reserve Bank of India has recently decided to open a special liquidity facility for mutual funds (SLF-MFs) of Rs 50,000 crore.

Background

- Franklin Templeton India is a major player in mutual fund business in India, with total asset under management of Rs 30,852 crores (as on March 31, 2020)
- Recently, it decided to voluntarily wind down its six credit fund schemes in the wake of redemption pressure and tight liquidity in the high-yield bond market.
- This has led to concerns among investors in mutual funds at a time when mutual funds (MFs) have already been facing liquidity pressures.

The Special Liquidity facility for Mutual funds (SLF-MFs)

- Under the scheme, the RBI will conduct repo (repurchase agreement) operations of 90-day tenor at a fixed repo rate of 4.40% for banks.
- According to the RBI, banks can avail funds under this facility exclusively for meeting the liquidity requirements of mutual fund houses by extending loans and undertaking outright purchase of and/or repos against the collateral of investment grade corporate bonds, commercial papers (CPs), debentures and certificates of deposit (CDs) held by the fund houses.
- The scheme will be open till May 11 or up to utilisation of the allocated amount, whichever is earlier.

Reason for the introduction of liquidity window

- Franklin Templeton Mutual Fund's decision to wind up six debt funds that had a combined asset under management (AUM) of almost ₹26,000 crore was the main reason for offering liquidity window.
- Note: Assets under management (AUM) is the total market value of the investments that are held by the Mutual Fund i.e. it is the money that the mutual fund is handling for their clients/investors.
- This led to fears that the debt funds of many other fund houses could face redemption pressure accentuated by the panic sparked by Templeton's sudden move.
- A couple of fund houses have already seen huge erosion in the net asset values of a few debt schemes post the Franklin Templeton episode due to mark-downs of their holdings.
- Incidentally, till date, banks have borrowed about ₹2,000 crore through the RBI liquidity window for mutual funds.

Other Factors because of which Debt schemes are under pressure

Investors Skeptical about the quality of assets

- The AUM (asset under management) of debt schemes of the mutual fund industry is about ₹15-lakh crore, which is more than half of the total AUM of Indian fund houses.
- The worst affected sub-category of debt funds is Credit Risk funds that account for only 5% of the overall debt assets.
- However, investors are skeptical about the overall credit quality of the assets; hence debt schemes are likely to see a spike in redemptions.

Continues borrowing by Mutual Funds in April month

- Mutual funds are allowed to borrow up to 20% of their assets to meet liquidity needs for redemption or dividend pay-out.
- While such borrowings are common in March (there are huge redemptions due to advance tax payment and other quarter-end obligations), however a spillover of such borrowings to April is a cause for concern.

Quality of debt securities held by mutual funds

- More than half of the assets in debt schemes have a rating of AA or above.
- While about 20% to 30% of total debt AUM would be AAA rated or in cash, another 30% to 50% would be in AA+ or AA rating.
- While the overall debt quality, based on current ratings, looks good on paper, the ongoing nationwide lockdown has impacted cash flows of most corporate, and investors are expecting defaults especially from the mid and small-sized corporate segment.

Way ahead

- The regulators are aware of the potential risk and are monitoring the situation closely.
- Stock brokers have already urged the government and the Securities and Exchange Board of India (SEBI) to take strict action against Franklin Templeton Mutual Fund to safeguard further erosion of investor wealth while enabling a plan for investors to get their money in a time-bound manner.
- They also suggested appointing a high-powered committee to take over the management of the fund house while examining its investment decisions.

Bond Rating

- **A bond's rating is the key indicator of the creditworthiness of the bond issuer, and therefore the degree of risk to the investor that the issuer could default on the debt.**

- The best ratings are AAA, from S&P, and Aaa, from Moody's.
- Investment-quality bonds are rated by S&P as AAA, AA+, AA, AA-, A+, A, A-, BBB+, BBB, and BBB- (in decreasing quality order).
- Moody's equivalent ratings, in descending order of quality, are Aaa, Aa1, Aa2, Aa3, A1, A2, A3, Baa1, Baa2, and Baa3 (in decreasing quality order).
- Any rating below these indicates a bond that is highly speculative or worse.

4.3 JOB DISTRESS BY ILO

Why in News: Approximately 1.6 billion workers in the informal economy, nearly half of the global workforce, are in immediate danger of having their livelihoods destroyed because of the novel corona virus disease (COVID-19) pandemic, the International Labour Organization (ILO) has warned in its report

- As the world grapples with the consequences of the COVID-19 pandemic, vulnerable workers in the informal sector at global level have been hit hard.
- As vendors working in close quarters and or as frontline care-workers in households, many are particularly vulnerable to contracting the virus.
- Countries that had full lockdown measures primarily enforced three measures on social distancing, according to the ILO report:
 - Mandatory workplace closure
 - Mandatory internal travel controls
 - Mandatory shutdown of public transport
- Partial lockdown measures, according to the report, meant that at least one of the above three measures were mandatory.
- While necessary phases of lockdown are threatening livelihoods in the informal economy, government relief efforts are frequently only reaching formal workers and businesses.

How will it impact the informal Economy

- The latest ILO data on the labour market impact of the COVID-19 pandemic reveals the devastating effect on workers in the informal economy and on hundreds of millions of enterprises worldwide.
- According to the ILO Monitor third edition: COVID-19 and the world of work, the drop in working hours in the current (second) quarter of 2020 is expected to be significantly worse than previously estimated.
- Of the total global working population of 3.3 billion, about 2 billion work in the “informal economy”, often on short-term contracts or self-employment, and suffered a 60% collapse in their wages in the first month of the crisis.

- Of these, 1.6 billion face losing their livelihoods.
- Close to 1.1 billion workers lived and worked in countries that were in a total lockdown situation, with an additional 304 million in countries that had partial lockdown measures.
- These workers together represent 67 percent of informal employment across the world.
- Asia and Africa both account for nearly 916 million workers from the informal economy, with an additional 178 million in countries that are in partial lockdown.
- There are 772 million informal workers under complete lockdown in the Asia Pacific region alone, according to ILO estimates, with 77 million in countries with partial lockdown measures.
- The number of workers from Africa stuck under complete lockdown measures numbered close to 164 million, while close to 101 million informal workers were under partial lockdown measures.
- Without alternative income sources, these workers and their families will have no means to survive.

Impact on enterprises

- Worldwide, more than 436 million enterprises face high risks of serious disruption.
- These enterprises are operating in the hardest-hit economic sectors, including some 232 million in wholesale and retail, 111 million in manufacturing, 51 million in accommodation and food services, and 42 million in real estate and other business activities.

The situation in India

- The unemployment rate fell to 21.1 percent in the week ended April 26, lowest during the corona virus lockdown period, according to the Centre for Monitoring Indian Economy.
- The rate of unemployment was 26.2 percent rate in the preceding week of the month.
- While the unemployment rate declined, the labour participation rate further plunged in the period.
- The labour participation rate has dropped from 42.6 percent in the week of March 22 which was just before the national lockdown to 35.4 percent in the latest week ended April 26 i.e. a 7.2 percentage point fall, implying that 7.2 percent of the working age population have quit the labour markets during this lockdown
- The national lockdown did not just throw 72 million out of the labour force but it also drove another 85 million to some kind of desperation to look for jobs in the midst of a national lockdown when none were available.
- This desperation suggests that people were highly vulnerable to a loss of livelihood caused by the national lockdown.

Need of the Moment

- The ILO calls for urgent, targeted and flexible measures to support workers and businesses, particularly smaller enterprises, those in the informal economy and others who are vulnerable.
- Measures for economic reactivation should follow a job-rich approach, backed by stronger employment policies and institutions, better-resourced and comprehensive social protection systems.
- International co-ordination on stimulus packages and debt relief measures will also be critical to making recovery effective and sustainable.
- International labour standards, which already enjoy tripartite consensus, can provide a framework.

ILO

- The only tripartite U.N. agency, since 1919 the International Labour Organization (ILO) brings together governments, employers and workers of 187 member States, to set labour standards, develop policies and devise program promoting decent work for all women and men.
- The ILO was founded in 1919, in the wake of a destructive war, to pursue a vision based on the premise that universal, lasting peace can be established only if it is based on social justice.
- Headquartered in Geneva, Switzerland, the ILO became the first specialized agency of the UN in 1946.
- India, a Founding Member of the ILO, has been a permanent member of the ILO Governing Body since 1922.

Conclusion

As the Corona virus and the employment crisis is evolving at a fast rate, the need to protect the most vulnerable becomes even more urgent. For millions of workers, no income means no food, no security and no future. Millions of businesses around the world are barely breathing. These are the real faces of the world of work. It's time to support workers and business, particularly smaller enterprises and those in the informal economy.

4.4 PURCHASING MANAGER INDEX

Why in News: Factory activity collapsed to its record low in April, according to the IHS Market survey of purchasing managers. The IHS Market India Manufacturing PMI slumped to 27.4 in April from 51.8 in March.

Purchasing Manager Index (PMI)

- **The Nikkei India Manufacturing PMI, compiled by IHS Markit, is based on data compiled from monthly survey responses by purchasing managers in more than 400 manufacturing companies, on various factors that represent demand conditions.**
- **Note:** It is also sometime referred to as IHS Markit India Manufacturing PMI.
- PMI measures activity at the purchasing or input stage. It is very different from industrial production which is indicative of actual production. For example, the Index of Industrial Production (IIP) measures output.
- The PMI is constructed separately for manufacturing and services sector, but the manufacturing sector holds more importance.
- PMI does not capture informal sector activity.

Significance

- The Index is considered as an indicator of the economic health and investor sentiment about the manufacturing sector.
- PMI is also the earliest indicator of manufacturing activity and economic health, as the manufacturing PMI report for any given month comes out without any delay - either on the last day of that month or on the first day of the next month.

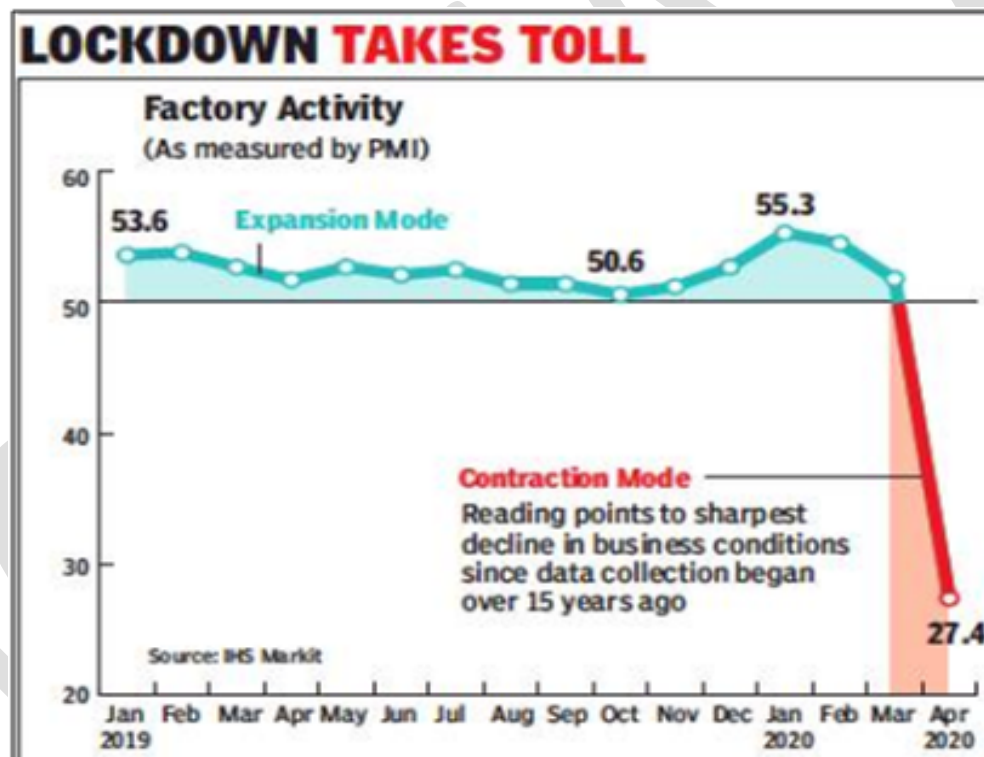
How it is captured

- The PMI is derived from survey responses to a series of qualitative questions from purchasing managers in a panel of around 400 manufacturers.
- PMI is composite index based on five individual sub-indices:
 - New orders
 - Output
 - Employment
 - Suppliers' delivery times
 - Stock of items purchased

Reading the PMI

- A figure above 50 denotes expansion in business activity and anything below 50 denotes contraction.
- Higher is the difference from this mid-point, greater is the expansion or contraction.

- The rate of expansion can also be judged by comparing the PMI with that of the previous month data. If the figure is higher than the previous month's then the economy is expanding at a faster rate. If it is lower than the previous month then it is growing at a lower rate.
- India's manufacturing activity witnessed an unprecedented contraction in April, as seen by the IHS Markit purchasing managers index (PMI) which fell to 27.4 in April from 51.8 in March.
- PMI below 50 denotes contraction in manufacturing activity, and the further below it is from 50, the higher is the contraction in activity.
- It pointed to the sharpest deterioration in business conditions across the sector since data collection began over 15 years ago.



Impact of the lockdown due to virus

- The national lockdown restrictions to help stem the spread of the corona virus disease, also led to widespread business closures.
- In an environment of severely reduced demand, new business collapsed at a record pace and firms sharply reduced their staff numbers.
- The lockdown led to a slump in demand and massive supply chain disruptions. There was evidence of unprecedented supply-side disruption, with input delivery times lengthening to the greatest extent since data collection began in March 2005.

4.5 MSME SECTOR

Why in News: The Covid-19 pandemic has left its impact on all sectors of the economy but nowhere is the hurt as much as the Medium, Small and Micro Enterprises (MSMEs) of India. All evidence available, such as the hundreds of thousands of stranded migrant workers across the country, suggests that MSMEs have been the worst casualty of Covid-19 induced lockdown.

MSME definition

- Formally, MSMEs are defined in terms of investment in plant and machinery. The present classification for the manufacturing sector designates a micro enterprise as one with investment in plant and machinery not exceeding Rs 25 lakh.
- Whereas, small enterprises are ones with an investment between Rs 25 lakh-Rs 5 crore and medium enterprises have investment between Rs 5-10 crore.
- For service sector classification, micro enterprises have investment in plant and machinery not exceeding Rs 10 lakh, between Rs 10 lakh and Rs 2 crore for small enterprises and Rs 2-5 crore for medium enterprises.

Change proposed in the definition

- But this criterion for the definition was long criticized because credible and precise details of investments were not easily available by authorities.
- That is why in February 2018, the Union Cabinet decided to change the criterion to “annual turnover”, which was more in line with the imposition of GST.
- According to the proposed definition, which is yet to be formally accepted, a micro enterprise will be one with an annual turnover less than Rs 5 crore; a small enterprise with turnover between Rs 5 crore and Rs 75 crore; and a medium enterprise with turnover less than Rs 250 crore.

Labour distribution in MSMEs

- According to the latest Annual Report of Department of MSMEs (2018-19), there are 6.34 crore MSMEs in the country.
- Around 51 per cent of these are situated in rural India and together, they employ a little over 11 crore people but 55 per cent of the employment happens in the urban MSMEs.
- These numbers suggest that, on average, less than two people are employed per MSME. At one level that gives a picture of how small these set-ups are, but a breakup of all MSMEs into micro, small and medium categories is even more revealing.
- As 99.5 per cent of all MSMEs fall in the micro category, the medium and small enterprises — that is, the remaining 5% of all MSMEs — employ the remaining 5 crore-odd employees.

Socio-geographic distribution of MSMEs in India

- While micro enterprises are equally distributed over rural and urban India, small and medium ones are predominantly in urban India. In other words, micro enterprises essentially refer to a single man or a woman working on their own from their home.
- In terms of geographical distribution, seven Indian states alone account for 50 per cent of all MSMEs. These are Uttar Pradesh (14%), West Bengal (14%), Tamil Nadu (8%), Maharashtra (8%), Karnataka (6%), Bihar (5%) and Andhra Pradesh (5%).
- The distribution of enterprise by caste further completes the picture. About 66 per cent of all MSMEs are owned by people belonging to the Scheduled Castes (12.5%), the Scheduled Tribes (4.1%) and Other Backward Classes (49.7%).
- The gender ratio among employees is largely consistent across the board at roughly 80% male and 20% female.

Problems faced by MSMEs in India

Out of the formal network

- To begin with, most of the MSMEs are not registered anywhere. A big reason for this is that they are just too small, as even GST has its threshold and most micro enterprises do not qualify. This apparent invisibility tends to work for enterprises as well as against them.
- Being out of the formal network, they do not have to maintain accounts, pay taxes or follow regulatory norms etc. This brings down their costs but, as it is clear in a time of crisis, it also reduces a government's ability to help them
- For instance, in some of developed countries, the government has tried to directly provide wage subsidy and extra credit to smaller firms but that could happen because even smaller firms were being mapped.

Lack of financing

- According to a 2018 report by the International Finance Corporation (part of the World Bank), the formal banking system supplies less than one-third (or about Rs 11 lakh crore) of the MSME credit need.
- In other words, most of the MSME funding comes from informal sources and this fact is crucial because it explains why the Reserve Bank of India's efforts to push more liquidity towards the MSMEs has had a limited impact.
- A key reason why banks stay away from extending loans to MSMEs is the high ratio of bad loans. Data shows, that the defaults are higher for relatively bigger enterprises.
- The other big issue plaguing the sector is the delays in payments to MSMEs — be it from their buyers (which includes the government also) or things like GST refunds etc.

Impact of Covid-19 on MSMEs

- MSMEs were already struggling, in terms of declining revenues and capacity utilization, in the lead-up to the Covid-19 crisis. The total lockdown has raised a question mark on the existence of many primarily because these firms do not have as much cash to wait out the crisis.
- Companies use working capital for their day-to-day expenses. While the fixed expenses — such as salaries to employees — have remained constant even during the lockdown, there's been no income or cash that has come for a non-essential manufacturer or service provider.
- Even those operating in the essential item segment also seem to be impacted. Pharmaceutical MSMEs have reported facing serious issues with arranging accommodation for their workforce, as they do not have the infrastructure or money for it.
- While RBI data shows that the credit outstanding to the sector has contracted, many economists said credit availability may further tighten with banks turning more risk averse now.
- Loans to MSMEs are mostly given against property (as collateral) — because often there isn't a robust cash flow analysis available — but in times of crisis, property values fall and that impacts the extension of new loans.
- Since a large number of state capitals have been classified in red zones, this is also a huge problem for MSME owners to find the points for sales across sectors.

Way Ahead

- The RBI has been trying to pump money into the MSME sector but given the structural constraints, it has had limited impact.
- Thus, the government can provide tax relief (GST and corporate tax), give swifter refunds, and provide liquidity to rural India (say, through PM-Kisan) to boost demand for MSME products.
- A credit guarantee by the government can help as it assures the bank that its loan will be repaid by the government in case the MSME fails to do so. It has also been reported that just like the first relief package, called the PM Garib Kalyan Yojana, the second package, too, would primarily focus on the MSME sector.

4.6 LABOUR REFORMS

Why in News: Amid the corona virus-induced lockdown, a number of states have pushed through changes to their labour laws. The changes in labour laws has been done by the way of amendments (ordinances or executive

orders), some of which would require approval from the central government to come into effect

Background

- The industrial and economical activities in the country have been severely affected and slowed down due to the outbreak of Covid-19.
- Due to the halt because of the national lockdown, businesses and economic activities have slowed down which has also affected the labour welfare.
- The changes in labour laws have been made in order to bring economic activity back on track, and to create new investment opportunities along with fastening the businesses processes and productivity.

Steps taken by U.P government

- The Uttar Pradesh government has cleared an ordinance (Uttar Pradesh Temporary Exemption from Certain Labour Laws Ordinance, 2020) exempting businesses from the purview of most labour law provisions for the next three years.
- All labour laws related to labour unions, settling work disputes, regulations for working conditions, contracts, etc will remain suspended for three years in Uttar Pradesh under this ordinance.
- The ordinance relaxes all labour laws in the state, except a few, which are related to abolishment of bonded labour, worker health, and timely wage payments.
- The exempted labour laws include:
 - Bonded Labour System (Abolition) Act, 1976;
 - Employee Compensation Act, 1923 (statutory liability upon an employer when workers suffer from any physical disabilities or diseases during the course of employment in hazardous working conditions); Building and Other Construction Workers Act, 1996 (safety, health and welfare measures)
 - Section 5 of Payment of Wages Act, 1936 (ensure timely payment of daily wages).
 - The relaxations will be extended to existing industries and manufacturing units, as well as new ventures that set shop in the state in coming days.
 - However, the provisions related to women and children will continue to exist, the Uttar Pradesh government noted.

Steps taken by Madhya Pradesh government

- Madhya Pradesh has announced a slew of reforms in labour laws to give employers more freedom to operate.

- The state has exempted employers from some obligations under various labour laws, like Madhya Pradesh Industrial Relations Act and Industrial Disputes Act, as well as Contract Labour Act for 1,000 days, allowing employers to hire and fire workers “at their convenience”.

Introducing compounding provisions to reduce industrial disputes

- Except Section 25 of the Industrial Disputes Act, the state has relaxed all other provisions to allow industry owners to select workers as per convenience.
- Industries employing less than 100 workers have been exempted from the provisions of the MP Industrial Employment (Permanent Order) Act.
- **Changes in Industrial Employment Act:** The Industrial Employment Act which was applicable to establishments with more than 50 workers will now be applicable if the number of workers is 100 or more.
- **Extending working hours:** The state has allowed industries to increase workers’ shifts from eight to 12 hours. Employees will be able to work up to 72 hours a week if they are willing and are paid additional amount for putting in more hours. The state has also allowed exempted firms flexibility of extension of working hours.
- **Early clearance of registration and license:** Registration and license for industries, shops and bidi manufacturers among others, will now be given in just one day against the existing provision of 30 days.
- The state has already notified changes in the Public Services Delivery Guarantee Act that will entail a fine on the authority responsible for registration and licensing these services.
- The applicant will receive the fine as compensation.
- **More time for license renewal:** Factory license will henceforth be required to be renewed only once in ten years instead of annual renewal. Under the Contract Labour Act, the state will now give license for the entire duration of the contract rather than for a calendar year.

Changing contract labour conditions

- Contractors who employ less than 20 workers are not required to seek registration.
- The state has proposed to the Centre to increase the number of workers to 50 to give the contractors more freedom.
- Also, the registration will be granted online.
- The state is sending a proposal to the Centre to make punishable offences under the Contract Labour Act compoundable.

Relaxation in Factory Act

- Except the clause that deals with safety of workers, the MP government has given relaxations in all provisions of the Factory Act for the next three months.

- The state has issued a notification relaxing provisions of MP Industrial Relations Act till further orders. This will allow factory manager and the trade union to resolve disputes according to their convenience without going to the labour court.

Allowing third party inspections: It has exempted new factories under the Factories Act, 1948 from inspection from the Labour Department and permitted the flexibility to conduct third party inspections at will.

Small and cottage industries employing less than 50 workers have been kept free from inspection. Henceforth, they could be inspected only with the permission of the labour commissioner and in the event of someone filing a complaint.

Easy return filing: Various labour laws require industries to maintain 61 registers and file 13 returns. Now they will have to maintain just one register and file one return, with self-certification being treated as sufficient.

Extension in working hours in other states: States including Rajasthan, Haryana, Himachal Pradesh and Punjab have extended working hours in manufacturing units to 12 hours from 8.

Reaction of Trade Unions:

- Reacting to the move by states, trade unions have condemned the blanket exemption to employers from labour laws and termed the move as regressive.
- These moves have been considered as the more aggressive move to liberate corporate employers from obligations under almost all labour laws in states.
- The amending of labour laws by state are considered to be in contravention to the globally accepted norms.

4.7 AIIB

Why in News: The Asian Infrastructure Investment Bank (AIIB) has approved funding of \$500 million to support India's efforts to fight the COVID-19 pandemic. The loan is part of a \$10 billion funding facility the AIIB has announced to help public and private sector entities deal with the pandemic.

AIIB

The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank with a mission to improve social and economic outcomes in Asia.

Establishment of AIIB

- In October 2013, at the Asia-Pacific Economic Cooperation Summit in Bali (Indonesia), China proposed creating a new multilateral development bank (MDB), the Asian Infrastructure Investment Bank (AIIB).
- As its name suggests, the Bank's stated purpose is to provide financing for infrastructure needs throughout Asia, as well as in neighbouring regions.
- The AIIB was formally established in December 2015, headquartered in Beijing, with 57 founding members.

Membership

- Membership in the AIIB is open to all members of the World Bank or the Asian Development Bank (ADB).
- The AIIB's Articles of Agreement create two classes of membership: regional and non-regional members.
- Regional members are those located within areas classified as Asia and Oceania by the United Nations. All other members are non-regional members.
- According to the AIIB Articles, regional members hold 75% of the total voting power in the Bank.
- Fourteen of the G-20 nations are AIIB members.
- The United States is not an AIIB member.
- Unlike other MDBs, the AIIB allows for non-sovereign entities to apply for AIIB membership, assuming their home country is a member.

The Purpose of the bank according to AIIB's Articles of Agreement

- Foster sustainable economic development
- Create wealth and improve infrastructure connectivity in Asia by investing in infrastructure and other productive sectors
- Promote regional cooperation and partnership in addressing development challenges

Functions: To implement its purpose, the Bank shall have the following functions

- To promote investment in the region of public and private capital for development purposes, in particular for development of infrastructure and other productive sectors;
- To utilize the resources at its disposal for financing such development in the region, having special regard to the needs of less developed members in the region;
- To encourage private investment in projects, enterprises and activities contributing to economic development in the region, in particular in infrastructure and other productive sectors.

- **Governance:** The Bank has a Board of Governors, a Board of Directors, a President, and other staff.
- Interestingly, the AIIB's articles give a larger degree of decision-making authority to regional countries and the largest shareholder country, China.
- The Bank has established an International Advisory Panel (IAP) to support the President and Senior Management on the Bank's strategies and policies as well as on general operational issues.

AIIB Lending

- Recipients of AIIB financing may include member countries (or agencies and entities or enterprises in member territories), as well as international or regional agencies concerned with the economic development of the Asia-Pacific region.
- The Bank can lend outside Asia provided that it supports connectivity with Asia or it is for a global public good and that the loan significantly benefits Asia.
- The ceiling for non-regional loans is 25%.
- The government and the AIIB have signed a COVID-19 Emergency Response and Health Systems Preparedness Project that would help strengthen India's public health preparedness.
- This is the first ever health sector support from the AIIB to India.

COVID-19 Emergency Response and Health Systems Preparedness Project

- COVID-19 Emergency Response and Health Systems Preparedness Project is being financed by the World Bank and AIIB in the amount of \$1.5 billion, of which \$1.0 billion will be provided by World Bank and \$500 million will be provided by AIIB.
- Implementing agencies: The project will be implemented by the National Health Mission (NHM), the National Centre for Disease Control (NCDC) and the Indian Council of Medical Research (ICMR).
- Primary project beneficiaries: Infected people, at-risk populations, medical and emergency personnel, service providers at medical and testing facilities (both public and private), and public and animal health agencies engaged in India's COVID-19 response.

Significance of the Project

- The project will enable the government slow and limit the spread of COVID-19 in India by providing immediate support to enhance disease detection capacities, oxygen delivery systems and medicines among others.
- The project will enhance the resilience of India's health system to provide core public health prevention and patient care to better manage COVID-19 and future disease outbreaks.

- It will help strengthen India's Integrated Disease Surveillance Program, revamp infectious disease hospitals, district, civil, general and medical college hospitals, and build a network of high containment Bio-safety Level 3 laboratories.
- The project will develop capacity and systems to support biomedical research on COVID-19 by Indian institutions, and upgrade viral research and diagnostic laboratories for testing and research.
- It will also help address potential significant negative externalities in the event of a widespread COVID-19 outbreak, including comprehensive health awareness and behaviour change campaigns on hygiene practices, wearing masks, social distancing, and mental health and psychological services for vulnerable communities.

4.7 BAD BANKS

Why in News: The Indian Banks' Association has pitched the idea of creating a 'bad bank' to help lighten the load of stressed assets on the books of Indian lenders.

Bad Bank

- Technically, a bad bank is an Asset Reconstruction Company (ARC).
- When the problem of non-performing loans (NPLs) becomes pervasive and too big for individual banks to handle, governments often propose the setting up of a bad bank to buy out all toxic loans from banks.
- This helps banks get on with business as usual, while the bad bank grapples with recovering the loans or realising cash from selling the underlying assets.

Benefits of setting up a bad bank

- The major benefit of forming a bad bank is asset monetisation.
- Asset Monetization refers to the process of turning a non-revenue-generating asset into cash.
- Bad assets would stay in the 'risky' category, while the good one stays in the other category, saving them from mixing together.
- The real benefit for a bank comes when its investors are sure of its financial health, which helps it in the long run in raising capital, borrow, and lend money to other companies.

Background

- Though the idea of bad bank was first pioneered in the US in 1988, the idea of forming a 'bad bank' in India was initially floated in January 2017 when the Economic Survey of India

suggested setting up a Public Sector Asset Rehabilitation Agency (PARA), to buy out the largest NPLs from Indian banks.

- The RBI also came up with a suggestion to form two entities to clean up the bad loan problems ailing PSBs by PAMC (Private Asset Management Company) and NAMC (National Assets Management Company).
- A Private asset management company (PAMC) which would be suitable for sectors where the stress is such that assets are likely to have economic value in the short run, with moderate levels of debt forgiveness.
- A National asset management company (NAMC) for sectors where the problem is not just one of excess capacity but possibly also of economically unviable assets in the short- to medium-term.
- It said the NAMC would be formed with the government support, which would invest in bad assets with short-term stress but good chances of turnaround and economic benefit.
- **In 2018, in proposing Project Sashakt, a five-point plan to revive Indian banks, the Sunil Mehta panel** suggested that a new Asset Management Company (AMC) be set up to tackle bad loans of over ₹500 crore.
- The AMC will in turn set up alternative investment funds that will buy up stressed assets in different sectors, from asset reconstruction companies, then try to auction them off to raise cash.
- Although the government did not back the proposal, some suggestions such as an inter-creditor agreement were accepted.
- Banks led by State Bank of India (SBI) are pushing for a 'bad bank' in the form of an asset reconstruction company (ARC), preferably sponsored by the government, which can take over loans that have been largely provided for by them.
- **Main Purpose of Bad Bank:** To cleanse bank's books of non-performing assets (NPAs) so that they are in a position to focus on the restructuring of loans for businesses that are hit by Covid-19.

The proposed structure

- The structure being proposed involves creating an asset management company or an asset reconstruction company which would be promoted collectively by the government, banks and private sector entities.
- It would be run by private sector employees.
- The AMC/ARC, in turn, would be funded by an alternative investment fund which would seek funding from investors domestically and internationally.

- The bad bank would aggregate stressed assets from across the banking system and lead resolution efforts.
- The bad bank will also rope in private lenders that have a large share of bad loans in some accounts.
- However, a final decision will be taken by the RBI and the government.

How would the bad banks pay to the lender banks?

The bad bank (ARC) need not fully pay the discounted price and instead issue the lenders security receipts, which will entitle them to a share of the recovery.

The bad bank would pay to the banks at least 15 percent of the net present value of the assets upfront in cash and the rest will be paid in the form of security receipts, which can be redeemed by banks in the future.

4.8 FDI, FPI AND SIP

Why in News: According to data released by the Department for Promotion of Industry and Internal Trade (DPIIT), total foreign direct investment (FDI) into India jumped 18 percent to \$73.46 billion in the 2019-20 financial year (the highest in four years).

FDI

- Foreign Direct Investment (FDI) is the investment through capital instruments by a person resident outside Indian an unlisted Indian company; 10 percent or more of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company.
- **FDI inflows in India:** FDI inflows in services sector contribute over 60 per cent to the gross domestic product.

FPI

- Foreign Portfolio Investment is any investment made by a person resident outside India in capital instruments where such investment is
- Less than 10 percent of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company or
- Less than 10 percent of the paid up value of each series of capital instruments of a listed Indian company.

FDI v/s FPI

- FDI aims to take control of the company in which investment is made. However, FPI aims to reap profits by investing in shares and bonds of the invested entity without controlling the company.
- According to the existing regulation by the SEBI, FPI is investment in shares of a company not exceeding 10% of the total paid up capital of the company.
- Any investment above 10% is FDI as with that size of shareholding, the foreign investor can exert control in the management of the company.

Latest Developments

- According to data released by the Department for Promotion of Industry and Internal Trade (DPIIT), total foreign direct investment (FDI) into India jumped 18 percent to \$73.46 billion in the 2019-20 financial year (the highest in four years).
- Of this FDI equity inflows through the Foreign Investment Promotion Board (FIPB), RBI's automatic route of through acquisition rose 13 percent to around \$49.98 billion.
- The sectors that attracted the most foreign inflows during 2019-20 included:
 - Services (\$ 7.85 billion),
 - Computer software and hardware (\$ 7.67 billion),
 - Telecommunications (\$ 4.44 billion),
 - Trading (\$ 4.57 billion) and
 - Automobiles (\$ 2.82 billion).
- However, of this, investment in services, construction and chemicals was lower than the previous financial year.
- Singapore once again emerged as the largest equity FDI source, contributing to inflows of \$14.67. However, this is a drop from the \$16.22 billion Singapore contributed in 2018-19.
- Mauritius was a distant second with investments of \$8.2 billion routed via India's close ally, with a sharp spike seen from the Netherlands, with inflows rising 1.7 times to \$6.5 billion.

SIP

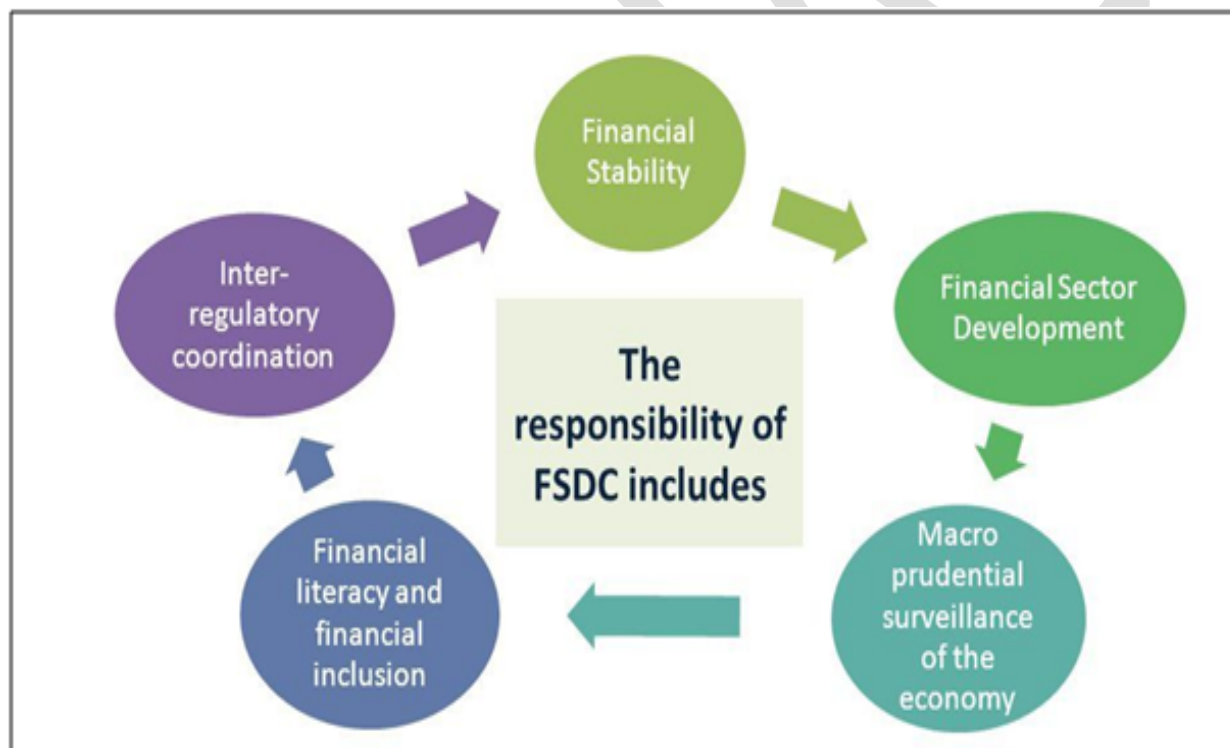
- A Systematic Investment Plan (SIP), more popularly known as SIP, is a facility offered by mutual funds to the investors to invest in a disciplined manner.
- SIP facility allows an investor to invest a fixed amount of money at pre-defined intervals in the selected mutual fund scheme.
- The fixed amount of money can be as low as Rs. 500, while the pre-defined SIP intervals can be on a weekly/monthly/quarterly/semi-annually or annual basis.
- By taking the SIP route to investments, the investor invests in a time-bound manner without worrying about the market dynamics and stands to benefit in the long-term due to average costing and power of compounding.

4.9 FINANCIAL STABILITY AND DEVELOPMENT COUNCIL

Why in News: In view of disruptions caused by the COVID-19 pandemic, the Finance ministry recently reviewed the state of the economy at the meeting of the Financial Stability and Development Council (FSDC).

Financial Stability and Development Council (FSDC)

- FSDC was established in December 2010 as the apex body of sectoral regulators.
- **Objective:** To strengthen and institutionalize the mechanism for maintaining financial stability, enhancing inter-regulatory coordination and promoting financial sector development.
- An apex-level FSDC is not a statutory body.



Composition

Chairman of the Council: Finance Minister

Members

- The heads of financial sector Regulators (RBI, SEBI, PFRDA, IRDA & FMC)
- Finance Secretary and
- Secretary, Department of Economic Affairs,

- Secretary, Department of Financial Services, and
- Chief Economic Adviser

Latest Development

Since the corona virus outbreak, this was the first meeting of the FSDC. It was held via video conferencing.

The issues discussed in the meeting

- The current global and domestic macro-economic situation
- Financial stability and vulnerabilities
- Challenges likely to be faced by banks and other financial institutions
- Regulatory and policy responses
- Solvency matters of financial firms
- Market volatility
- Domestic resource mobilisation
- Capital flows issues

Outcomes of the meeting

- The FSDC underlined the need to continue with measures to address the liquidity and capital requirements of the financial sector.
- The council also reviewed the action taken by members on the decision taken by the FSDC earlier.
- The council also note of the initiatives taken by the government and the regulators in the recent months to help revive the economy.
- It highlighted the need for the government and regulators to remain vigilant on financial conditions that could expose systemic vulnerabilities.
- The Council stressed that the government and regulators would continue to provide liquidity and capital support to domestic financial institutions.

4.10 EMERGENCY CREDIT LINE SCHEME

Why in News: The Union Cabinet has approved an additional funding of up to Rs 3 lakh crore through the Emergency Credit Line Guarantee Scheme (ECLGS) for the MSME sector hit hard by the corona virus crisis.

- For this purpose, a corpus of Rs 41,600 crore shall be provided by the central government spread over the current and the next three financial years to provide guarantee against loan losses.
- The main objective of the Scheme is to provide an incentive to Member Lending Institutions (MLIs), i.e., banks, Financial Institutions (FIs) and Non-Banking Financial Companies (NBFCs) to increase access to, and enable availability of additional funding facility to MSME borrowers.
- It aims at reducing the economic distress being faced by about 45 Lakh MSMEs by providing them additional funding in the form of a fully Guaranteed Emergency Credit Line (GECL).

Emergency Credit Line Guarantee Scheme (ECLGS) for the MSME sector

Eligibility for the scheme

- All MSME borrower accounts with outstanding credit of up to Rs. 25 crore as on 29th February, 2020, which were less than or equal to 60 days past due as on that date; and
- An annual turnover of up to Rs. 100 crore

Details of the scheme

- The National Credit Guarantee Trustee Company (NCGTC) will provide 100 per cent guarantee against losses on loans given to eligible micro, small, and medium enterprise (MSMEs) and MUDRA borrowers under the scheme which is open till October 31 2020.
- Interest rates under the Scheme are 25 per cent for banks and financial institutions and 14 per cent for non-banking financial companies (NBFCs).
- The amount of GECL funding to eligible MSME borrowers either in the form of additional working capital term loans (in case of banks and FIs), or additional term loans (in case of NBFCs) would be up to 20% of their entire outstanding credit up to Rs. 25 crore as on 29th February, 2020.
- The tenor (duration) of the loan under the scheme shall be four years with a moratorium period (authorized delay) of one year on the principal amount.
- No Guarantee Fee shall be charged by NCGTC from the Member Lending Institutions (MLIs) under the Scheme.

Special Liquidity Scheme for NBFCs

- The Union Cabinet has approved a Rs 30,000-crore special liquidity scheme for non-banking finance companies (NBFCs) and housing finance companies (HFCs) aimed at improving the cash position of these entities.

- The scheme will be administered by the Department of Financial Services, Ministry of Finance.
- A special purpose vehicle (SPV) would be set up by a public sector bank to manage a Stressed Asset Fund (SAF) whose special securities would be guaranteed by the Central Government and purchased by the Reserve Bank of India (RBI) only.
- The proceeds of sale of such securities would be used by the SPV to acquire short-term debt of NBFCs/HFCs.
- The direct financial implication for the Government is Rs 5 crore, which may be the equity contribution to the Special Purpose Vehicle (SPV). Beyond that, there is no financial implication for the Government until the Guarantee involved is invoked

How the scheme will help

- The scheme would act as an enabler for NBFCs to get investment grade or better rating for bonds issued.
- The scheme would be a one-stop arrangement between the SPV and the NBFCs and thus would be easier to operate.
- It would also help in giving a boost to the economy by increasing the lending resources of NBFCs/HFCs.

Relaxed norms of Partial Credit Guarantee Scheme

- The Cabinet has relaxed the norms of the Partial Credit Guarantee Scheme and extended its time period in order to widen the coverage to include a larger number of NBFCs, HFCs and MFIs (micro finance institutions).
- Guarantee of up to 20 per cent of first loss will be provided to state-owned banks for purchase of bonds or commercial papers of NBFCs, MFIs and HFCs having a credit rating of AA or below.
- This will also include unrated papers with original maturity of up to one year.

Scheme to support micro food processing units

- The Cabinet also approved a new centrally-sponsored scheme to support micro food processing units at an outlay of Rs 10,000 crore, with the expenditure being shared by the Centre and the States on a 60:40 basis.
- The scheme will be implemented over a five-year period and will benefit about two lakh self-help groups, farmer producer organizations and other small units.
- It would aid these units through a credit-linked subsidy, providing money for working capital and tools, a marketing grant, skills training and technical upgrade.

Pradhan Mantri Matsya Sampada Yojana approved

- The Cabinet has approved the Pradhan Mantri Matsya Sampada Yojana, a scheme announced in the 2020 Budget, to develop the fisheries sector over a five-year period.
- The scheme aims to bring about a Blue Revolution through sustainable and responsible development of fisheries sector in India.
- It intends to augment fish production and productivity at a sustained average annual growth rate of about 9% to achieve a target of 22 million metric tons by 2024-25.
- Of the total investment of Rs 20,050 crore, the Centre will spend Rs 9,407 crore, the States Rs 4,880 crore while beneficiaries themselves will have to invest about Rs 5,763 crore.

Benefits

- Boost investments in fisheries sector and increase competitiveness of fish and fisheries products.
- Creation of critical infrastructure including modernisation and strengthening of value chain.
- Creation of direct gainful employment opportunities to about 15 lakh fishers, fish farmers, fish workers, fish vendors and other rural/urban populations in fishing and allied activities.

Pradhan Mantri Vaya Vandana Yojana extended

- The Union Cabinet, has given an extension to the Pradhan Mantri Vaya Vandana Yojana (PMVVY) up to 31st March, 2023, for a further period of three years beyond 31st March, 2020.
- PMVVY is a social security scheme for senior citizens intended to give an assured minimum pension to them based on an assured return on the purchase price/ subscription amount.
- The Cabinet has fixed an initial assured interest rate of 7.40% for the year 2020-21, along with a provision of a reset of the interest rate every year.
- The minimum investment has also been revised to Rs.1, 56,658 for pension of Rs.12,000/- per annum and Rs.1,62,162/- for getting a minimum pension amount of Rs.1000/- per month under the scheme.

Announcements in the Coal Sector

- The methodology is oriented to make maximum coal available in the market at the earliest and it also enables adequate competition which will allow discovery of market prices for the blocks and faster development of coal blocks.
- The Cabinet has also given the permission for commercial exploitation of coal-bed methane in the mining lease area.
- Further, the tenure of coking coal linkage has been increased to 30 years.

SCIENCE AND TECHNOLOGY

❖ **Paper III: The articles in this section are relevant to the following topics:**

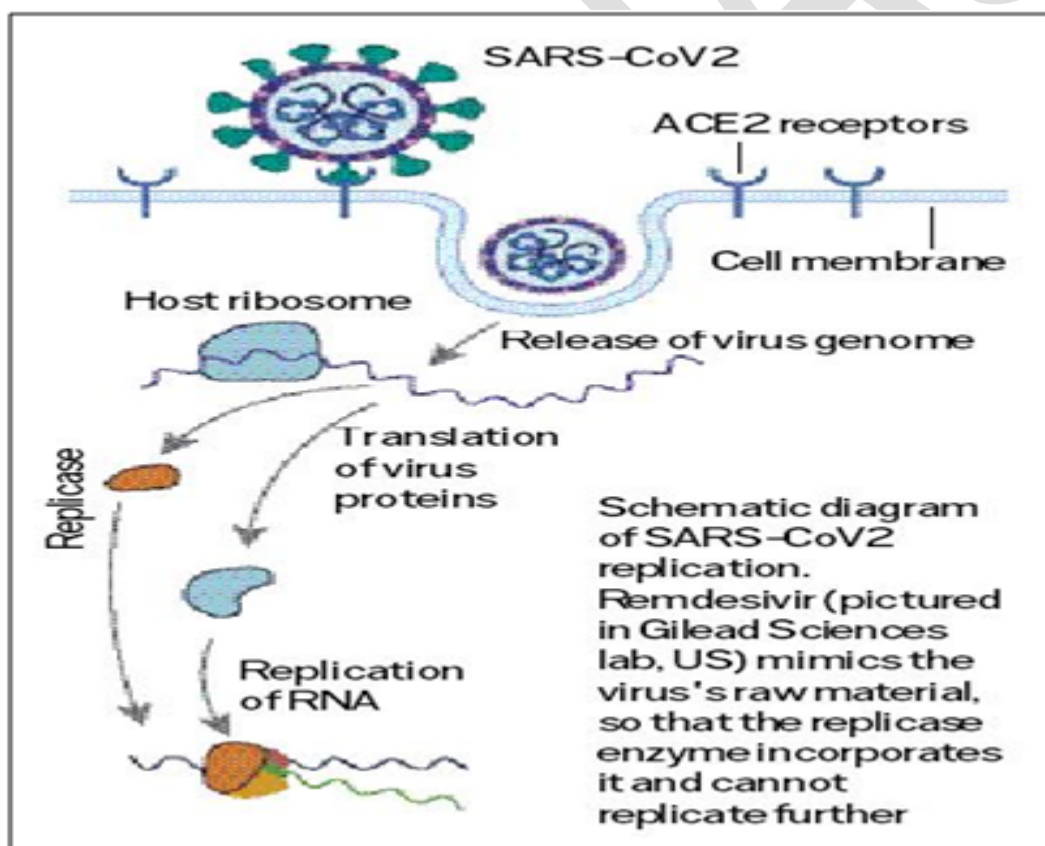
- **Science and Technology- developments and their applications and effects in everyday life**
- **Achievements of Indians in science & technology; indigenization of technology and developing new technology.**
- **Awareness in the fields of IT, Space, Computers, robotics, Nano-technology, bio-technology and issues relating to intellectual property rights.**

5.1 Remdesivir Drug

Why in News: The US Food and Drug Administration (FDA) has given emergency approval to use the drug remdesivir for critical COVID-19 patients.

Remdesivir

- Remdesivir was designed in 2014 to act against the Ebola virus (which is not a coronavirus) by US-based biotechnology firm Gilead Sciences.
- It has since been used to treat for MERS and SERS, both caused by members of the coronavirus family. However, this was not with much success.
- Current research is looking at whether the drug's antiviral properties work against SARS-CoV2, the corona virus that causes COVID-19 disease.
- There are six major trials or studies under way for remdesivir, including by WHO.



SARS-CoV2 replicates itself inside the human cell with the help of an enzyme called RdRp. Such an enzyme is called a polymerase (the p in RdRp stands for polymerase) or a replicase.

Replication of Corona virus

- After the virus enters the human cell, it releases its genetic material, which is then copied using the body's existing mechanism.
- At every stage of infection, various human proteins, virus proteins, and their interactions come into play. At the replication stage, the key viral protein at play is an enzyme called RdRp (an enzyme is a kind of protein that speeds up chemical reactions within a cell).
- RdRp makes the copies, by processing components of the RNA of the virus.
- It is sometimes termed as the "engine" of the virus and "copy machine" of the virus.

When remdesivir is injected intravenously, it acts against RdRp and effectively blocks replication of the coronavirus, followed endlessly by the copies creating copies of themselves.

Inhibition of RdRp by Remdesivir

- In order to replicate, the RdRp processes raw material from the virus RNA, broken down by another enzyme with that specific function.
- When a patient is given remdesivir, it mimics some of this material, and gets incorporated in the replication site.
- With remdesivir replacing the material it needs, the virus fails to replicate further.
- These corona virus polymerases are sloppy and they get fooled, so the inhibitor (remdesivir) gets incorporated many times and the virus can no longer replicate.

Remdesivir use in India for Covid-19 patients

- Most of the doctors are trying ritonavir, lopinavir, and even immunosuppressant tocilizumab, but not remdesivir because of global reports of adverse reaction of remdesivir in COVID-19 patients.
- However, it is doctor's call whether or not to use the drugs before clinical trial results. I am open to its use.

Availability of Remdesivir in India

- Until January there was an inventory to treat 5,000 patients on a 10-day course
- Since January, investments have been made to ramp up production and establish a supply chain.
- By March end, it was scaled up to 30,000 patients and by May end the company plans to produce enough stock for 1.4 lakh patients.
- Gilead (company manufacturing remdesivir) has for now stopped meeting individual requests for supply under its Compassionate Use program, except for pregnant women and children with severe infection.

5.2 INTERNET USAGE IN INDIA

Why in News: As per a report by the Internet & Mobile Association of India (IAMAI), for the first time, India has more internet users in rural areas than in urban cities.

IAMAI

- The Internet & Mobile Association of India (IAMAI) is not-for-profit industry body.
- It works to expand and enhance the online and mobile value added services sectors.
- It seeks to present a unified voice of the businesses it represents to the government, investors, consumers and other stakeholders.
- It is involved in spreading the use of internet among all Indians, and works to create an enabling environment for digital companies to thrive and add value to the economy and society.

Latest Update

- As per a latest report, as of November 2019, rural India had 227 million active internet users, which is 10% more than urban India's active internet users at about 205 million.
- The report on internet users in India was brought out by the Internet & Mobile Association of India (IAMAI) and Nielsen.
- **Note:** Active internet users are defined as those who use the internet at least once a month.
- In addition, around 71 million kids, aged 5-11 years, are going online using devices of family members.
- All combined, India has about 504 million active internet users who are 5 years old or above. This is 53 million more than 451 million in March 2019.
- The numbers of active users were boosted by the cheapest internet connections in the world.

Female users

- The report also found that the increase in female internet users was much higher at 21% as compared to 9% for males during the March-November period.
- It said 26 million new female users went online during this period.

Usage

- The report showed that nearly 70% of the active Internet population in India is daily users.
- 90% users in urban India access Internet at least once a week.
- In India, close to one-third of users access Internet for 'more than an hour' during Sundays and holidays versus a normal working day.

- Mobile phones remain the first choice for a device to access internet in both urban and rural India due to their affordability, along with availability of cheaper data plans.

Internet penetration

- With 504 million active internet users who are 5 years old or above, India has become the second-largest internet user market behind China.
- China has about 850 million users, while the United States has about 280-300 million users.
- However, in terms of internet penetration India stands at 40%, behind both US (over 88%) and China (61%) in internet penetration.
- The top eight metros in India had an internet penetration of 65% as of November 2019, compared to 63% as of March 2019.

5.3 STYRENE GAS

Why in News: The gas that leaked from a chemical factory on the outskirts of Visakhapatnam, leaving at least 11 dead and sending hundreds to hospital, is called styrene.

The gas leaked from a tank when officials were preparing to reopen the factory that was shut for 44 days due to the lockdown.

Styrene

- Styrene is an organic compound with the formula C_8H_8 and is a derivative of benzene (C_6H_6). It is a flammable liquid stored that is stored in factories as a liquid, but evaporates easily.
- It is the main raw material for synthesis of polystyrene, or $(C_8H_8)_n$. Polystyrene, in turn, is a versatile plastic that is used to make parts of various appliances such as refrigerators or micro-ovens; automotive parts; and parts of electronics such as computers; and also to manufacture disposable cups and in food packaging.
- Styrene is also used as an intermediate to produce copolymers — which are polymers derived from one or more species of monomers such as styrene.
- It is also found in vehicle exhaust, cigarette smoke, and in natural foods like fruits and vegetables.

Effects of exposure to Styrene gas

- As per the US-based Environment Protection Agency (EPA), short-term exposure to the substance can result in respiratory problems, irritation in the eyes, irritation in the mucous membrane, and gastrointestinal issues.

- However, in people suffering from respiratory illness such as asthma, and those who have chronic obstructive pulmonary diseases, these conditions may get exaggerated. Those suffering from diabetes or hypertension may also have anxiety disorders.
- Long-term exposure could drastically affect the central nervous system and lead to cancer and depression in some cases. Studies on the effects on health due to occupational exposure to styrene have, however, been inconclusive.
- As per the United States EPA, tests involving acute exposure of rats and mice have shown styrene to have low to moderate toxicity by inhalation and oral exposure.

How did the leak take place?

- The styrene gas has to be stored in gas tanks under 20°C to keep it stable. The temperature has to be continuously monitored, and any exposure to light or heat may result in polymerization.
- If temperature rises, inhibitors have to be added to keep the styrene stable. At LG Chem, an inhibitor tank is attached to the styrene storage tank but it failed to stabilise it in time.
- As the styrene was stagnant for 44 days, it is likely that some gas accumulated at the ceiling of the storage tank and its temperature rose beyond the specified 20°C, leading to auto polymerisation and vapourisation.
- However, the exact cause is still not known and the company is yet to explain the reasons behind the bursting of the tank that caused the leak.

5.4 ELISA TEST

Why in News: The Centre has approved an indigenous antibody detection test for Covid-19 which will allow authorities to do surveillance testing to see how much of the population has been exposed to corona virus infection.

- The Elisa test (Covid Kavach Elisa) has been developed by National Institute of Virology (NIV) to detect antibodies that the body develops in response to infection by corona virus.
- While real-time RTPCR is the frontline test for clinical diagnosis of SARSCoV-2, robust antibody tests are critical for surveillance.
- The test developed by NIV assumes importance as the rapid antibody tests imported from China were found to be unreliable and hence States were instructed not to use them for detecting previous corona virus infection.

ELISA test

- The Elisa (enzyme-linked immune sorbent assay) test has been used as a diagnostic tool in medicine, plant pathology, and biotechnology, as well as a quality control check in various industries.
- ELISAs are designed specifically for screening large numbers of specimens at a time, making them suitable for use in surveillance and centralized blood transfusion services.
- It is used to detect antibodies in the blood for a wide variety of infections, particularly HIV.
- It has also found applications in the food industry in detecting potential food allergens, such as milk, peanuts, walnuts, almonds and eggs.

Covid Kavach Elisa test kit

- The test kit developed by NIV was validated at two sites in Mumbai and has high sensitivity and accuracy. Besides, it has the advantage of testing 90 samples together in a single run of 2.5 hours
- The test will be used to screen 30,000 samples from 75 hotspot districts to understand the extent of spread of the virus in the community.
- India has thus far maintained that there is no community transmission despite there being over 63,500 cases so far from across the country.
- The Drug Controller General had granted commercial production and marketing permission to Zydus Cadila, post which NIV has transferred the technology to Zydus Cadilla for mass production.

Significance of this

- Since the ELISA test is based on detection of antibodies, it can only help in knowing if the person has been previously infected by corona virus. Thus, even people who have remained symptom-free (asymptomatic) during the entire course of the infection will test positive.
- However, according to the Centers for Disease Control and Prevention (CDC), it takes one-three weeks for the antibodies to develop in response to infection.
- So, if a person who has been recently infected by the virus is tested during the window period (the time taken to develop antibodies) the result will turn out to be negative. But a repeat test after a couple of weeks will indicate the true infection status.
- While the RT-PCR, which detects the RNA of the corona virus, enables detection of current infection, it will not be useful if the testing is carried out days after the infection clears as the virus will no longer be present.
- However, antibodies developed in response to the corona virus infection will be present in the blood for a longer duration and hence the ELISA test can help detect past infection.

National Institute of Virology

- The National Institute of Virology is an Indian virology research institute, and one of the translational science cells part of Indian Council of Medical Research (ICMR).
- It was previously known as 'Virus Research Center' and was founded in collaboration with the Rockefeller Foundation. It has been designated as a WHO reference laboratory for SE Asia region.
- NIV is also the National Monitoring Centre for Influenza, Japanese encephalitis, Rota, Measles, Hepatitis and Corona virus.

5.5 NATIONAL TECHNOLOGY DAY

Why in News: May 11 is celebrated as the National Technology Day, to mark the day on which India successfully test-fired its first nuclear bombs in 1998. Between May 11 and May 13, 1998, five devices were tested during the nuclear tests in Rajasthan's Pokhran.

India is currently among eight countries in the world that have a publicly known nuclear weapons program.

Background

- At the time of India's independence, the country's leaders were opposed to fully embracing nuclear weapons.
- This is because, towards the end of World War II, in 1945, the world had witnessed the horrific atomic bombings of Hiroshima and Nagasaki.
- Mahatma Gandhi had called the use of nuclear weapons morally unacceptable. India's first Prime Minister, Jawaharlal Nehru, was also skeptical, but kept the door open for future consideration.
- India's defeat in the 1962 Sino-Indian War gave rise to legitimate fears about national security. Thus, in 1974, India conducted its first nuclear test, code-named Smiling Buddha, at Pokhran in Rajasthan.
- India's then Prime Minister Indira Gandhi called the test a "peaceful nuclear explosion" and India demonstrated to the world that the country could defend itself in an extreme situation.
- However, India chose not to immediately weaponise the nuclear device it tested at Pokhran.
- Things changed in the 1980s when Pakistan began to secretly develop its own nuclear program.
- India was then forced to develop its own nuclear weapons program undercover, which took place while Indian diplomacy was pushing for global disarmament at forums such as the United Nations.

The Pokhran II tests

- Eventually, India put an end to its middle path approach, when it detonated another device in 1998, again at Pokhran. Following the test, then-Prime Minister Atal Bihari Vajpayee publicly declared India's status as a nuclear weapons power.
- Assigned the code name Operation Shakti, the tests were conducted by former President Dr APJ Abdul Kalam, who led the scientific team that made preparations for the tests.
- The tests consisted of 5 detonations, the first being a fusion bomb while the remaining four were fission bombs. With the tests, India achieved its objective of building fission and thermonuclear weapons with yields up to 200 kilotons.

Significance of conducting the tests

- The first response to the tests was outright criticism issued from every multilateral platform. These nuclear tests resulted in a variety of sanctions against India by a number of major states, including Japan and the United States.
- However, the tests were needed to end India's international isolation.
- The tests acted as a turning point in India's engagement with the world, provided the basis for reconciliation with the global nuclear order, and redefined India's relationship with the US.
- The tests created one of the pre-requisites for India's aspiration to become a leading power and began the process for the world to acknowledge India as a responsible nuclear power.
- Nuclear weaponisation also has a security connotation and the tests made the country stronger, by lending it a significant deterrence effect, thereby creating a stable security situation in the subcontinent.

Nuclear Weapons

Types of Nuclear Energy

There are two ways that nuclear energy can be released from an atom:

- **Nuclear fission** – the nucleus of an atom is split into two smaller fragments by a neutron. This method usually involves isotopes of uranium (uranium-235, uranium-233) or plutonium (plutonium-239).
- **Nuclear fusion** – two smaller atoms are brought together, usually hydrogen or hydrogen isotopes (deuterium, tritium), to form a larger one (helium isotopes); this is how the sun produces energy.

5.6 SONIC BOOM

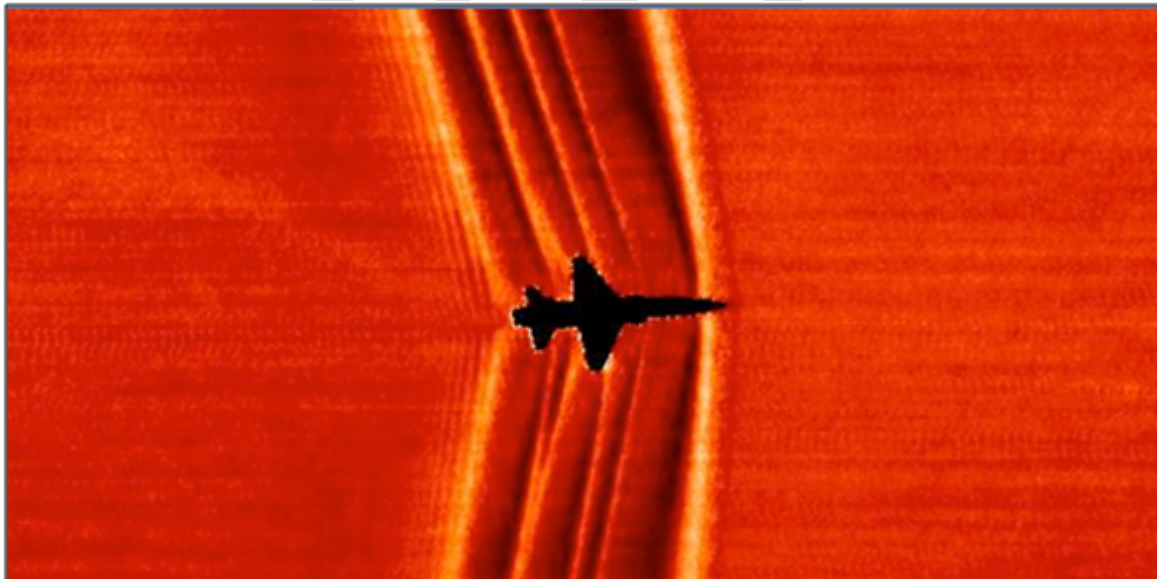
Why in News: A 'loud sound' was recently heard in Bengaluru, which puzzled lakhs of city residents as to the source of the sound. However, it has now been revealed to have emanated from an IAF test flight involving a supersonic profile. The sound effect caused due to such high-speed flights is known as 'sonic boom'.

Sonic Boom

A sonic boom is a thunder-like noise a person on the ground hears when an aircraft or other type of aerospace vehicle flies overhead faster than the speed of sound, or "supersonic."

Shock Wave

- As an aircraft travels, it pushes the air in front of it and creates waves, just like a motor boat creates waves as it moves through the water.
- But when aircraft travel faster than the speed of sound — or faster than 767 mph (1235 km/h) — it moves faster than the waves it creates. Because air molecules can't keep up with its speed, they begin to compress.
- This creates a rapid increase in pressure in front of the craft, resulting in a different kind of wave: supersonic shock wave.



The shock wave forms a "cone" of pressurized or built-up air molecules, which move outward and rearward in all directions and extend all the way to the ground.



As this cone spreads across the landscape along the flight path, it creates a continuous sonic boom along the full width of the cone's base.

Sonic Boom

- The sharp release of pressure, after the buildup by the shock wave, is heard as the sonic boom.
- The change in air pressure associated with a sonic boom is only a few pounds per square foot -- about the same pressure change experienced riding an elevator down two or three floors.
- It is the rate of change, the sudden changing of the pressure, which makes the sonic boom audible.

"Double" Booms

- All aircraft generate two cones, at the nose and at the tail.
- They are usually of similar strength and the time interval between the two as they reach the ground is primarily dependent on the size of the aircraft and its altitude.
- However, some people on the ground may perceive the sound as a single sonic boom.

General Factors Associated With Sonic Booms

- There are several factors that can influence sonic booms -- weight, size, and shape of the aircraft or vehicle, plus its altitude, flight path, and weather or atmospheric conditions.

- A larger and heavier aircraft must displace more air and create more lift to sustain flight, compared with small, light aircraft. Therefore, they will create sonic booms stronger and louder than those of smaller, lighter aircraft.
- The larger and heavier the aircraft, the stronger the shock waves will be.

Altitude Effect

- Altitude determines the distance shock waves travel before reaching the ground, and this has a significant effect on intensity.
- As the shock cone gets wider, and it moves outward and downward, its strength is reduced.
- Generally, the higher the aircraft, the greater the distance the shock wave must travel, reducing the intensity of the sonic boom.

Sonic Boom Carpet

- The width of the boom “carpet” beneath the aircraft is about one mile for each 1000 feet of altitude.
- For example, an aircraft flying supersonic at 50,000 feet can produce a sonic boom cone about 50 miles wide.
- However, parts of the sonic boom carpet are typically weaker than others.
- Maximum intensity for traditional supersonic aircraft is directly beneath the aircraft, and decreases as the lateral distance from the flight path increases, until it ceases to exist.
- The lateral spreading of the sonic boom depends upon altitude, speed, and the atmosphere – and is independent of the vehicle’s shape, size, and weight.



ECOLOGY and ENVIRONMENT

❖ **Paper III: The articles in this section are relevant to the following topics:**

- **Conservation, environmental pollution and degradation, environmental impact assessment**
- **Disaster and disaster management.**

❖ **Prelims Oriented Questions**

6.1 LOCUSTS ATTACK

Why in News: Locusts have arrived early this year, presenting a new worry to farmers and authorities due to their potential for exponential growth and crop destruction. Locusts that normally arrive during July-October, have already been spotted in April this year in Rajasthan. In the first half of April, scientists at the Locust Warning Organisation (LWO) observed Desert Locusts at Sri Ganganagar and Jaisalmer districts of Rajasthan.

Locusts

- Locusts are a group of short-horned grasshoppers, that are about the length of 6-8 centimeters.
- According to the FAO, eggs can hatch in about two weeks, with locusts maturing to adulthood in two to four months on average.
- They multiply in numbers as they migrate long distances in destructive swarms (up to 150 km in one day), which can contain as many as 80 million locusts per square kilometer. Swarms can vary from less than 1 square kilometer in size to several hundred square kilometers.
- Four species of locusts are found in India:
 - Desert locust (*Schistocerca gregaria*)
 - Migratory locust (*Locusta migratoria*)
 - Bombay Locust (*Nomadacris succincta*)
 - Tree locust (*Anacridium* sp)

Desert Locusts

- The desert locust does not cause any harm while it moves about independently.
- These winged insects differ from normal hoppers, and become dangerous only when their populations build up rapidly and the close physical contact in crowded conditions triggers behavioural changes.
- They, then, enter the “gregarious phase”, by grouping into bands and forming swarms that can travel great distances (up to 150 km daily), while eating up every bit of vegetation on the way.
- One locust can consume its own weight in food each day.
- The swarms devour leaves, flowers, fruits, seeds, bark and also destroy plants by their sheer weight as they descend on them in massive numbers.
- As per some estimate, a small swarm of the desert locusts eats on average as much food in one day as about 10 elephants, 25 camels or 2500 people.

Threaten food security

- The Desert Locust is regarded as the most destructive pest in India as well as internationally.
- If not controlled at the right time, these insect swarms can threaten the food security of countries

6.2 TROPICAL CYCLONE

Why in News: A rapidly intensifying Category 5 super cyclone 'Amphan' is moving across the Bay of Bengal and heading for the India-Bangladesh border.

According to the India Meteorological Department (IMD), the severe cyclonic storm is likely to make a landfall somewhere between Digha in West Bengal and Hatiya Islands in Bangladesh on 20th May 2020.

landfall

- Landfall is the event of a storm or waterspout moving over land after being over water.
- A tropical cyclone is classified as making landfall when the center of the storm moves across the coast

Latest Update

- The super cyclone Amphan is expected to have wind speeds of 230-240 kmph gusting to 265 kmph, bringing heavy rainfall to coastal Odisha and West Bengal.
- Any cyclone with wind speeds of over 220 kmph is categorised as 'super cyclonic storm'.
- Amphan will cross West Bengal - Bangladesh coasts between Digha (West Bengal) and Hatiya Islands (Bangladesh) close to Sundarbans.
- However, by the time it makes landfall in West Bengal, Amphan is expected to tone down into a category 4 Extremely Severe Cyclonic (ESC) storm with wind speed of 165-175 kmph and gusting to 195 kmph.
- Amphan will cause heavy to extremely heavy rainfall over Gangetic West Bengal and heavy to very heavy rainfall over north coastal Odisha on 19th May and 20th May 2020.
- National Disaster Response Force (NDRF) teams have been deployed in West Bengal and Odisha to undertake massive evacuation of people and to handle any emergency situation.

Cyclones

- Cyclones are centers of low pressure surrounded by closed isobars and having increasing pressure outwards.
- As air enters an area of low pressure from all directions, the Coriolis Effect bends the direction of the wind to the right of its path.

- This creates a counter clockwise rotation around the low and convergence near the centre of the system. As the air collides near the centre it is forced aloft where divergence takes air away from the centre of the system.
- A Cyclone is a system of low level convergence and high level divergence with a rising column of air in the centre of the rotating air mass. If the upper air is not diverging then there cannot be a cyclone present.
- Cyclones are broadly of two types:

a) Temperate cyclones (caused in middle and high latitudes, thus does not occur in India)

b) Tropical cyclones.

Tropical Cyclones

- Cyclones developed in the regions between the Tropic of Cancer and Tropic of Capricorn, are called tropical cyclones.
- The weather conditions of low latitudes, mainly rainfall regimes are largely controlled by tropical cyclones.
- Tropical cyclones usually develop in summer season in the vicinity of Inter-Tropical Convergence Zone (ITCZ) over warm ocean surface.
- Tropical cyclones are one of the mechanisms by which surface heat energy is redistributed from the equator to the poles.
- Tropical cyclones are known by various names in different parts of the world.
- In the North Atlantic Ocean and the eastern North Pacific they are called hurricanes, and in the western North Pacific around the Philippines, Japan, and China the storms are referred to as typhoons.
- In the western South Pacific and Indian Ocean they are variously referred to as severe tropical cyclones, tropical cyclones, or simply cyclones.
- All these different names refer to the same type of storm.

Conditions necessary for development

Tropical cyclone is like a heat engine which is energized by latent heat of condensation. Generally, tropical cyclones are formed due to low pressure of thermal origin. The conditions favorable for the formation and intensification of tropical cyclone storms are:

- Large sea surface with temperature higher than 27° C
- Presence of the Coriolis force
- Small differences in the vertical wind speed
- A pre-existing weak- low-pressure area or low-level-cyclonic circulation
- Upper divergence above the sea level system

Having these conditions met is necessary, but not sufficient as many disturbances that appear to have favorable conditions do not develop.

Categories of Tropical Cyclones:

- **Category 1:** Wind and gales of 90-125 kph, negligible house damage, some damage to trees and crops.
- **Category 2:** Destructive winds of 125-164 kph. Minor house damage, significant damage to trees, crops and vehicles, risk of power failure.
- **Category 3:** Very destructive winds of 165-224 kph. Some roof and structural damage, some caravans destroyed power failure likely.
- **Category 4:** Very destructive winds of 225-279 kph. Significant roofing loss and structural damage, vehicles blown away, widespread power failures.
- **Category 5:** Very destructive winds gusts of more than 280 kph. Extremely dangerous with widespread destruction.

Where do cyclones occur in India

- More cyclones occur in the Bay of Bengal than the Arabian Sea and the ratio is approximately 4:1.
- An analysis of the frequency of cyclones on the east and west coasts of India between 1891 and 1990 shows that nearly 262 cyclones occurred on the east coast and 33 cyclones occurred on the west coast during this period.
- Indian sub-continent is the worst affected region of the world, having a coastline of 7516 kms.
- There are 13 coastal states/Union Territories encompassing 84 coastal districts which are affected by cyclones.
- Four states - Andhra Pradesh, Odisha, Tamil Nadu and West Bengal and one Union Territory - Pondicherry on the East Coast are most vulnerable to cyclone disasters.
- Although cyclones affect the entire coast of India, the East coast is more prone as compared to the West coast.

Reason for frequent cyclones in Bay of Bengal: The warmer sea surface temperature of Bay of Bengal is an ideal platform for cyclones. The Bay of Bengal is adjacent to the northwest Pacific, which is one of the world's most active basins for typhoons. Typhoons over the Northwest Pacific move across the South China Sea into the Bay of Bengal, intensifying into cyclones.

The region receives the remnants of major landfalls in the Philippines, China and South Asia. In contrast, Arabian Sea cyclones are mostly their own formations and they also generally move north-west, away from India's west coast.

SOCIAL ISSUES

❖ **Paper I: The articles in this section are relevant to the following topics:**

- **Salient features of Indian Society, Diversity of India.**
- **Role of women and women's organization, population and associated issues, poverty and developmental issues, urbanization, their problems and their remedies.**
- **Effects of globalization on Indian society**
- **Social empowerment, communalism, regionalism & secularism.**

7.1 WHO

Why in News: With Union Health Minister Dr Harsh Vardhan set to become the chairman of the WHO Executive Board at its 147th session, India would now be playing a more prominent role at the World Health Organisation (WHO).

- WHO has six regional groups viz. African Region, Region of the Americas, South-East Asia Region, European Region, Eastern Mediterranean Region, and Western Pacific Region.
- The WHO's South East Asia group had unanimously decided last year that India would be elected a member state of the executive board for a three-year term.
- It was also decided at this meeting that India's nominee would be the Executive Board chairman for the first year.

World Health Organization

- The WHO is a specialized agency of the United Nations responsible for international public health. It was established on 7 April 1948, which is commemorated as the World Health Day.
- It is headquartered in Geneva, Switzerland and the logo of WHO features the Rod of Asclepius as a symbol for healing.
- WHO's broad mandate includes advocating for universal healthcare, monitoring public health risks, coordinating responses to health emergencies, and promoting human health and well-being.
- It provides technical assistance to countries, sets international health standards and guidelines, and collects data on global health issues through the World Health Survey.

Structure of WHO

- The WHO is governed by two decision-making bodies — the World Health Assembly and the Executive Board.
- The Board and the Assembly create a forum for debate on health issues and for addressing concerns raised by Member States.
- Both the Board and the Assembly produce three kinds of documents — Resolutions and Decisions passed by the two bodies, Official Records as published in WHO Official publications, and Documents that are presented "in session" of the two bodies.

World Health Assembly

- The World Health Assembly, composed of representatives from all 194 member states, serves as the agency's supreme decision-making body. It also elects and advises an Executive Board made up of 34 health specialists.

- The WHA is convened annually and attended by delegations from all WHO member states and focuses on a specific health agenda prepared by the Executive Board.
- The main functions of the WHA are to determine the policies of the Organization, appoint the Director-General, supervise financial policies, and review and approve the proposed program budget.

WHO Executive Board

- The Executive Board is composed of 34 members technically qualified in the field of health, with members being elected for three-year terms.
- The chairman's post of the Executive Board is held by rotation for one year by each of the WHO's six regional groups.
- The main functions of the Board are to give effect to the decisions and policies of the Health Assembly, to advise it and generally to facilitate its work.
- At the main Board meeting, the agenda for the forthcoming Health Assembly is agreed upon, and resolutions for forwarding to the Assembly are adopted.

WHO and India

- India became a party to the WHO Constitution in 1948 and the first session of the WHO Regional Committee for South-East Asia was held in 1948 in the office of India's Health Minister and inaugurated by Prime Minister Jawaharlal Nehru.
- The WHO India Country Cooperation Strategy (CCS) 2019-2023 has been developed jointly by the Health Ministry and the WHO India country office.
- The CCS's strategic priorities are to accelerate progress on Universal Health Coverage, promote health and wellness by addressing determinants of health, better protect the population against health emergencies and enhance India's global leadership in health.
- On the ground, WHO has been a key partner in the immunization program, tackling TB and neglected diseases such as leprosy and kala azar, and nutrition program across states.

7.2 PRADHAN MANTRI GARIB KALYAN ANN YOJANA

Why in News: Measures under the scheme include providing free food grains to 80 crore beneficiaries under the National Food Security Act (NFSA), 2013.

For beneficiaries under NFSA

- One of the PMGKAY measures is the grant of additional 5 kg foodgrain per person per month 'free' for three months (April-June), above the monthly entitlement of 5 kg of highly subsidised food grains per beneficiary under NFSA.
- This would ensure that a large section of the vulnerable have access to foodgrains during this critical juncture.

For those not covered under NFSA

The government also announced to give 5 kg per person of wheat or rice and 1 kg per family of channa for those not covered under NFSA for two months.

Lack of portability of ration cards limited the effectiveness of the scheme for migrants

However, because of the lack of portability of ration cards, the migrant labour living outside their home states or districts for livelihood in economically more advanced states or districts were unable to get access to supplies under NFSA.

Internal migration in India

- As per estimates, six crore people migrate seasonally to various states in search of livelihoods.
- Besides, around 8 crore people are intra-state migrants, moving from one district to another in their home state.
- Food and public distribution ministry officials acknowledge the absence of authentic data on the number of migrants in the country.

One nation, one ration card

- In June 2019, the government launched 'One nation, One ration card', aimed at ensuring ration card portability.
- This enables migrant ration-card-holders to lift their quota of grain entitlement from any Fair Price Shop (FPS) in the country.

Aadhaar and ePoS enable this

- For benefiting under the scheme, migrants can use the ration card issued in their home states or Union Territory after biometric authentication on electronic Point of Sale (ePoS) devices installed at the FPS.
- As per food ministry data, 90% of the 23.55 crore ration cards have been seeded with Aadhaar
- 85% of the beneficiaries under NFSA listed in these ration cards have been linked through bio-metric authentication.

- In 90% of the total 5.39 lakh FPS, e-PoS machines have been installed.
- Assam, Meghalaya and Arunachal Pradesh are largely the only states yet to complete installation of e-PoSs and Aadhaar seeding of ration cards.

Nation-wide roll out of the scheme by March 2021 announced

- The union Finance Minister has recently announced nation-wide roll out of 'one nation, one ration card' scheme by March 2021.
- Food ministry officials said that in the next three months, 23 states would implement ration card portability.
- About 67 crore beneficiaries under NFSA will get benefits under one nation, one ration card scheme by August 2020.

Features

- To ensure ration-card portability, the Centre has requested states to issue the ration card in the bi-lingual format—local language and Hindi or English.
- A 10-digit standard ration card number has been assigned to beneficiaries, wherein the first two digits denote the state code.
- Along with 10 digits, a set of another two digits will be appended with the ration card number to create unique member IDs for each beneficiary in a ration card.

7.3 GI TAGS

Why in News: Chak-Hao, the black rice of Manipur, the Gorakhpur terracotta and Kovilpatti kadalai mittai of Tamil Nadu have recently been bagged the Geographical Indication (GI) tag.

Chak-Hao

- Chak-Hao is scented glutinous rice, characterised by its special aroma which has been in cultivation in Manipur over centuries.
- It is normally eaten during community feasts and is served as Chak-Hao kheer.
- It has also been used by traditional medical practitioners as part of traditional medicine.
- This rice takes the longest cooking time of 40-45 minutes due to the presence of a fibrous bran layer and higher crude fiber content.
- At present, the traditional system of Chak-Hao cultivation is practised in some pockets of Manipur.
- Direct sowing of pre-soaked seeds and also transplantation of rice seedlings raised in nurseries in puddled fields are widely practised in the State's wetlands.

Terracotta work of Gorakhpur

- The terracotta work of Gorakhpur is a centuries-old traditional art form, where the potters make various animal figures like, horses, elephants, camel, goat, ox, etc. with hand-applied ornamentation.
- The famed baked clay or 'terracotta' products are made from the special soil found in Bhathat area of Uttar Pradesh's Gorakhpur district.
- Some of the major products of craftsmanship include the Hauda elephants, Mahawatdar horse, deer, camel, five-faced Ganesha, singled-faced Ganesha, elephant table, chandeliers, hanging bells etc.
- The entire work is done with bare hands and artisans use natural colour, which stays for a long time.
- There are more than 1,000 varieties of terracotta work designed by the local craftsmen.

Kovilpatti kadalai mittai

- Kovilpatti kadalai mittai is a candy made of peanuts held together with glistening syrup, and topped with wisps of grated coconut dyed pink, green and yellow.
- It is made using all-natural ingredients such as the traditional and special 'vellam' (jaggery) and groundnuts and water from the river Thamirabarani is used in the production, which enhances the taste naturally.
- The groundnuts are grown in the native black soil in and around Kovilpatti.

Geographical Indication (GI)

A Geographical Indication (GI) is primarily an agricultural, natural or a manufactured product (handicrafts and industrial goods) originating from a definite geographical territory.

Some Important examples of Registered GI are

Darjeeling Tea from West Bengal, Kancheepuram Silk from Tamil Nadu, Channapatna Toys from Karnataka, Aranmula Mirror from Kerala, Alphonso Mango from Maharashtra.

Significance

- Once the GI protection is granted, no other producer can misuse the name to market similar products.
- GI tag conveys an assurance of quality and distinctiveness, which is essentially attributable to the place of its origin.
- It gives protection to the producer of those genuine products, which commands premium pricing in the markets both domestic and international.

- It also provides comfort to customers about the authenticity of that product.
- **Karnataka has the highest number of GI-tagged products.**
- **When geographical area is factored in, Kerala has the highest.**
- **Tamil Nadu has the highest number of handicraft GIs**
- **Maharashtra leads in the number of GI-tagged agricultural products.**
- **Over 30 types of sarees and fabrics have been the tag (the highest), with specialized craft items figuring second.**

7.3 AFRICAN SWINE FEVER

Why in News: Amid the corona virus pandemic, another disease outbreak is affecting thousands of animals in Assam. The recovery of 28 pig carcasses from a stretch of the Brahmaputra river flowing through the Kaziranga National Park (KNP) has alarmed wildlife officials in Assam. Over 2,900 pigs have died in the Assam due to African Swine Fever (ASF). This is the first time that an ASF outbreak has been reported in India.

African Swine Fever (ASF)

- ASF is a severe viral disease that affects wild and domestic pigs typically resulting in an acute haemorrhagic fever.
- The disease has a case fatality rate (CFR) of about 100 percent.
- Routes of Transmission: Its routes of transmission include direct contact with an infected or wild pig (alive or dead), indirect contact through ingestion of contaminated material such as food waste, feed or garbage or through biological vectors such as ticks.
- Symptoms: High fever, depression, anorexia, loss of appetite, haemorrhages in the skin, vomiting and diarrhoea among others. It is sometimes characterised by the sudden deaths of pigs.
- Even so, while ASF is lethal, it is less infectious than other animal diseases such as foot-and-mouth disease.

Vaccine: As of now, there is no approved vaccine, which is also a reason why animals are culled to prevent the spread of infection.

Note: Its signs are similar to Classical Swine Fever (CSF), caused by a different virus for which a vaccine exists.

Swine influenza or swine flu

- It is a respiratory disease of pigs, which is caused by type A influenza virus that regularly causes outbreaks of influenza in pig populations.

- While the swine flu causing virus leads to a high number of infections in pig herds, the disease is not as fatal and causes few deaths.
- Specific swine influenza vaccines are available for pigs.
- The swine flu viruses are spread among pigs through close contact and through contaminated objects moving between infected and uninfected pigs.
- Symptoms: fever, depression, coughing, discharge from the nose and eyes, eye redness or inflammation.

Infection to Humans

While swine flu viruses don't typically infect humans, cases have been reported in the past (for instance during the 2009 H1N1 pandemic), most commonly when humans have contact with infected pigs.

When humans are infected with swine flu viruses, the symptoms are similar to human seasonal influenza and include fever, lethargy, lack of appetite and coughing.

7.5 GLOBAL NUTRITION REPORT

Why in News: According to the Global Nutrition Report 2020, India is among 88 countries that are likely to miss global nutrition targets by 2025. The report has exposed different forms of socio-economic inequities prevalent. The report has also identified India as one with the highest rates of domestic inequalities in malnutrition.

Global Nutrition Report

- The Global Nutrition Report is the world's leading independent assessment of the state of global nutrition.
- It is an annual report, which captures the burden of malnutrition at the global, regional, sub-regional and country levels.
- The Global Nutrition Report was conceived following the first Nutrition for Growth Initiative Summit (N4G) in 2013.
- It was devised as a mechanism for tracking the commitments made by 100 stakeholders spanning governments, aid donors, civil society, the UN and businesses.
- **Aim:** The report aims to inspire governments, civil society and private stakeholders to act to end malnutrition in all its forms.
- It also plays the important role of helping hold stakeholders to account on the commitments they have made towards tackling malnutrition.

In 2012 the 65th World Health Assembly (WHA) endorsed a Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition that included six global targets:

- Reducing stunting by 40% in children under 5
- Reducing childhood wasting to less than 5%.
- Halting the epidemic of obesity,
- Reducing anemia by 50% in women of reproductive age (19-49 years),
- Reducing low birth weight by 30% and
- Increasing the rate of exclusive breastfeeding in the first six months up to at least 50%

Global targets were established to identify priority areas, inspire ambition at the country level and develop accountability frameworks.

Global Nutrition Report 2020: Report Summary

Link between malnutrition and inequity

- The report emphasises on the link between malnutrition and different forms of inequity, such as those based on geographic location, age, gender, ethnicity, education and wealth malnutrition in all its forms.
- Inequity is a cause of malnutrition (both under-nutrition and overweight, obesity and other diet-related chronic diseases).
- The 2020 Global Nutrition Report therefore examines the critical role of addressing inequity to end malnutrition in all its forms.

The nutritional indicators data: India

Underweight children

- Between 2000 and 2016, rates of underweight have decreased from 66.0% to 58.1% for boys and 54.2% to 50.1% in girls.
- However, this is still high compared to the average of 35.6% for boys and 31.8% for girls in Asia.

Stunting and wasting in children under 5

- 9% of children under 5 years are stunted and 20.8% are wasted, compared to the Asia average of 22.7% and 9.4% respectively.
- Stunting level in Uttar Pradesh is over 40%.
- The rate of stunting among individuals in the lowest income group is more than double those in the highest income group at 22.0% and 50.7%, respectively.
- Stunting prevalence is 10.1% higher in rural areas compared to urban areas.

MISCELLANEOUS and SCHEMES

❖ ULTRAVIOLET GERMICIDEL IRRADIATION

- Ultraviolet germicidal irradiation (UVGI) is the use of ultraviolet (UV) energy (electromagnetic radiation with a wavelength shorter than that of visible light) to kill or inactivate viral, bacterial, and fungal species.
- UVGI is a method of disinfection that uses short wavelength ultraviolet light (UV-C) to inactivate or kill microorganisms and pathogens.
- Essentially, UVGI is the use of UV light with sufficiently short wavelengths to disinfect surfaces, air, and water.
- The effectiveness of germicidal UV light depends on the length of time a microorganism is exposed to UV, as well as the intensity and wavelength of the UV radiation.

How does UV Light Kill Viruses and Bacteria?

- Ultraviolet light kills cells by damaging their DNA.
- Exposure to the electromagnetic radiation (light) at certain UV wavelengths modifies the genetic material of microorganisms and destroys their ability to reproduce.
- The UV energy triggers the formation of specific thymine or cytosine dimers in DNA and uracil dimers in RNA, which causes the inactivation of microbes by causing mutations and/or cell death as well as failure to reproduce.

How does UVGI work?

- Ultraviolet germicidal irradiation (UVGI) uses destructive properties of UV light to target pathogens.
- It is thus considered effective in disinfecting the air and helps in preventing certain infectious diseases from spreading.
- UVGI replicates UV wavelengths that disinfect contaminated spaces, air and water.
- It is a promising method for disinfection but the efficacy of it depends on its dose.

❖ MISSION SAGAR

- As part of the 'Mission Sagar' program, this deployment is in line with India's role as the first responder in the region and builds on the excellent relations existing between these countries to battle the COVID-19 pandemic and its resultant difficulties.

- The deployment is in consonance with the Prime Ministers vision of Security and Growth for All in the Region 'SAGAR' and highlights the importance accorded by India to relations with her neighbouring countries and further strengthens the existing bond.
- The operation is being progressed in close coordination with Ministries of Defence and External Affairs.

In 2015, India unveiled its strategic vision for the Indian Ocean i.e. Security and Growth for All in the Region (SAGAR).

It is an increasing recognition of the increasing importance of maritime security, maritime commons and cooperation.

❖ **EVENTBOT**

- In a latest, the Indian Computer Emergency Response Team (CERT-In) has issued a detailed warning to people against the trojan called EventBot which has been identified as malware or trojan that steals personal financial information and can affect Android smart phone users in the country.
- EventBot is a mobile-banking Trojan and info-stealer that abuses Android's in-built accessibility features to steal user data from financial applications, read user SMS messages and intercept SMS messages, allowing malware to bypass two-factor authentication.
- The EventBot trojan has over 200 different financial applications under its target, including banking applications, money-transfer services, and crypto currency wallets, or financial applications based in the US and European region.
- The tricky part about a trojan such as EventBot is that it seems to be a trusted application, as per India's federal cyber-security agency.

❖ **IMMUNITY PASSPORT**

- The idea for the "immunity passport" or a "back to work" pass is:
- If you've been infected with SARS-CoV-2, the virus that causes COVID-19, and recover, then you have immunity that will protect you from getting the disease again for some amount of time.
- However, it is not known for certain that whether people do have immunity once they've recovered and how long that immunity would last.