



VAJIRAM & RAVI

(Institute for Civil Services Examination)

APRIL 2020

the RECITALS

Explore Current Affairs Through Q&A



Featured
Articles

Mains
Q & A

Prelims
Q & A

Bridging
Gaps

World Health Organisation

Covid-19 and Geo-political
Consequences

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(April 2020)

VAJIRAM & RAVI

(INSTITUTE FOR IAS EXAMINATION)

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From the Desk of the Director

Dear Students

The preparation of current affairs magazine is an evolutionary process as its nature and content keeps changing according to the demands of Civil Service Exam. As you are aware about the importance of current affairs for the prelims as well as mains exam, our aim is to follow an **integrated approach** covering all stages of examination from prelims to interview. Keeping these things in mind, we, at Vajiram and Ravi Institute, are always in the process of evolving our self so as to help aspirants counter the challenges put forward by UPSC.

In fulfillment of our objective and commitment towards the students, we have introduced some changes in our current affairs magazine. The CA Magazines, now with the name of “**The Recitals**”, will have four sections. These are:

1. **Feature Article:** As you are aware of the fact that civil service mains exam has become quite exhaustive and analytical, especially since 2013 after the change in syllabus, we have decided to focus on 2-3 topics every month that will provide an insight into the issue so as to help students understand the core of the issue. This will help in Essay writing as well as Mains Exam.
2. **Mains Q&A:** New students quite often struggle to find out that in what way the given topic is useful for them and in what form questions can be framed from the article. To help those students, we at Vajiram and Ravi have designed an innovative way to teach current affairs. Now, we will cover the current issues through questions and answers so as to make it more targeted towards exam. This will not just provide the information and analysis on current issues but will also help in learning the art of answer writing. Further the related information on the topics on which questions have been framed but that is outside the purview of answer will be given in the Box as ‘**Extra Mile**’.
3. **Prelims Q&A:** This section will contain prelims based MCQs that will test your diligence while reading the current issues. These MCQs will be of UPSC standard and will contain detailed explanation. Students are advised to attempt these MCQs honestly and read the Explanation carefully. The idea is to also provide students with a question bank of around 600 current affairs MCQs (50 Qs × 12 months = 600 Qs) just before their prelims examination, which will act as revision on issues spanning over the entire year.
4. **Bridging Gaps:** This section will contain miscellaneous topics which has not been covered through Q&A. That is why it is called Bridging Gaps, meaning the left-over topics.

So, the new magazine is a complete overhaul of what we have been doing for so long. We hope that the new beginning will be to the liking of students.

Thanks

Best Wishes

COVID-19 and Geo-political Consequences

Due to COVID-19, the world is going to face recession; and it is being expected that the global losses may exceed the World Wars I and II combined. At the same time, the falling world price of crude oil has added further anxieties. Many scholars argue that we are about to **witness a new world order** in which the forces of **uninterrupted globalization process will give way** to the forces of **protective nationalism** and **nation-states will strengthen** their status as the most legitimate political community. However, there is no denying to the fact that the post-COVID-19 world will not be the same as before. Many things will change.

Impact on Globalization

- Many analysts are of the view that the emerging world order will evince **more intense geopolitical competitions among great powers** – most notably between the United States and China.
- On the other hand, there are experts who believe that **globalization is a never-ending process**. The rise of such transboundary challenges as epidemics and environmental disasters will require **more globally coordinated responses**. Hence, turning back to the pre-globalization era is almost impossible.
- Despite such debates, it is certain that **globalization will face strong criticism**. The coronavirus has demonstrated that unwanted incidents occurring in distant places can have a direct impact on our lives.
- The free movement of people across the globe seems to be the most important reason why the virus has fast spread to countries beyond China.

Rise of Regional Globalisation

- Globalization might **slow down across the world**, yet it will **accelerate at regional levels**.
- **Decoupling** between the American and Chinese economies **might increase**, yet both powers, particularly China, will increase their efforts to lead globalization in their regions.
- The process of **regional globalization will speed up** as leading countries in different regional locations see the **creation of regional supply chains under their leadership** more vital to their national interests than ever.

Validity of Nation States

- The war on COVID-19 has also shown that **nation-states are still the most legitimate entities** to provide the most effective remedies to the virus plague.
- Boosting different economic sectors by providing stimulus packages, adopting strict lockdowns, asking them to respect the social distancing, treating them in well-equipped hospitals and tracing the physical movements of those who are infected by the virus **could not have been handled by any authority but states.**

US – China Rivalry

- Even prior to COVID-19, Trump's trade war with China was gaining traction domestically within the US. This will be **further strengthened post COVID-19.**
- The years ahead will likely see the geopolitical rivalry between the U.S. and China intensify. This power competition will likely transpire within a post-liberal international order.

Rise of China

- Given the recent attitudes of both US & China towards the globalization process, **China seems to be in a more advantageous position than the U.S.**
- Even though the U.S. is far ahead of China in terms of the number of treaty allies, strategic partners and economic partners, the resentment against the U.S. has recently reached high levels among traditional American allies in Europe and East Asia.
- Given that winning the emerging geopolitical competition requires as much soft power as hard power, **China's pro-globalization stance** and intensifying economic and medical diplomatic efforts might tilt the balance in China's favor.

Weakening of Global Governance

- The pandemic has **highlighted the weaknesses of global governance.** The weakness of global governance, particularly in the area of health is very much visible.
- The US has shown **no inclination to play a leadership** role to harness international cooperation.
- China has blocked discussions in the United Nations Security Council (UNSC) on the issue. **Role of WHO is under scanner.**

- There is **lack of international cooperation and trust deficit**. The pandemic of fear may deepen an ongoing **shift towards increased anarchy** reflected in **'everyone for himself'** and could further **energise the process of weakening international institutions and agreements**.

Increased Cooperation in South Asia

- While each of the South Asian countries has undertaken drastic measures to save its nation from COVID-19-driven pandemic, regional cooperation is felt important to effectively handle the common challenge.
- A full house of **SAARC leaders met through video conference** in March 2020 to discuss the scope and possibility of a joint action. Among other decisions, South Asian leaders have decided to launch a **regional fund** to deal with the crisis.
- An **electronic platform with health experts** has been launched, and a follow-up video-conference of senior health officials was organised thereafter, where countries have discussed several important issues. Steps are also proposed to foster technical cooperation, training and capacity building, among others.

India

- India's diplomacy **has played major role** in managing the crisis on a 24x7 basis, be in lifting the distress people from several parts of the world or following the pandemic minute by minute or settling immediate and complicated queries.
- India has **stood out for its globalism** during the ongoing pandemic. Be it the organising of SAARC video conference or pledging \$10 million towards an emergency SAARC fund, **India has acted like a leader**.
- India has emerged as a **trusted partner in global geopolitics** and would benefit from the shift in international value chain post-Covid-19 crisis.
- **Not only Indians but also citizens of other countries** such as - Maldives, Myanmar, Bangladesh, China, US, Madagascar, Sri Lanka, Nepal, South Africa and Peru- were evacuated by India.
- **Requests for emergency medical equipment** from Bhutan, Bangladesh and the Maldives have also been responded to by India.

- India has **exported critical drugs** like hydroxychloroquine, paracetamol as well as azithromycin to many countries including USA, Brazil and Israel. This was the time when during this crisis world witnessed **a nation rising beyond its immediate national concerns**.
- India was the **first country to call for G-20 virtual meet** in order to generate a coordinated response among G-20 countries in the fight against this pandemic.
- It also had a **teleconference with some of the Indo-Pacific countries** on issues related to countering COVID-19. Indian diplomacy has responded brilliantly. However, the **same initiative is yet to occur in case of BIMSTEC** or between **India and ASEAN**.
- In the post-coronavirus world, **exchange of information and multilateral collaboration** would be crucial – not just in resisting a relapse of the virus, but **also in preventing a future pandemic**. This in an area where India has the potential to lead.
- It already has the infrastructure: As early as 1964, New Delhi established the **Indian Technical and Economic Cooperation (ITEC) Programme** to assist fellow developing countries.
- In 2012, New Delhi established the **Development Partnership Administration (DPA)** *to support the implementation of development projects worldwide*.
- Indian diplomacy should not stop here. India must continue to play a larger role in building a cohesive neighbourhood in this “New Normal” at a time when the partnership will be guided by new ethics, challenges and responses.

Conclusion

- China’s efforts to achieve global geo-political dominance vis-à-vis the US could be further hindered if major countries shed their ambivalence regarding China, excepting Russia, perhaps, whose reliance on China may deepen.
- China can no doubt be expected to push back against this trend. As a result, post corona world will see a **new world order with new set of rules and new dynamics**.
- So far, India has **shown its strength** and **is winning the hearts of people** all over the world by extending the much-needed help. However, a lot of what **India currently does is either bilateral or South Asian in scope – not global**.
- In the post-corona world, India will need to expand its cooperation programs into a global effort; Engage in the multilateral development of solutions to global policy challenges; and share lessons and experiences to progressively strengthen public systems and state institutions worldwide.

World Health Organisation (WHO)

US President Donald Trump halted US funding to the World Health Organization (WHO), after questioning the role played by WHO in the current Covid-19 pandemic. For the WHO, the loss of about 15% of its total funding is bound to have an impact the world over. However, unless other countries do the same as the US, the move may not severely hamstring WHO operations.

WHO

- The WHO is a **specialized agency of the United Nations** responsible for international public health.
- The WHO Constitution, which establishes the agency's governing structure and principles, states its main objective as ensuring "***the attainment by all people of the highest possible level of health.***"
- The WHO was established on 7 April 1948, which is commemorated as World Health Day.
- It is headquartered in Geneva, Switzerland and the logo of WHO features the Rod of Asclepius as a symbol for healing. The agency is part of the United Nations Sustainable Development Group.
- 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.
- Its flagship publication, the World Health Report, provides expert assessments of global health topics and health statistics on all nations. The WHO also serves as a forum for summits and discussions on health issues.

Structure

- 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 programme budget.

Funding

- There are four kinds of contributions that make up funding for the WHO. These are assessed contributions, specified voluntary contributions, core voluntary contributions and PIP contributions.
- **Assessed contributions** are the dues countries pay in order to be a member of the Organization. The amount each member state must pay is calculated relative to the country’s wealth and population.
- **Voluntary contributions** come from member states (in addition to their assessed contribution) or from other partners. They can range from flexible to highly earmarked.
- **Core voluntary contributions** allow less well-funded activities to benefit from a better flow of resources and ease implementation bottlenecks that arise when immediate financing is lacking.
- **Pandemic Influenza Preparedness (PIP) Contributions** were started in 2011 to improve and strengthen the sharing of influenza viruses with human pandemic potential, and to increase the access of developing countries to vaccines and other pandemic related supplies.
- In recent years, assessed contributions to the WHO have declined, and now account for less than one-fourth of its funding. These funds are important for the WHO, because they provide a level of predictability and minimise dependence on a narrow donor base. Voluntary contributions make up for most of the remaining funding.

WHO’s Current Funding Pattern

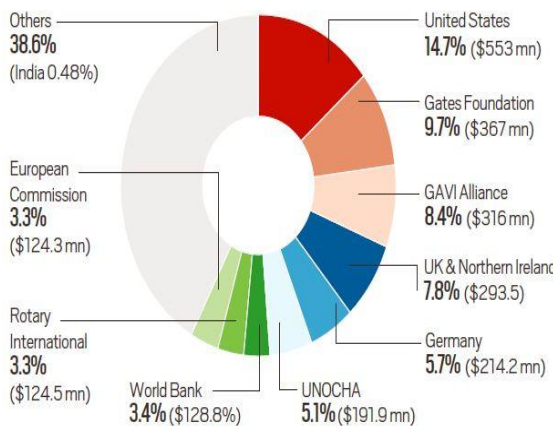
- As of fourth quarter of 2019, total contributions were around \$5.62 billion, with assessed contributions accounting for \$956 million, specified voluntary contributions \$4.38 billion, core voluntary contributions \$160 million, and PIP contributions \$178 million.

- The United States is currently the WHO’s biggest contributor, making up 14.67 % of total funding by providing \$553.1 million.

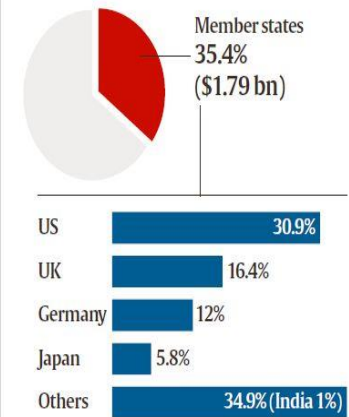
The US is followed by the Bill & Melinda Gates Foundation forming 9.76 % or \$367.7 million.

- India makes up 0.48 per cent of total contributions, and China 0.21 per cent.

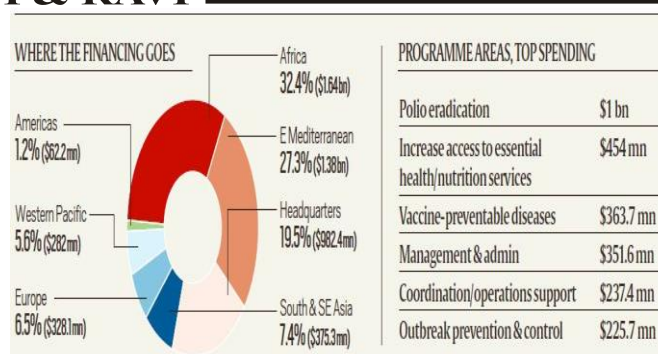
CONTRIBUTORS, OVERALL



MEMBER STATES PROVIDE OVER 35%



- The biggest programme area where the money is allocated is polio eradication (26.51 %), followed by increasing access to essential health and nutrition services (12.04 %), and preventable diseases vaccines (8.89 %). The decision on which country gets how much depends on the situation in the countries.



India and WHO

- India became a party to the WHO Constitution in 1948. 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 immunisation programme, tackling TB and neglected diseases such as leprosy and kala azar, and nutrition programmes across states.

Success And Failures Of WHO

- The WHO has guided the immunisation programmes in several countries, including India; it has been at the forefront of the fight against several diseases, with notable successes such as eradicating smallpox globally and eliminating polio in several parts of the world.
- It has helped draw up agendas on mental health and persuaded its members to sign landmark conventions on tobacco-control.
- In the past three decades, the WHO has helped nations frame strategies during outbreaks such as Zika, Ebola and HIV/AIDS. The agency’s role in developing a vaccine against Ebola, in fact, illuminates one of its key advantages – no other health outfit can bring together scientists, industry, regulators and governments during a public health emergency as rapidly as the WHO.

- But the history of the organisation also reveals some **serious shortcomings**. It has come under fire in recent years for its heavy bureaucratic framework, which has led to inefficiencies, inertia, and even over reactions.
- During the 2009 H1N1 (swine flu) pandemic, the WHO was accused of overplaying the dangers of the virus and aligning with pharmaceutical interests. As a consequence, member states bought billions of doses of vaccines that ultimately remained unused, leading to a wastage of resources and money. The organisation later admitted to have failed in communicating about it properly.
- During the Ebola outbreak in 2013-2015, the WHO failed to sound the alarm over the virus, despite knowing about it. Thousands of lives were lost before the WHO could act.

Criticisms Of WHO In The Current Pandemic

- In mid-January, WHO had said that investigations by Chinese authorities had found no clear evidence of human-to-human transmission of the virus. Taiwan's December 31 warning that such transmission was likely happening in Wuhan was ignored by the WHO, even though the information had been enough to convince the Taiwanese authorities – which may have better intelligence on China than anyone else – to institute preventive measures at home before any other country, including China.
- The WHO's persistent publicizing of China's narrative lulled other countries into a dangerous complacency, delaying their responses by weeks. In fact, the **WHO actively discouraged action**.
- On January 10, with Wuhan gripped by the outbreak, the WHO said that it did “not recommend any specific health measures for travellers to and from Wuhan,” adding that “entry screening offers little benefit.” It also advised “against the application of any travel or trade restrictions on China.”
- By the time the WHO finally labelled the epidemic a public-health emergency on January 30, travellers from China had carried COVID-19 to far-flung corners of the world, including Australia, Brazil, France, and Germany.
- Yet, when Australia, India, Indonesia, Italy, and the US imposed restrictions on travel from China, the WHO Director-General criticized the actions, arguing that they would increase “fear and stigma, with little public-health benefit.”

Reform the WHO

- The spread and scale of the coronavirus disease (Covid-19) have seen calls for strengthening international cooperation in the area of public health, both at the regional level and multilaterally.

- At the recent Group of Twenty (G20) summit, Indian PM had urged G20 about the need for reforms at the WHO. This is critical as WHO is the lead global and United Nations (UN) agency on public health. Its institutional arrangements must be able to strongly push global cooperation in public health and support developing countries in real-time.
- As an intergovernmental body, WHO is not immune to global power-play, as only a quarter of its budget comes from contributions from UN member-states, and the real money to power its work is from voluntary funding by countries and organisations.
- With demands for a better, real-time response from WHO, the **Executive Board should be made a standing body** with the elected countries having Geneva-based permanent representatives on it. The EB should meet when required and direct action by WHO.
- The EB also needs to go beyond only geographic representation and ensure that major stakeholders such as the largest economies and those with the largest populations are always on it. At the UN, there is a precedent for this in the composition of the board of UN Women which, apart from representation from different regions, also has representation from the largest donors.
- And, then there are the issues revolving around drugs and medical science. This is a huge and lucrative industry where Intellectual Property Rights (IPRs) count above all, and there is little willingness for collaborative research even in times of crisis.
- Neither WHO nor any multilateral organisation is involved in **drugs research**. Hence, they must be involved in rolling out new drugs in developed countries. WHO, along with others such as the WTO, must find ways to make affordable access to such key drugs in critical times possible.

Way Ahead

- In a globalised world, pathogens such as viruses & bacteria can't be contained within national borders. But coronavirus pandemic seems to have exacerbated isolationist tendencies in the world.
- **Information sharing** between nations has not always been adequate & countries have often resorted to unfair trade practices with respect to scarce resources such as personal protection equipment.
- Many of the WHO's actions are also not above criticism. But the global agency's decades-long work in low and middle-income countries and its robust understanding of a variety of cultural contexts mean that an empowered WHO holds the key to protecting the interests of the poor and most vulnerable countries. Thus, even as they need to question it sometimes, nations need to add their weight to the global health agency's voice – not undermine it in a critical time.

MAINS Q&A

1. “Panchayati raj institutions (PRIs) are simultaneously a remarkable success and a staggering failure”. Critically analyze.

Answer

The enactment of the **73rd amendment** is applauded as a defining moment in history as it permits states to take steps to organize village panchayats and provide them with necessary powers and authority necessary to help them to function as units of self-government. While the fiscal federalism literature of the West treats citizens as customers or consumers, the 73rd amendment envisage citizens as **political entities engaged in the transformation of their environment**.

Achievements of PRIs

- **New Era of Direct Democracy:** Soon after the 73rd and 74th Amendments, every state government began the process of creating the requisite layer of PRIs and urban local bodies. The uniformity in structure and function has led towards a true democratic decentralisation. There are about **250,000 PRIs and urban local bodies, and over three million elected local government representatives**.
- **Silent Social Revolution Through Reservations to Women as well as SC/ST:** The 73rd and 74th Amendments required that no less than one-third of the total seats in local bodies should be reserved for women. While India has always had reservations for elected representatives from disadvantaged groups like SC/STs, this is the only level of government with reservation for women. At 1.4 million, India has the most women in elected positions.
- **Participatory Democracy:** This process is set in a framework with several standardised features such as **quinquennial elections, reservations for historically marginalised communities and women, the creation of a State finance commission** to rationalise State-sub State level fiscal relations, the establishment of a district planning committee to evaluate resource endowments, to do spatial planning, and manage the conservation of resources with a mandate to draw up a draft development plan for the district as a whole.
- **Pace of Development** has increased. Schools, colleges, hospitals etc started functioning in true span.
- **Emergence of Local Leaders:** The PRIs today is acting as a training ground for democratic functioning and political leadership at higher level.

Major Pitfalls In The Implementation Of PRIs

- **Devolution of Powers:** Article 243G and Schedule XI has provided 29 items to PRIs, but Devolution of these subjects to panchayats has been left to the discretion of state. However, except for few States, no States have provided all these 29 items to PRIs. So, the devolution of subjects has been made, not the devolution of functions. Items in Schedule XI are also present in List II of Seventh Schedule. So, there are overlapping and lack of clarity as well.
- **Lack of Finances for PRIs**
 - a) **Power To Tax:** The Panchayati Raj bodies have limited powers in respect of imposing cesses and taxes. The power to tax, even for subjects falling within the purview of PRIs, has to be specifically authorized by the state legislature.
 - b) **Intergovernmental Transfers:** State Finance Commissions can recommend the revenue share between state and local governments. But these are merely recommendations and the state

governments are not bound by them. Though finance commissions have advocated for greater devolution of funds, there has been little action by states to devolve funds.

- c) **Tied Nature of Central Grant:** Most of the grant from Centre are of tied nature which arrest the flexibility of PRIs in utilizing these funds.
- d) After a quarter century of decentralisation, local expenditure as a percentage of GDP is only 2 per cent compared with the OECD (14 per cent), China (11 per cent), and Brazil (7 per cent).
- **Governance Issues:** PRIs cannot govern unless they are given the authority to actually perform functions related to governance. The most common example is the terrible state water boards, performing tasks that should have been left to elected representatives of local governments who best understand local water problems and can be disciplined through the democratic process.
- **Centralization:** Core functions like water supply, link roads, street lighting etc continue to be in the hands of State governments. The Members of Parliament Local Area Development Scheme (MPLAD) continue to bypass local governments. States like Punjab, Haryana and Rajasthan abolished local taxes. Haryana created a rural development agency under the chief minister.
- **Support Staff:** PRIs don't have a cadre of their own. There is severe lack of support staff and personnel in panchayats, such as secretary, junior engineers, computer operators, and data entry operators. This affects their functioning and delivery of services by them.
- **Poor Implementation:** The mandate to establish a district planning committee to prepare a draft development plan has been violated and distorted in most States. In all States, parallel bodies encroach on the functional domain of local self-governance and continue to grow unchecked.
- **Proxy Candidature:** Women empowerment is not in true sense as the husbands of women (nickname as Sarpanch Pati) are acting as a proxy in the gram panchayat area reserved for women.

Way Forward

- **Article 243G should be amended** and the word '**May**' shall be replaced by '**Shall**'. This will ensure devolution of function in true sense.
- **Finance Related Reforms:** The only long-term solution is to foster genuine fiscal federalism where PRIs raise a large portion of their own revenue and face hard budget constraints, i.e. **fiscal autonomy accompanied by fiscal responsibility**.
 - Tax on mining, properties, and markets should be given to PRIs.
 - The share of untied nature of funds should be increased.
 - The timing of report of State Finance Commission should be given due importance to stop delays. Panchayats should also be encouraged to carry out local audits regularly so that Finance Commission grants are not delayed.
 - MPLAD/MLALAD scheme should be abolished and their funds should be transferred to PRIs.
- A dedicated cadre of PRIs functionaries should be created. The 2nd ARC has called for a **PR Service**. Controlled and regulated by Panchayat. Further, MPs/MLAs should not be a member of Local bodies.

State governments should make adequate efforts to **devolve funds, functions, and functionaries to panchayats** for them to effectively plan economic development and social justice schemes.

Extra Mile

National Panchayati Raj Day

- National Panchayati Raj Day is celebrated on April 24 every year as it signifies the institutionalization of PRI through Constitution (73rd Amendment) Act, 1992,

- The Amendment Act came into force on April 24, 1993.
- The first National Panchayati Raj Day was celebrated in 2010.
- During the National Panchayat Raj Day event, the following awards were given to the best performing Panchayats.
 - Deen Dayal Upadhyay Panchayat Sashaktikaran Puraskar
 - Nanaji Deshmukh Rashtriya Gaurav Gram Sabha Puraskar
 - Gram Panchayat Development Plan (GPDP) Award
 - e-Panchayat Puraskar
 - Child-friendly Gram Panchayat Award

2. **The Supreme Court passed directions for all courts across the country to use video-conferencing for judicial proceedings to maintain social distancing amid the coronavirus pandemic. In this light, critically examine the role of e-courts in speeding up justice delivery?**

Answer

An e-court or Electronic Court means a location in which matters of law are adjudicated upon, in the presence of qualified Judge(s) and which has a well-developed technical infrastructure. In the case of e-court, everything is done in an "**online environment**" through the use of Internet and other Information and Communication Technology (ICT)

The e-courts project has been conceptualized on the basis of the "National Policy and Action Plan for Implementation of ICT in the Indian Judiciary -2005" prepared by the e-committee of the Supreme Court. Further, the Government has initiated **E-Court Integrated Mission Mode Project** with the objective of improving access to justice with the help of technology.

Objectives Includes

- **To make whole judicial system ICT enabled** by putting in place adequate and modern hardware and connectivity
- **Automation of workflow management** in all courts and electronic movement of records from taluka/trial to appeal courts
- **Installation of video conferencing facility** and recording of witness through Video Conferencing
- **Connecting all courts in the country to the National Judicial Data Grid (NJDG)** through WAN and additional redundant connectivity
- **Citizen centric facilities such as electronic filing, e-payment**, use of mobile applications in all courts, touch screen based kiosks in each court complex and full computerisation of State and district level judicial and service academies and centres.

Advantages of E-Courts

- On delivery front, the key advantages is bringing in a justice serving mechanism that is **transparent, efficient, affordable, time saving**, protects the interests of witnesses, reduces the backlog of pending cases and most importantly reduces the number of unscrupulous activities.
- This would be beneficial for both **improving the court processes and rendering citizen-centric services**. E-courts also makes legal processes easier and more user friendly.

- **Easy Retrieval:** The e-courts will also benefit the judicial system and will provide flexible retrieval of stored information. This will *allow judges to view the proceedings of a previous case or to retrieve other important documents at the click of a button.*
- **Data sharing between different courts** and various departments will also be made easy as everything would be available online under the integrated system
- **Democratisation of Information:** In an e-court, the entire work is executed digitally, wherein, the information that is shared and generated is stored as a database and synched to a particular software. This software can be *accessed by litigants, judges and advocates.*
- With the help of video conferencing, **the accused and the witnesses can be made to participate in the proceedings from various locations** other than the courtroom. This will, to a certain extent, reduce the time required to solve the case and will also be cost effective.

Possible Challenges That Could Arise While Setting Up E-Courts

- **Cost Intensive:** Setting up state of the art e-courts will require the deployment of new age technology and in the long run, e-courts may face the issue of lack of funds.
- **Cyber Security Threat:** Though the government has initiated remedial steps to address this problem and formulated the Cyber Security Strategy but it is more on the side of prescribed guidelines alone. The practical and actual implementation of the same is still missing.
- **Infrastructural Bottlenecks:** Non-availability of electricity and interrupted internet connectivity in most of the Talukas/villages.
- **Lack of data on High Court websites:** The availability of basic case details on High Court websites is crucial for the eCourts project
- **Other challenges** include the lack of coordination, communication between various departments, training large number of employees, lack of technical manpower in courts and awareness amongst litigants, advocates and their acceptance to the system change.

Way forward

- **Policy To Encourage Setting up of e-courts:** It is critical to draw up a well-defined and pre-decided framework as it can help in laying a concrete roadmap and direction to the e-courts scheme of India.
- **Deployment Of A Robust Security System** that provides secure access to case information for appropriate parties. The security of e-courts infrastructure and system is of paramount importance.
- **Upgrade The Present State Of Infrastructure:** The present judicial infrastructure does not support establishing the e-court project. The government needs to identify and develop the infrastructure that would be required to support the e-court project.
- **User friendly e-courts mechanism**, which is simple and easily accessible by the common public, will encourage litigants to use such facilities in India
- **Training Of Personnel To Maintain All The e-data.** These include maintaining proper records of e-file minute entries, notification, summons, warrants, bail orders etc. for ready references. Also, conducting training sessions to familiarise the Judges with the e-courts framework and procedure can give a huge impetus to the successful running of e-courts.
- **Creating Awareness around e-courts** through seminars etc can help bringing to light the facilities and the ease that e-courts can bring in.

3. A PIL has been filed in the Supreme Court seeking a direction to the Centre and authorities to pay full wages to MGNREGA workers for the entire period of the nationwide lockdown. In light of this, discuss the major impediments in the successful implementation of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme?

Answer:

The primary objective of MGNREGA was to enhance livelihood security in rural areas along with creation of durable assets such as building roads and canals. The scheme was ranked as the world's largest public works programme by the World Bank in 2015. The scheme provides a social security net for 15 % of our country's population. But on the ground level MGNREGA is not performing as expected.

Major Impediments In The Successful Implementation of MGNREGA:

- **No Guaranteed Employment:** Even though the scheme aims at providing 100 days of guaranteed employment, below 50 days of employment was actually provided on an average at an all-India level
- **Insufficient Budget Allocation:** The fund that centre allocates during the budget proves to be inadequate and more funds are sought by the Rural Development Ministry to finance MGNREGA. Almost every year, more than 80 % of funds get exhausted within the first six months. In the Union Budget 2020-21, the government has allocated Rs 61,500 crore for MGNREGA scheme, which is lower than last year's revised estimates of Rs 71,002 crore **by 13.4 per cent.**
- **Wage Related Issues**
 - **Low Wage Rate:** Currently, MGNREGA wage rates of 17 states are less than the corresponding state minimum wages. The low wage rates have resulted in lack of interest among workers in working for MGNREGA schemes, making way for contractors and middle men to take control, locally.
 - **Regular Payment Delays:** A study by Azim Premji University has found that 78 % of payments were not made on time, and as many as 45 % payments did not include compensation for delayed payment as per guidelines which is 0.05 % per day of the wages earned.
 - **The Banking Puzzle:** The rural banks are highly de-capacitated in terms of staff and infrastructure and thus always remain hugely crowded. Often, the workers do not get their wages during times of need due to the hassle and the cost involved in getting wages from the bank.
 - **Workers Penalised For Administrative Lapses:** The ministry withholds wage payments for workers of states that do not meet administrative requirements within the stipulated time period.
- **Non-payment of unemployment allowance:** There are a huge number of unemployment allowances being shown in the MIS currently. But inaction from the Central government in ensuring payments of the same has shown that the government wants to use the MIS as per its convenience and is not honouring its own database.
- **Corruption:** The increase in corruption and weakening accountability has roots in the excessive dependence of implementation of MGNREGA on technology (real-time MIS being one of them). There is a growing pile of evidence on how real-time MIS has made MGNREGA less transparent for workers, reduced accountability of frontline functionaries and aided in centralisation of the programme.
- **Genuine Job Cards Being Deleted To Meet 100% DBT Targets:** Genuine job cards are being randomly deleted as there is a huge administrative pressure to meet 100 % Direct Benefit Transfer (DBT) implementation targets in MGNREGA and genuine people have been deprived of their due entitlements.

- **Too Much Centralization Weakening Local Governance:** A real-time Management Information System (MIS) -based implementation and a centralized payment system has further left the representatives of the Panchayati Raj Institutions with literally no role in implementation, monitoring and grievance redress of MGNREGA schemes.
- **Administration not honouring local priorities:** Linking MGNREGA to construction of Pradhan Mantri Awas Yojana (PMAY), individual household toilets, anganwadi centres etc have been destroying the spirit of the programme; and gram sabhas & gram panchayats' plans are never honoured. This is a blatant violation of the Act as well.

Conclusion

MGNREGA has served as a lifeline for the poor, with 1 out of every 3 rural household having worked in the programme. However there is a need to create **mass level awareness** about the program and recruitment of **competent and sensitive human resources** should be the part of implementation process to ensure the realization of desired goals of MGNREGA policy. The government must create proper **monitoring and co-ordination system** with less paper work to ensure the quality in work within stipulated time. The states must ensure the effective implementation of MGNREGA in their respective state to ensure **people's right based entitlements** and to achieve the **universal goal of inclusive growth and sustainable development** to enrich the backward regions which are neglected historically

Extra Mile

Management Information System (MIS)

- The online MIS of the MGNREGA is an initiatives of the central government **to bring transparency**. Details of all job cards, muster rolls and wage and material payments can be found on the MIS
- A well designed MIS facilitates the flow of information among various levels and enables setting up of a feedback mechanism for planning and management of a programme, project or a policy.
- The MIS is thus an organized approach of collecting, processing, storing and disseminating data to carry out management functions.
- Over the past few years, however, the Union Ministry of Rural development has increasingly linked the implementation of MGNREGA to the MIS

4. **Recently Facebook and Reliance Industries announced a deal in which the social media giant would invest in Jio Platforms. Highlight the benefits that accrue out of the deal to various stakeholders, along with the concerns around the deal.**

Answer

- Reliance Industries and Facebook recently announced that the social media giant will acquire a 9.99 per cent stake in Jio Platforms, a unit of Reliance Industries (RIL), for \$5.7 billion (Rs 43,574 crore). The investment marks a rare coming together of two giants who have a reputation for market domination.
- Between Jio's last reported subscriber base of 388 million and the 700 million-plus Indian users on the three Facebook platforms – Facebook, WhatsApp and Instagram – their combined reach will be well over a billion, although with considerable overlap.
- As per the deal, Facebook will get a board seat and an observer seat on Jio Platforms. Although the deal is a binding agreement, it will need approval from antitrust watchdog Competition Commission of India.

Benefits for Facebook

- The deal marks Facebook's entry among elite investors in India's technology space, joining the likes of SoftBank, Amazon and Google that have together poured in billions of dollars in Indian tech startups and their own ventures over the years.
- The transaction gives Facebook an opportunity to deepen its presence in India, which is its largest market in terms of users, where Jio has changed the telecom industry with cheap data plans.
- It also gives Facebook access to Jio's bouquet of digital apps. These include in-house apps such as Jio Money, Jio TV, etc in addition to the young startups acquired by Reliance or its subsidiaries across categories such as logistics, e-commerce and artificial intelligence.
- The partnership with Reliance could also help Facebook navigate the regulatory environment in India, where it has faced several issues with the authorities, including for its major initiatives such as WhatsApp Pay and digital currency Libra.

Benefits For RIL

- Back in August 2019, RIL had said the group had prepared a roadmap for becoming a zero net-debt company within 18 months. The Facebook deal significantly contributes to that plan by cutting down about Rs 43,574 crore from its outstanding debt as of Rs 2.92 lakh crore.
- WhatsApp has around 400 million users in India and using WhatsApp's base allows Reliance to promote its services to users of Jio's rival telecom players.
- For Jio, this could mean users staying within its products for most of their online time, and thus emerging as a destination and not just the medium. No other service provider has really been able to do that so far, though all have tried.
- The transaction value also helps with valuation in case Jio wants to go for an IPO in the future.

Big Push To The Indian Retail Sector

- Further, the timing of the deal with Facebook is significant for another reason, as online platforms selling essential goods have suddenly witnessed a rise in demand. For example, before the outbreak, just 1% of the Rs 80,000-crore grocery market in India was represented by online players. After the lockdown, online platforms started to account for 50% of the grocery demand in the country.
- Experts have said the arrangement offers consumers the ability to access the nearest kiranas, or grocery stores, which can provide products and services to their homes by transacting with **JioMart** (Jio's e-tailing business) using WhatsApp. This is where the big opportunity lies for this new alliance, the emergence of WhatsApp as the new super app (the marketplace of the future), one that caters to much more than just people's chatting needs.
- The model has been very successful in other Asian markets like China, Korea and Japan. Apps like WeChat, Line, and Kakao Talk offering everything from gaming to retail commerce.
- The eventual winner will be the small trader who will get an easy opportunity to connect with customers old and new, as well as sell online using a platform they understand.

Concerns Around The Deal

- Yet there are concerns regarding this arrangement. Given the dominant market position of the players, concerns over the market structure and its implications for consumer welfare are bound to arise. The tie-up also raises questions on net neutrality with the possibility of preferential treatment being granted.

- Further, given the data privacy issues highlighted in the past by the Cambridge Analytica episode, for instance, there are apprehensions over the enormous amounts of data that will be collected by these entities, especially when India still does not have a personal data protection law.
- As per RIL, there will be areas that the companies will collaborate in but there will be areas where they will potentially not agree with each other. Facebook, on the other hand, maintained its stance in favour of an open ecosystem for data to flow across boundaries.

Although the deal is a big show of confidence in India's future economic potential even during these trying times and could lead to a digital transformation of India by revitalising the economy in the post pandemic era, the concerns around the deal should be carefully scrutinised and appropriate structures should be put in place to iron them out.

Extra Mile

- Facebook has been trying for years to get a share in the Indian internet market. In 2015, it had experimented with **Free Basics**, which provided free access to basic Internet services as a partnership with service providers. However, facing severe criticism for being discriminatory, it soon pulled out of the idea after differential pricing was disallowed by the telecom sector regulator.
- It had even looked at the possibility of beaming free Internet from the air using a solar-powered drone called **Aquila**, and enabled low cost high-speed Wi-Fi in some remote parts of India with an initiative called **Express Wi-Fi**.
- Data was expensive in those times, and free access to the Internet was viewed as the easiest way to bring the next billion users online.
- Post which, Reliance Jio was launched with data rates so low that they became the industry standard in one of the largest online markets in the world. Jio alone helped bring 388 million users online, well over a third of what Facebook had planned.
- In October 2019, RIL consolidated the digital platform business under a separate subsidiary to mirror the structure of global companies like Alphabet-Google, Tencent and Alibaba which are largely debt-free, making it easier to attract investors into the new entity.

5. The Covid pandemic and the consequent lockdown has badly hurt the Indian economy. In order to mitigate the ill effects, various experts have proposed direct monetisation of government deficit. What is Direct monetisation of government deficit? Delineate the concerns related to it, while highlighting the issues plaguing the financial system.

Answer

- The COVID-19 spread has meant that the Indian economy, which was already slowing down rapidly over the past couple of years, has been impacted badly.
- With a nationwide lockdown, incomes have fallen and so have consumption levels. In other words, the demand for goods and services in the economy has gone down.
- Most estimates suggest that India's GDP will barely grow in the current financial year, that is, if it does not contract, which is likely to be the case in most major economies of the world.

Issues Plaguing The Financial System

- **Transmission of Liquidity:** Reserve Bank of India (RBI) has been trying to increase the liquidity in the financial system by buying government bonds from the financial system. Most banks, however,

are unwilling to give new loans as they are risk-averse. Also, this process of transmission of liquidity further down in the system could take some time.

- **High Fiscal Deficit:** The government's finances were already under stress before going into this crisis, with its fiscal deficit way over the permissible limit. As the economy has come to a standstill, the government will not be getting its revenues, hence, the "general" government's (Centre plus states) fiscal deficit is expected to shoot up to around 15% of GDP when the permissible limit is only 6%. On top of that, if the government provides some kind of a bailout or relief package, it would have to borrow a huge amount, which will further impact the fiscal deficit negatively.
- **Lack Of Borrowing Options:** But for the government to borrow money, the market should have it as savings. Data shows that savings of domestic households have been going down and are barely enough to fund the government's existing borrowing needs. Foreign investors, too, have been pulling out funds and rushing to "safer" economies like the US, and are unwilling to lend in times of such uncertainty. Moreover, as the government borrows more from the market, it pushes up the interest rate, which impacts liquidity transmission negatively.

Direct Monetisation Of Government Deficit

- In spite of the above issues, there is still a solution, which can help the government in these troubled times - the "direct" monetisation of government deficit.
- In direct monetisation, the government deals with the RBI directly — bypassing the financial system — and asks it to print new currency in return for new bonds that the government gives to the RBI.
- Post which, the government would have the cash to spend and ease the stress in the economy through direct benefit transfers to the poor or starting construction of a hospital or providing wage subsidy to workers of small and medium enterprises etc.
- For printing this cash, which is a liability for the RBI (as every currency note has the RBI Governor promising to pay the bearer the designated sum of rupees), it gets government bonds.
- These bonds are an asset for the RBI, as such bonds carry the government's promise to pay back the designated sum at a specified date and since the government is not expected to default, this does not impact the RBI's balance sheet negatively.
- This is different from the "indirect" monetising that RBI does when it conducts the so-called Open Market Operations (OMOs) and/ or purchases bonds in the secondary market.

Issues With Direct Monetisation Of Government Deficit

- The main argument against it is not related so much to its initiation as to its end. Ideally, this tool provides an opportunity for the government to boost overall demand, but if governments do not exit soon enough, this tool also sows the seeds for another crisis.
- Government expenditure using this new money boosts incomes and raises private demand in the economy, which **increase inflation**. A little increase in inflation is healthy as it encourages business activity. However, if the government doesn't stop in time, more and more money floods the market and creates high inflation.
- Moreover, since inflation is revealed with a delay, it is often too late before governments realise they have over-borrowed. Thus, **higher inflation and higher government debt** provide grounds for macroeconomic instability.
- The other argument against direct monetising is that governments are considered **inefficient and corrupt in their spending choices**. Thus, it is likely that in its desire to deal with the ongoing crisis, the govt may resort to inefficient spending, which would hurt the economy further in the long run.

Way Ahead

- Given the current circumstances, India would have to resort to monetising the deficit as such a large increase in expenditure cannot be managed without monetisation of government debt. However, in doing so, it should not forget the lessons from the balance of payments crisis in 1991, and a near-crisis in 2013, which were a result of extended fiscal irresponsibility.
- While there is no ideal level of debt which is mandatory, most economists however believe developing economies like India should not have debt higher than 80%-90% of the GDP. Hence, India should commit to a pre-determined amount of additional borrowing and to reversing the action once the crisis is over. Only such clearly stated fiscal control can retain market confidence in India's economy.

Extra Mile**Examples of Direct Monetization**

- In India, until the year 1997, the RBI used to “automatically” monetize the government's deficit. However, in 1994, Manmohan Singh (former RBI Governor and then Finance Minister) and C Rangarajan, then RBI Governor, decided to end this facility by 1997.
- On April 9, the Bank of England extended direct monetisation facility to the UK government even though the Governor of the Bank of England opposed the move till the last moment.

- 6. Recently US oil markets created history when prices of West Texas Intermediate (WTI) fell to minus \$40.32 a barrel in New York. What led to this record low price? Also highlight the impact of the current fall in crude price on India.**

Answer

- With the world engulfed in Covid-19 pandemic and the lockdown to deal with it, oil markets in the world have been witnessing a freefall, with the US oil market creating history by recording the lowest crude oil price ever known at -\$40.32/barrel. The negative price concerned only contracts for delivery of barrels in May that are traded on so-called futures markets.
- In simplest terms, the negative oil prices means the commodity producers are willing to pay purchasers to take oil off their hands amid fears that most storage facilities will run out of space by the end of May.
- Even before the Covid-19 induced global lockdown, crude oil prices had been falling over the past few months due to the supply demand mismatch. They were closer to \$60 a barrel at the start of 2020 and by March-end, they were closer to \$20 a barrel.
- In the recent past, the OPEC has been working with Russia, as OPEC+, to fix the global prices and supply. By the time the Saudi Arabia and Russia discord was sorted out, under pressure from US President, it was possibly too late.
- Oil-exporting countries decided to cut production by 6 million barrels a day — the highest production cuts — and yet the demand for oil was shrinking by 9 to 10 million barrels a day.

Reasons For The Fall In Price

- Even as global institutions have made massive production cuts, supply still far outstrips the demand. The supply demand mismatch resulted in almost all storage capacity being exhausted. Trains and ships, which were typically used to transport oil, too, were used up just for storing oil.

- The May contracts for WTI, the American crude oil variant, were due to expire on, April 21. As the deadline came near, prices started plummeting.
- This was for two broad reasons. There were many oil producers who wanted to get rid of their oil even at unbelievably low prices instead of choosing the other option — shutting production, which would have been costlier to restart when compared to the marginal loss on May sales.
- From the consumer side, that is those holding these contracts, it was an equally big headache. Contract holders wanted to come out of the compulsion to buy more oil as they realised, quite late in hindsight, that there was no space to store the oil if they were to take the delivery.
- They figured that it would be costly for them to accept the oil delivery, pay for its transportation and then pay for storing it (possibly for a longish period, given the circumstances) especially when there is no storage available than to simply take a hit on the contract price.
- This desperation from both sides — buyers and sellers — to get rid of oil meant the oil prices not only plummeted to zero but also went deep into the negative territory.
- Thus, in short-term, for both — the holders of delivery contract & the oil producers — it was less costly to pay \$40 a barrel and get rid of the oil instead of storing it (buyers) or stopping production (producers).

Impact on India

- The Indian crude oil basket does not comprise WTI — it only has Brent and oil from some of the Gulf countries — so there is no direct impact. But oil is traded globally and weakness in WTI is mirrored in the falling prices of the Indian basket as well.
- There are two ways in which this lower price can help India. If the government passes on the lower prices to consumers, then, whenever the economic recovery starts in India, individual consumption will be boosted.
- If, on the other hand, governments (both at the Centre and the states) decide to levy higher taxes on oil, it can boost government revenues.
- Further, as lower oil prices will impact the economies of oil producing countries in the middle east, they could also affect remittance flows to India.
- To take advantage of the low crude oil prices led by an unprecedented demand crisis in the global market, India is stacking up crude oil for the future and has decided to fill the strategic petroleum reserves (SPR) to their full capacity.

Way Ahead

It is likely that this was a one-off event and will not happen as producers are forced to cut back production further. But one cannot rule out a repeat because, with Covid-19 continuing to spread, demand is falling every day. Hence, eventually, it would be the demand-supply mismatch (adjusted for how much can be stored away) and diplomatic interventions of oil producing nations that will decide the fate of oil prices in the future.

Extra Mile

Strategic Petroleum Reserves

- Petroleum reserves are made to ensure energy security and it becomes more important for India because the country imports a major portion of its oil requirements. In fact, crude oil is the largest portion of India's imports and thus it majorly determines the country's current account.

- The SPR is divided between three locations in southern India (Visakhapatnam, Mangalore, and Padur) and can store about 37 million barrels of oil, equivalent to about 9.5 days of India's oil demand. A portion of the SPR is already filled.
- India plans to completely fill its strategic petroleum reserve (SPR) by the third week of May by moving about 19 million barrels into the sites by then.

WTI and Brent Crude

- West Texas intermediate (WTI), is a grade of crude oil used as a benchmark in oil pricing. This grade is described as light crude oil because of its relatively low density, and sweet because of its low sulfur content. It is the underlying commodity of New York Mercantile Exchange's oil futures contracts.
- WTI is lighter and sweeter, containing less sulfur, than Brent crude, and considerably lighter and sweeter than Dubai or Oman.
- Brent Crude is extracted from the North Sea. It is used to set the price of two-thirds of the world's internationally traded crude oil supplies.

7. Many volunteers have recently come forward to enroll for 'human challenge trials' to fast track the vaccine development process for Covid-19. Throw light on the vaccine development process and human challenge trials along with the ethical concerns associated with human challenge trials.

Answer

- A vaccine is a type of medicine that trains the body's immune system so that it can fight a disease it has not come into contact with before and thus are designed to prevent a disease, rather than treat a disease.
- As laboratories around the world race to develop a vaccine for the novel coronavirus, many people have volunteered to take part in a controversial testing method called human challenge trials.
- The method, which involves intentionally infecting volunteers with the novel coronavirus, is being promoted in order to speed up the process of preparing a vaccine.

Vaccine Development Process

- In most regulatory regimes, vaccines take several years to develop, and their development typically proceeds through three phases of clinical trials.
- In Phase 1, small groups of people receive the trial vaccine. During Phase 2, the clinical study is expanded and the vaccine is given to people who have characteristics (such as age and physical health) similar to those for whom the new vaccine is intended.
- In Phase 3, the vaccine is given to several thousand people and tested for efficacy and safety. During this phase, participants either receive the vaccine or a placebo.
- The efficacy of the vaccine is determined by comparing the prevalence of infection in the group that was administered the vaccine with the one which received a placebo. The hypothesis that those in the vaccine group will be infected significantly less is thus tested.

Human Challenge Trials

- Under human challenge trials, participants of both the vaccine group and placebo group, upon consent, are deliberately exposed to the infection – thus are “challenged” by the disease organism.

- Proponents of the method believe that such trials could save valuable time in developing a Covid-19 vaccine, as researchers would not have to wait for participants to contract the infection under real-world conditions.
- By replacing conventional Phase 3 testing of vaccine candidates, such trials may subtract many months from the licensure process, making efficacious vaccines available more quickly.
- According to experts, such testing would also require significantly less number of people than regular Phase 3 trials, which require thousands of volunteers.

Ethical concerns

- While human challenge trials are not new, they are usually carried out in developing medications for diseases which are **considered less lethal and have been better understood by scientists** over the years, such as malaria.
- Critics have questioned undertaking such trials for Covid-19, a potentially deadly disease for even those who are less at risk, and which researchers are still in the early stages of studying.
- In 2016, WHO emphasised that human challenge studies have been conducted over hundreds of years and have contributed vital scientific knowledge that has led to advances in the development of drugs and vaccines.
- Nevertheless, such research can appear to be in conflict with the guiding principle in medicine to do no harm. Hence, even well documented historical examples of human exposure studies would be considered unethical by current standards.

Thus, it is essential that challenge studies be conducted within an ethical framework in which truly informed consent is given and the value of the information to be gained should clearly justify the risks to human subjects.

8. Although the world has been dealing with various zoonotic diseases, the most recent zoonotic disease has taken the world by storm. What are zoonotic infections? Highlight the reasons for the prevalence of zoonotic infections, along with the ways in which the world can be better prepared to deal with them.

Answer

- A zoonosis (zoonotic disease or zoonoses -plural) is an infectious disease that is transmitted between species from animals to humans. A zoonotic agent may be a bacterium, a virus, a fungus or other communicable disease agent.
- For many zoonotic diseases, livestock serve as a bridge between wildlife and human infections. The inevitable interaction between humans and livestock with wildlife exposes the human species to the risk of spillover of potential pathogens.
- The issue of pathogens crossing species to cause diseases is not a new concept. The WHO estimates that globally, about a billion cases of illness and millions of deaths occur every year from zoonoses.
- According to the United Nations Environment Programme (UNEP), 60% of all infectious diseases in humans are zoonotic, and about 75% of all emerging infectious diseases are zoonotic in nature. **Rodents, Primates and Bats** act as hosts of **three-quarters** of viruses transmitted to humans.
- Among zoonoses that emerged or re-emerged recently, the UNEP counts Ebola, bird flu, Middle East Respiratory Syndrome (MERS), Rift Valley fever, Severe Acute Respiratory Syndrome (SARS), West Nile virus, Zika virus disease, and COVID-19.

Reasons For The Prevalence Of Zoonotic Diseases

- As per UNEP, the reasons for the emergence of zoonotic diseases are changes in the environment ranging from land use change; changes in animals or human hosts; and changes in pathogens, which are programmed to survive, and in the process exploit multiple hosts.
- For instance, bat-associated viruses emerged due to the loss of habitats. The Ebola outbreak in West Africa was reportedly the result of forest losses leading to closer contacts between wildlife and human settlements.
- Similarly, the emergence of avian influenza was linked to intensive poultry farming; and the Nipah virus was linked to the intensification of pig farming and fruit production in Malaysia.
- **Human-induced environmental changes** modify wildlife population structure and reduce biodiversity, resulting in new environmental conditions that favour particular hosts, vectors, and/or pathogens.
- **Changes in weather patterns**, and extreme weather events affect the distribution areas of disease, pathogens and pests.
- Also, **changes in human behaviour**, including travel, conflicts, migration, wildlife trade, urbanisation, and dietary and medical preferences, can result in disease emergence.

Way Ahead

- It is clear that it will be difficult to predict, with current tools, where the next outbreak will come from or when it will be. Growing evidence suggests that outbreaks or epidemic diseases may become more frequent as changes continue to have an impact on the ecosystem, but doing nothing will only let these pathogens flourish, jump hosts and attack humans.
- In perfect ecosystems, all biological systems have a natural capacity to recover and adapt, but the current pace of change may be too fast for systems to do so.
- Thus, the WHO proposes the '**One Health**' approach, which incorporates designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes.
- The areas of work in which a One Health approach is particularly relevant include food safety, the control of zoonoses, and combating antibiotic resistance. Also, the concept helps practitioners understand disease determinants, manage risks and optimise interventions.
- However, it is not just animal-to-human transmission that the world needs to worry about. Human immune systems are equally unprepared for drug-resistant diseases that jump from plants to humans.
- As the world works to control and treat the current pandemic, it must not only be cautious of transmission of disease from the plant kingdom but also work on avoiding future pandemics without disrupting the food supply.

Thus, developing sharper, reliable early warning systems for diseases, along with a global stewardship of nature and biodiversity will go a long way in dealing with zoonotic infections as preserving ecosystem integrity can help regulate diseases by supporting a diversity of species and lead to a harmony in the ecosystem.

Extra Mile

- As the virus causing COVID-19 spreads across the world, various claims have been made about how the virus came into being in the first place. One of the conspiracy theories spreading around is that the virus was manufactured in laboratories and then shipped to nations.

- However, a paper published in the reputed journal Nature Medicine has made it clear that this is a case of zoonoses and the host of the virus was definitely an animal. The analyses clearly show that SARS-CoV-2 is not a laboratory construct or a purposefully manipulated virus.
- Moreover, given the similarity of SARS-CoV-2 to bat SARS-CoV-like coronaviruses, it is likely that bats served as reservoir hosts. Further, Malayan pangolins illegally imported into Guangdong province, contain coronaviruses similar to SARS-CoV-2.

9. With around half the world under a lockdown, there have been reports of growing violence against women. Throw light on this growing menace along with its impact. Also suggest measures to deal with it.

Answer

- With 90 countries in lockdown and four billion people sheltering at home to deal with the global contagion of Covid-19, the world is witnessing another pandemic of growing violence against women.
- In Argentina, Canada, France, Germany, Spain, the United Kingdom, and the United States, government authorities, women's rights activists and civil society partners have flagged increasing reports of domestic violence during the crisis, and heightened demand for emergency shelter.
- The National Commission for Women (NCW) in India, which receives complaints from across the country, has recorded a more than twofold rise in gender-based violence.
- Even before COVID-19 existed, domestic violence was already one of the greatest human rights violations. In the previous 12 months, 243 million women and girls across the world have been subjected to sexual or physical violence by an intimate partner.
- However, confinement is fostering the tension and strain created by security, health, and money worries. And it is increasing isolation for women with violent partners, separating them from the people and resources that can best help them.
- Wide under-reporting of domestic and other forms of violence has previously made response and data gathering a challenge, with less than 40 per cent of women who experience violence seeking help of any sort or reporting the crime. Further, less than 10 per cent of those women seeking help go to the police.
- The current circumstances make reporting even harder, including limitations on women's and girls' access to phones and helplines and disrupted public services like police, justice and social services.
- The lockdown also closes women's avenues to escape violence by relocating to their natal homes or contacting the local police.

Impact

- As the COVID-19 pandemic continues, it is likely to have multiple impacts on women's wellbeing, their sexual and reproductive health, their mental health, and their ability to participate and lead in the recovery of our societies and economy.
- These disruptions may also be compromising the care and support that survivors need, like clinical management of rape, and mental health and psycho-social support, while further fuelling impunity for the perpetrators.
- The global cost of violence against women had previously been estimated at approximately USD 1.5 trillion. If not dealt with, this shadow pandemic will also add to the economic impact of COVID-19.

Measures To Deal With Violence Against Women

- The increase in violence against women must be dealt with urgently with measures embedded in economic support and stimulus packages that meet the gravity and scale of the challenge and reflect the needs of women who face multiple forms of discrimination.
- Shelters and helplines for women must be considered an essential service for every country with specific funding and broad efforts made to increase awareness about their availability.
- Helplines, psychosocial support and online counselling should be boosted, using technology-based solutions such as SMS, online tools and networks to expand social support, and to reach women with no access to phones or internet.
- Grassroots and women's organizations and communities have played a critical role in preventing and responding to previous crises and need to be supported strongly in their current frontline role including with funding that remains in the longer-term.
- Police and justice services must mobilize to ensure that incidents of violence against women and girls are given high priority with no impunity for perpetrators.
- The private sector also has an important role to play, sharing information, alerting staff to the facts and the dangers of domestic violence and encouraging positive steps like sharing care responsibilities at home.

The pandemic is already testing the world in ways most it had never previously experienced, providing emotional and economic shocks that it is struggling to rise above. The violence that is emerging now as a dark feature of this pandemic is a mirror and a challenge to the values of the world, its resilience and shared humanity. Hence, the world must not only survive the coronavirus, but emerge renewed, with women as a powerful force at the centre of recovery.

10. The market can empower Dalits, but old prejudices still pose a problem. In the light of this statement, do you think Dalit capitalism can lead to Dalit empowerment? Justify your answer.

Answer:

Dalit Capitalism refers to the Dalit embracing entrepreneurship and becoming a capitalist or at least, setting up small-scale industries. They carry out their own businesses, welcome the economic reform and globalization and hence themselves become a market force.

Dalit Capitalism: Tool For Empowerment**1. Social Empowerment**

- It will provide **the required social mobility**. The capitalism is changing caste structure much faster than any human being.
- It will help in **perception management** and hence in the **fight against stigmatisation and role stereotyping**. Dalit capitalism ensures that Dalits are not only takers, they are givers. They could also **become role models for the next generation**.
- To confront 'illegitimate dominance of the Caste Order,' **Dalits need to create a middleclass** based on education/white collar jobs/professions.

Steps Taken to promote Dalit Capitalism:

- Launch of the first Dalit venture capital fund.
- Stand Up India initiative,
- Pradhan Mantri Mudra Yojana
- The Dalit Indian Chamber of Commerce and Industry (DICCI), founded in 2005

- It has been observed that caste *mix of employees varies by the caste of the owner.* Hence, Dalit capitalism would ensure that Dalits are adequately represented in the workforce. This, in turn, would have a trickledown effect on education and health aspects of Dalits.

2. Economic Empowerment

- More and more Dalits would be integrated into formal economy. Stigma of untouchability has traditionally kept Dalits out of many industries such as food-related industries.

3. Political Empowerment

- As Dalit capitalism focuses on creation of a Dalit middle class who are educated and financially capable. This in turn would increase the political activism among them.

Challenges

- One of the main problems is the **lack of access to existing business networks.**
- **Markets exist within a societal context.** Caste and community links play a role in various aspects of the Indian market, from securing capital to integration into supply chains. The result leads to “**unfavourable inclusion**” of Dalits in the market.
- **Access to funding** remains biggest challenge for Dalits. NSCFDC’s dismal performance to date is an evident of this.
- The **inherent flaw of capitalism** would further **create a class difference among Dalits.**
- **Poor health and low literacy rates** among Dalits further create problem in creation of skilled manpower needed for the industries.

Way Forward

- **Voluntary actions by large companies** that have expansive supply chains have potential to address the issue of lack of access of existing business networks. The Tata group has been at the forefront of such experiments.
- We need to take radical steps similar to **Malaysian affirmative action programmes** (it directly seeks to redress wealth disparities between Malays and the Chinese by reserving 30% of all business ownership to ethnic Malays).

Conclusion

- Liberalization and political empowerment have changed the Dalit experience and expectations over the past quarter century. Dalit capitalism is the next step forward.
- But for the market to succeed, it will first have to deal with old prejudices and inherent faults of capitalism.

11. The food grain production is touching new heights every year and we are producing more than sufficient to feed our people without relying on external support. However, sufficient food production is not the only criteria to eliminate hunger. Discuss.

Answer

- As per the economic survey, **total food grains production during 2018-19 is estimated at 285.21 million tonnes.** Despite this self-sufficiency in food grains production, the country is home to one-quarter of all undernourished people worldwide.

- According to the Global Hunger report 2019, India ranked 102 among 118 developing nations, worse than all its neighbors except Pakistan.

Various Factors Behind The Worsening Hunger Situation:

- **Poverty Trap:** Poor people do not have enough money to buy or produce enough food. In turn, they tend to be weaker and get trapped into poverty-hunger nexus.
- **Dietary Ignorance:** Due to dietary ignorance, many people do not complement their children's diet with sufficient nutritional components. As a result, we see the incidents of child stunting, child wasting etc.
- **Socio-Cultural Factors** - Hunger in India also has ***age, gender and caste dimensions***. Compared to men, women more often forgo meals to feed their children. This is evident from the World Bank's report which says that 60% of those who are hungry are female.
- **Caste and tribe are structural factors** which predispose certain groups to long term poverty and deprivation which ultimately gets translated into hunger and malnutrition.
- **Politics of Distribution** - According to Amartya Sen, hunger usually arises from food distribution problems, or from governmental policies in the developing world, and not from the insufficiency of food production.
- This is true for India as well. Corruption, leakages, exclusion-inclusion error etc. makes the public distribution system inefficient in addressing the issue of hunger and malnutrition.
- **Food wastage** – Be it the cold storage of Food Corporation of India or the extravaganza shown in marriages and rituals, food/food grains wastages are the common thing in India. These wastages distort the food availability making difficult for poor and vulnerable to buy food from market.
- **Natural Disaster** – Erratic monsoon, incidence of draughts, unseasonal rainfall, cyclones etc. and the recent COVID – 19 pandemics has affected the food grain production and hence affects the food security in India.

Conclusion

- Hunger in India is a complex issue. It is widespread and the causes are different across various regions.
- This multidimensional problem should be addressed by devising a multi-pronged strategy. It is good step that India has launched Swachch Bharat Abhiyan to fight against the hygiene-stunting nexus.
- Also, by widening the social security net and distributing food grains and cooked meal to the vulnerable population during recent pandemics will address the issue of hunger.
- India needs to focus on the outcomes of different programmes in order to achieve the goals of SDGs.

12. While the world is focused on the health and economic threats posed by COVID-19, cybercriminals around the world undoubtedly are capitalizing on this crisis. In this context, discuss the impact of COVID-19 on cybersecurity.

Answer

- The Covid-19 outbreak has curbed the movement of more than half of the world's population. This has pushed the working population to become remote workers, many for the first time.
- Even, the government meetings have shifted to the online mode. The **UK Government has been holding its daily cabinet meetings online.**

- India has held a video conference with **SAARC leaders to brainstorm** means to curb the spread of Covid-19.
- Hence, today we are witnessing a truly digitalised world. However, this has also led to the rise of a plethora of opportunities for malicious actors to exploit the existing vulnerabilities.

Impact of COVID-19 on Cybersecurity

- 1. A rise in COVID 19 related phishing and ransomware attacks** – Attackers are using COVID-19 as bait to impersonate brands and steal credentials for online fraud. Recently, the Indian govt. had to issue a clarification over cyber criminals sending e-mails and WhatsApp messages stating that the government was giving Rs 1,000 to those under the so-called **Corona Sahayata Yojana scheme**.
- 2. Increased security risk from remote working/learning** – Many business and critical entities have **relaxed their geofencing restrictions to allow their personnel to log-in** and work from home. On March 13, one of the Czech Republic's biggest testing laboratories, Brno University Hospital, was hit by a cyberattack.
- 3. Breach of Privacy** – Work from home has led to the increase in usage of different online platforms like Zoom, Cisco WebEx etc.
 - The **video conferencing software Zoom** was found to share the personal details of users with the third party like Facebook.
 - Android applications posing as a genuine COVID-19 tracking map from the Johns Hopkins University for instance **was found to be a spyware linked to a surveillance operation against mobile users in Libya**.
- 4. Influx of cyber criminals** – Globally, companies are downsizing their workforce to cope with the effects of COVID-19. This move would likely encourage the growth of cyber criminals as idle people with internet access.
- 5. Potential delays In Cyber-attack Detection And Response** - The functioning of many security teams is likely to be impaired due to the COVID-19 pandemic thereby making detection of malicious activities difficult.
- 6. Exposed Physical Security** – Many places, especially the rural areas, do not have proper internet connectivity. It may result into employees work from public spaces to utilise power and free internet facilities. This may inadvertently expose the computing facilities (such as mobile phones, laptops etc.) and confidential information it contains to theft or damage.

Conclusion

- Concerns about security are legitimate and should be given due consideration. Not only are businesses being targeted, end-users who download COVID-19 related applications are also being tricked into downloading ransomware disguised as legitimate applications.
- Hence, organisations and governments should work towards putting in place a tailor-made work-from-home cyber defence strategy.

Extra Mile

A. Govt Raises Red Flags Over Video Conference App Zoom

The Union home ministry and **CERT-In** has termed **video conferencing software Zoom** as **unsafe and vulnerable to cybercrimes**.

Why Zoom Has Been Termed As Unsafe

- **Sharing personal data with the third party** - It was found that the app **sends data to social networking website Facebook** even if a user doesn't have an account on it.
- **Zoombombing** - A research published by Checkpoint - a cyber security company - stated that Zoom has witnessed an exponential rise in malicious domain registrations.
- It was also reported that the hackers have **discovered a technique to identify and join active Zoom Meetings**. This phenomenon has been tagged as "Zoombombing", wherein nefarious actors may join calls and broadcast porn or prank videos.
- **Not fully encrypted** - Zoom's server is encrypted similar to the connection between a user's web browser. This form of encryption is called **transport encryption** and is different from E2E. In this case, the **Zoom service itself can access the unencrypted video and audio content of the Zoom meetings**.

Suggestions Provided by Home Ministry

- Keeping the Zoom software patched by its regular updation.
- Using strong and difficult-to-guess passwords for all meetings and webinars, and locking the meeting session once all attendees have joined
- Enabling the waiting room feature, for meetings involving discussion of sensitive information, so that the host can have control over the participants.

Indian Computer Emergency Response Team (CERT-In)

- It is a functional organisation of the **Ministry of Electronics and Information Technology**, Government of India, **to secure Indian cyber space**. It provides **Incident Prevention and Response Services** as well as **Security Quality Management Services**.
- **Objectives:**
 - Preventing cyber attacks against the country's cyber space.
 - Responding to cyber attacks and minimizing damages and recovery time reducing national vulnerability to cyber attacks.
 - Enhancing security awareness among common citizens.

B. India Launches WhatsApp Chatbot

- The Indian government has launched **Whats App Chatbot to curb fake news** being spread **about COVID-19 virus**.
- The WhatsApp chatbot, '**MyGov Corona Helpdesk**', can be accessed by sending a text to +91 90131 51515.
- The chatbot is backed by verified data from the Ministry of Health, and is updated on a real-time basis.
- The chatbot has been developed for the government, free of cost by **Jio Haptik**.
- A Chatbot uses the technology of Artificial Intelligence. It is a computer program designed to **simulate human conversations**.

Need For Such Chatbot

- Misinformation and fake news circulating on social media is fueling public fears around coronavirus.

- The tendency of mass-forwarding messages without verifying content has triggered rumour-mongering and, at times, panic.
- With the Whatsapp user base in India crossing over 400 million, this is an ideal medium to route basic hygiene practices around the virus.

C. Increased Cyber Attack Due to Work From Home

- The assessment report by the National Technical Research Organisation (NTRO) has highlighted that the **number of cyber-attacks in India has increased due to the work from home scenario.**
- It also highlighted the fact that **India's critical sectors may fall prey to inimical forces** which could use relaxations in geofencing restrictions granted to employees working from home to make cyber attacks.
- In view of the lockdown, several critical sector entities have **relaxed their geofencing restrictions to allow their personnel to log-in** and work from home.
- This has increased the attack surface available to threat actors (cyber criminals) from neighbouring countries.

[For detailed discussion on NTRO, please refer the Yellow book on Internal Security]

PRELIMS MCQs

1. Consider the following statements about Basaveshwara:

1. Basaveshwara introduced the public institution of Anubhava Mantapa.
2. Poems written by Basaveshwara on social awareness are called Shrutis.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: A

Explanation:

- Basava Jayanti was recently celebrated on 26th April in the honour of Lord Basaveshwara. He is also known as **Bhaktibhandari** (literally, the treasurer of devotion) or Basavanna.
- Basavanna was a 12th-century statesman, philosopher, poet, **Lingayat saint** in the Shiva-focussed Bhakti movement, and social reformer during the reign of the Kalyani Chalukya/Kalachuri dynasty.
- Basavanna spread social awareness through his poetry, popularly known as **Vachanaas**. He rejected gender or social discrimination, superstitions and rituals.
- He introduced new public institutions such as the **Anubhava Mantapa** (or, the "*hall of spiritual experience*"), which welcomed men and women from all socio-economic backgrounds to discuss spiritual and mundane questions of life, in open.
- Basaveshwara is the first Kannadiga in whose honour a commemorative coin has been minted in recognition of his social reforms.

2. Consider the following statements about Danda Jatra:

1. Danda Jatra is a traditional dance festival organised in the State of Maharashtra.
2. Danda Jatra is held in the month of Chaitra.
3. Only males take part in Danda Jatra.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Answer: B

Explanation:

- Odisha's Ganjam district administration has banned the Meru Jatra festival and congregations related to it at temples on the occasion of Mahavishub Sankranti.

- Meru Jatra marks the end of 21-day-long festival of penance named 'Danda Nata'. Mahavishub Sankranti is also start of the Odia New Year.

Danda Jatra

- Danda Nata or Danda Jatra is one of the most important traditional dance festivals organized in different parts of South Odisha and particularly in the Ganjam District, the heartland of ancient Kalinga Empire.
- The Danda Nata festival is held in the month of Chaitra every year. Only male persons take part in this festival and the participants are known as the **Bhoktas**.

3. Consider the following statements about Lord Mahavira:

- 1. Lord Mahavira is also known as Vardhaman.**
- 2. Lord Mahavira was born in the Ikshvaku dynasty.**
- 3. Lord Mahavira was the first Tirthankara of Jainism.**

Which of the statements given above is/are correct?

- a) 1 and 2 only**
- b) 2 and 3 only**
- c) 1 and 3 only**
- d) 1, 2 and 3 only**

Answer: A

Explanation:

- One of the most important festivals in Jainism, Mahavir Jayanti was recently celebrated on 6th April. The festival marks the birth anniversary of Lord Mahavira.
- Mahavira, also known as Vardhamana, was the **24th tirthankara of Jainism** and was the spiritual successor of 23rd tirthankara Parshvanatha.
- He was born to *King Siddhartha and Queen Trishala* of the **Ikshvaku dynasty**, at the Vaishali district of modern day Bihar.
- After turning 30, he renounced his crown and decided to spend years in exile, away from materialistic things and worldly pleasures. He practiced intense meditation and austerity for almost 12 years before attaining "Kevala Jnana" or omniscience.
- Mahavir taught the vows of ahimsa or non-violence, satya or truth, asteya or non-stealing, brahmacharya or chastity and aparigraha or non-attachment. His teachings were compiled by his chief disciple **Indrabhuti Gautama** as the Jain Agamas.

4. Which of the following are included in the National List of Intangible Cultural Heritage (ICH) of India?

- 1. Oral traditions**
- 2. Performing arts**
- 3. Social practices**
- 4. Practices concerning nature**

5. Traditional craftsmanship

Choose the correct option using the codes below:

- a) 2, 3 and 4 only
- b) 1 and 5 only
- c) 1, 2 and 5 only
- d) 1, 2, 3, 4 and 5 only

Answer: D

Explanation:

- The National List of Intangible Cultural Heritage (ICH) of India was recently launched. It aims to raise awareness about the various intangible cultural heritage elements from different states of India at national and international level and ensure their protection.
- Following UNESCO's 2003 Convention for the Safeguarding of the Intangible Cultural Heritage, this list has been classified into **five broad domains** in which intangible cultural heritage is manifested:
 - Oral traditions and expressions, including language as a vehicle of the intangible cultural heritage
 - Performing arts
 - Social practices, rituals and festive events
 - Knowledge and practices concerning nature and the universe
 - Traditional craftsmanship
- The present items in the list have been collated from the projects sanctioned under the scheme for 'Safeguarding the Intangible Cultural Heritage and Diverse Cultural Traditions of India' formulated by the Ministry of Culture.
- Beginning in 2013, the scheme aims at reinforcing the diverse cultural expressions that are necessary for the continuous evolution and interpretation of intangible cultural heritage in India, as well as their transmission to future generations.
- It also includes the 13 elements of India that have already been inscribed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity.

UNESCO's List of Intangible Cultural Heritage

- UNESCO established its Lists of Intangible Cultural Heritage with the aim of ensuring better protection of important intangible cultural heritages worldwide and the awareness of their significance.
- This list is published by the Intergovernmental Committee for the Safeguarding of Intangible Cultural Heritage. It was established in 2008 when the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage took effect.
- The programme compiles two lists. The longer, Representative List of the Intangible Cultural Heritage of Humanity, comprises cultural practices and expressions that help demonstrate the diversity of this heritage and raise awareness about its importance.
- The shorter, List of Intangible Cultural Heritage in Need of Urgent Safeguarding, is composed of those cultural elements that concerned communities and countries consider to require urgent measures to keep them alive.

5. Consider the following statements about Ordinance making power of President

1. Ordinance-making is a discretionary power of the President.
2. An ordinance can be retrospective, that is, it may come into force from a back date.

Which of the following statements is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: B

Explanation

- President of India gave his assent to an ordinance to effect a 30% salary cut of all parliamentarians including the Prime Minister.
- The ordinance - an amendment to **Members of Parliament Act, 1954**, will **reduce the allowances and pension by 30 %** with effect from April 1, 2020. The reduction will be applicable for a year. The money will go to the **Consolidated Fund of India**.

Ordinance Making Power Of President

- Article 123 of the Constitution empowers the President to promulgate ordinances during the recess of Parliament. But, the exercises of this power is subject to the following **four limitations**:
 1. He can promulgate an ordinance only when both the Houses of Parliament are not in session or when either of the two Houses of Parliament is not in session. An ordinance can also be issued when only one House is in session because a law can be passed by both the Houses and not by one House alone.
 2. He can make an ordinance only when he is satisfied that the circumstances exist that render it necessary for him to take immediate action
 3. His ordinance-making power is coextensive as regards all matters except duration, with the law-making powers of the Parliament. This has two implications: (a) An ordinance can be issued only on those subjects on which the Parliament can make laws. (b) An ordinance is subject to the same constitutional limitation as an act of Parliament. Hence, an ordinance cannot abridge or take away any of the fundamental rights.
 4. Every ordinance issued by the President during the recess of parliament must be laid before both the Houses of Parliament when it reassembles. If the ordinance is approved by both the Houses, it becomes an act. If Parliament takes no action at all, the ordinance ceases to operate on the expiry of six weeks from the reassembly of Parliament.
- The President can also withdraw an ordinance at any time. However, **his power of ordinance-making is not a discretionary power, and he can promulgate or withdraw an ordinance only on the advice of the Council Of Ministers** headed by the Prime Minister.
- **An ordinance like any other legislation, can be retrospective**, that is, it may come into force from a back date. It may modify or repeal any act of Parliament or another ordinance. It can alter or amend a tax law also. However, it cannot be issued to amend the Constitution.

6. Consider the following statements about Attorney General (AG) of India

1. The term of office of the AG is fixed as 5 years by the Constitution.
2. Constitution does not contain the procedure and grounds for his removal.

Which of the statements given above is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: B

Explanation:

- Former Attorney General of India and senior advocate Ashok Desai died in Mumbai.
- Desai dealt with several landmark cases including decriminalisation of homosexuality, Narmada dam, Illegal Migrants (Determination by Tribunal) Act in Assam, and the Vineet Narain case on investigation into corruption allegations against top public officials.
- In 2001, he was awarded the Padma Bhushan and the Law Luminary Award.

About Attorney General (AG) of India

- The Constitution (Article 76) has provided for the office of the Attorney General for India. He is the **highest law officer in the country**
- AG is **appointed by the President**. He must be a person who is **qualified to be appointed a judge of the Supreme Court**.
- **The term of office of the AG is not fixed by the Constitution**. Further, the Constitution **does not contain the procedure and grounds for his removal**. He holds office during the pleasure of the president. This means that he may be removed by the president at any time. He may also quit his office by submitting his resignation to the president. Conventionally, he resigns when the government (council of ministers) resigns or is replaced, as he is appointed on its advice.
- The **remuneration of the AG is not fixed by the Constitution**. He receives such remuneration as the president may determine.
- He has the **right to speak and to take part in the proceedings of both the Houses of Parliament** or their joint sitting and any committee of the Parliament of which he may be named a member, but without a right to vote.
- Attorney General is not a full-time counsel for the Government. He **does not fall in the category of government servants**.

7. Consider the following statements about Sixth Schedule of the Constitution

1. It contains special provisions for the administration of tribal areas in all the north-eastern states of India.
2. The Governor is empowered to organise and re-organise the autonomous districts in the Sixth schedule areas.

Which of the statements given above is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: B

Explanation:

- Assam's **Bodoland Territorial Area Districts (BTAD)** was placed under the **Governor's Rule** after the **expiry of the five-year term of the tribal council** that governs it. Election to the council had been deferred because of the COVID-19 pandemic.
- The State's Governor is the constitutional head of the BTAD that falls under the **Sixth Schedule of the Constitution** and is administered by the Bodoland Territorial Council (BTC).

About Sixth Schedule

- The Constitution, under Sixth Schedule, contains special provisions for the administration of **tribal areas in the four north-eastern states of Assam, Meghalaya, Tripura and Mizoram**
- The tribal areas in the four states of Assam, Meghalaya, Tripura and Mizoram have been constituted as autonomous districts. But they **do not fall outside the executive authority of the state concerned**.
- **The Governor is empowered to organise and re-organise the autonomous districts**. If there are different tribes in an autonomous district, the Governor can divide the district into several autonomous regions.
- Each autonomous district has a **district council consisting of 30 members**, of whom four are nominated by the Governor and the remaining 26 are elected on the basis of adult franchise. The **elected members hold office for a term of five years** (unless the council is dissolved earlier) and nominated members hold office during the pleasure of the Governor. Each autonomous region also has a separate regional council.
- The district and regional councils administer the areas under their jurisdiction. The district and regional councils within their territorial jurisdictions can constitute village councils or courts for trial of suits and cases between the tribes. These councils are also empowered to assess and collect land revenue and to impose certain specified taxes.
- The district council can establish, construct or manage primary schools, dispensaries, markets etc. It can also make regulations for the control of money lending and trading by non-tribals. But, such regulations require the assent of the Governor.
- **The acts of Parliament or the state legislature do not apply to autonomous districts** and autonomous regions or apply with specified modifications and exceptions.
- The governor can appoint a commission to examine and report on any matter relating to the administration of the autonomous districts or regions.

8. Consider the following statements about Dearness Allowance:

1. **The calculation of Dearness Allowance is based on the All India Consumer Price Index (AICPI) for the past 12 months.**
2. **Dearness allowance is revised twice every year.**

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation

- The Finance Ministry has issued an order freezing the Dearness Allowance (DA) to the Central government employees and Dearness Relief (DR) to Central government pensioners at current rates till July 2021. However, DA and DR at current rates will continue to be paid.
- The decision has been taken considering that there is a need for major increase in the expenditure on health as well as on welfare measures for various affected sections of society, including the poor and vulnerable due to Covid-19.
- According to sources, the combined savings on account of freezing of these instalments of DA and DR to central government employees and pensioners would be Rs 37,530 crore in the current financial year and 2021-22.
- Generally, the states follow the Centre order on DA and DR. Hence, it is estimated that the savings on suspension of these instalments of DA and DR of state government employees and pensioners will be Rs 82,566 crore. Thus, the combined savings of the Centre and states will be Rs 1.20 lakh crore.

DA and DR

- Dearness allowance is usually received by government employees and pensioners to compensate for the rising inflation. The DA is revised twice during the year in the month of January and July.
- The DA is calculated based on a percentage of the basic salary and is part of the other allowances that a government or a government-owned company's employee gets.
- The DA/DR increase are in accordance with the accepted formula, which is based on the recommendations of the 7th Central Pay Commission. It is calculated based on the All-India Consumer Price Index (AICPI) for the past 12 months.

9. Consider the following statements about Kisan Rath app:

1. Kisan Rath app will facilitate farmers to find transport facilities for farm produce.
2. Kisan Rath app is developed by the National Informatics Centre.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation

- The Centre has launched Kisan Rath Mobile App that will facilitate farmers and traders to identify suitable transport facilities for the movement of farm produce during coronavirus lockdown. The app will be made available in 8 languages and is ready for pan India use.
- Developed by the National Informatics Centre, Kisan Rath app will facilitate farmers and traders in searching for transport vehicles for primary and secondary transportation for movement of agriculture and horticulture produce.
- Primary transportation include movement from farm to mandis, food produce collection centre and warehouses while secondary transportation would include movement from mandis to intra-state and inter-state mandis, processing units, railway station, warehouses and wholesalers.
- Highlighting how the App will work, the Ministry informed that the consignors — farmer, FPOs, buyer/trader — will place a requirement for transportation which will be disseminated to transport aggregators in the market, who in turn interface with truckers and fleet owners for obtaining a competitive quote.
- Then the quote by truckers will be passed back to the consignor. After this, the consignor will directly negotiate off line with the trucker and finalize the deal. The consignor can also share their feedback and give ratings to the truckers on the app.

Benefits

- The rating would help the consignors in the country to have the choice to find a suitable transport facility to transfer their agriculture produce.
- The app will also help in giving boost to Inter-mandi and Inter-State trade of agriculture and horticulture produce in the country along with reducing wastage and contributing to better pricing of perishable commodities.

10. Consider the following statements about National Infrastructure Pipeline:

1. NIP covers only greenfield projects.
2. NIP includes private sector participation in projects.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: B

Explanation

- The Task Force on National Infrastructure Pipeline (NIP) has submitted its Final Report on NIP for FY 2020-25 to the Union Minister for Finance & Corporate Affairs. The task force was set up after the PM, in his Independence Day speech last year, highlighted Rs 100 lakh crore worth of infra investment over the next five years to make India a \$5 trillion economy.
- The Summary Report of the Task Force on National Infrastructure Pipeline had already been released by the Finance Minister in December, 2019.

- The summary report had pointed that critical step in addressing decreasing private sector participation in infrastructure can be institutionalising dispute resolution mechanism to efficiently resolve disputes related to PPP projects.
- It further stated that investments must be made in the institutions created under The Commercial Courts Act 2015, The Specific Relief (Amendment) Act 2018, and the New Delhi Arbitration Centre Act 2019 for speedy resolution.

National Infrastructure Pipeline

- NIP is a first-of-its-kind, whole-of-government exercise to provide world-class infrastructure across the country, and improve the quality of life for all citizens. It aims to improve project preparation, attract investments (both domestic and foreign) into infrastructure, and will be crucial for target of becoming a \$5 trillion economy by FY 2025.
- The Final Report of NIP Task Force has projected total infrastructure investment of Rs 111 lakh crore during the period FY 2020-25. The NIP captures all projects — **greenfield or brownfield**, under implementation or under conceptualisation — costing greater than Rs 100 crore per project.
- While Centre and states are expected to have almost equal share in implementing NIP, **private sector contribution is expected around 21 %**.
- Out of the total expected capital expenditure of Rs 111 lakh crore, projects of Rs 44 lakh crore (40 per cent of NIP) are under implementation, projects worth Rs 33 lakh crore (30 per cent) are at conceptual stage and projects worth Rs 22 lakh crore (20 per cent) are under development.
- Of the total project capital expenditure, sectors such as energy (24 %), urban (17 %), railways (12 %) and roads (18 %) are expected to contribute nearly 70 % of the infra investments in India.

Recommendations

- In addition to updating existing sectoral policies, the Final Report also identifies and highlights a set of reforms to scale up and propel infrastructure investments in various sectors throughout the country.
- Aggressive push towards asset sales, monetisation of infrastructure assets, setting up of development finance institutions and strengthening the municipal bond market are some measures suggested to boost infrastructure investments.
- Further, the Task Force has recommended for three Committees to be setup:
 - A Committee to monitor NIP progress and eliminate delays;
 - A Steering Committee in each Infrastructure ministry level for following up implementation; and
 - A Steering Committee in Department of Economic Affairs for raising financial resources for the NIP.

11. Consider the following statements about Software Technology Parks of India:

- 1. STPI is an autonomous society under Ministry of Commerce and Industry.**
- 2. STPI acts as a single window in providing services to software exports.**

Which of the statements given above is/are correct?

- a) 1 only**
- b) 2 only**
- c) Both 1 and 2**
- d) Neither 1 nor 2**

Answer: B

Explanation

- In a major boost to the information technology (IT) and IT-enabled services (ITeS) sector, the government will provide relief from payment of rental to the small IT units operating out of the Software Technology Parks of India (STPI), in view of the challenges due to the covid-19 outbreak and consequent lockdown.
- This initiative will provide benefit to nearly 200 IT-ITeS MSMEs, operating from these 60 STPI centres. The effort is also in the larger interest of around 3,000 IT-ITeS employees who are directly supported by these units.

STPI

- Software Technology Parks of India was set up in 1991 as an autonomous society under the Ministry of Electronics and Information Technology (MeitY).
- At present, a total of 60 STPI centres/sub-centres are operational across the country, out of which 51 centres are in Tier II and Tier III cities.
- STPI acts as 'single-window in providing services to the software exporters. It has played a key developmental role in the promotion of software exports.
- STPI has been implementing the Software Technology Park (STP) scheme and the Electronics Hardware Technology Park (EHTP) scheme for the promotion of IT/ITES industry.
- The phenomenal success of the IT-ITES industry has been possible, due to pivotal role played by the STP Scheme, designed to promote the software industry and growth of startups and SMEs without any locational constraints.
- The EHTP Scheme was launched to entrepreneurs in establishing manufacturing units of the electronic hardware equipment. It promotes setting up Hardware Technology Parks anywhere in India to export their produced electronics goods.

12. Consider the following statements about Ways and Means Advances (WMA)

1. WMA is used to fund States to help them to deal with temporary mismatch in cash flows.
2. Borrowings through WMA are to be repaid within a year.
3. Normal WMA funding is provided at the repo rate.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Answer: C

Explanation:

The Reserve Bank of India (RBI) has hiked the limit of Ways and Means Advances (WMA) facility of the central government, allowing it to borrow up to Rs 2,00,000 crore from the central bank to meet the short-term liquidity requirements. The earlier limit was Rs 1,20,000 crore.

Ways and Means Advances

- WMA is a facility for both the Centre and states to borrow from the RBI. These borrowings are meant purely to help them to tide over temporary mismatches in cash flows of their receipts and expenditures.
- Section 17(5) of the RBI Act, 1934 authorises the central bank to lend to the Centre and state governments subject to their being repayable “**not later than three months** from the date of the making of the advance.
- The interest rate on normal WMA is the **RBI’s repo rate**, which is basically the rate at which it lends short-term money to banks.
- The governments are, however, allowed to draw amounts in excess of their WMA limits, called **Special Drawing Facilities**. The interest on such overdraft is 2 percentage points above the repo rate. Further, no state can run an overdraft with the RBI for more than a certain period.

Need For The Relaxation

- The financial position of states was precarious even before the lockdown. The gross fiscal deficit of 22 states, as per latest available data, rose from 2.4% of their GSDP (gross state domestic product) in 2018-19 to 2.9% in 2019-20, with the corresponding revenue deficit ratio also climbing from 0.1% to 0.7%.
- Moreover, gross government market borrowings shot up from Rs 10,49,323 crore (Centre: Rs 571,000 crore, States: Rs 478,323 crore) in 2018-19 to Rs 13,44,521 crore (Centre: Rs 710,000 crore, States: Rs 634,521 crore) in 2019-20.
- Given the current pressure on revenues as well as expenditures – not to speak of uncertainty over the COVID-19 outbreak’s “depth, spread and duration”- these numbers are likely to show further deterioration in 2020-21.
- With economic activity at a near standstill, there is hardly any money coming in from GST, petroleum products, liquor, motor vehicles, stamp duty or registration fee. At the same time, the states are also incurring the bulk of the on-the-ground expenditures for combating the novel coronavirus.
- In a scenario where their expenses are real, mounting and cannot be deferred, even as revenues are collapsing and uncertain, the states are facing an unprecedented cash crunch.

13. Consider the following statements about Mutual Funds:

1. **A mutual fund is an investment instrument that invests in various asset classes such as equity, debt, gold and foreign securities.**
2. **An equity mutual fund attracts a long term capital gains tax only after a holding period of 3 years.**
3. **In India, mutual funds are regulated by SEBI.**

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Answer: C

Explanation:

- Franklin Templeton Mutual Fund, the ninth largest in the country, has jolted investors with its decision to wind up six yield-oriented managed credit funds. The fund house said that redemption pressures, coupled with reduced liquidity in the bond markets, had compelled it to take this decision.
- It essentially means that Franklin Templeton MF will first liquidate the assets in the schemes and then return the money to investors. With the market situation tough for now, investors may not get an immediate exit.
- As per the experts, the fund house may find it difficult to get a buyer for the low-rated assets in the portfolio, so investors may have to wait. On the other hand, if the fund house pushes hard to get new buyers for those assets, it will go at a substantial haircut, which would mean a big loss for investors on their capital investment.

Credit Risk Funds

- Credit risk funds are debt funds that play on the principle of high-risk-high-reward. By definition, credit funds invest 65 per cent of the portfolio in bonds that are AA rated or below.
- While higher-rated bonds of companies are more secure and offer lower interest rates, credit risk funds generally invest in lower-rated bonds which offer higher return but also carry a higher risk.
- The managers of most credit risk funds have been seen chasing high yields and ignoring the associated higher risk. This strategy worked well when the external environment was good — the economy witnessing higher growth rates, and no undue pressures on the liquidity front.
- In such times, when credit funds were exposed to companies with a weaker balance sheet, chances of default were low. However, when there is stress in the economy, and even strong companies are finding it tough to raise funds, companies with a weaker balance sheet and higher leverage (AA rated and below) are most vulnerable.

RBI Bailout

- RBI has announced a special liquidity window of Rs 50, 000 crore to bail out mutual funds hit by the turmoil in the debt fund segment.
- Under the special liquidity facility for mutual funds (SLF-MF), the RBI will conduct repo operations with a tenor of 90 days at the fixed repo rate. Funds availed under the SLF-MF will be used by banks exclusively for meeting the liquidity requirements of MFs.
- The RBI's liquidity offer is expected to bring some degree of comfort in the debt market which is under huge redemption pressure, especially in the credit risk fund category which has assets of over Rs 55,000 crore.

Mutual Funds

- A mutual fund is an investment instrument that pools in money from different investors and invests the collected corpus in a set of different asset classes such as equity, debt, gold & foreign securities.
- In India, Mutual Funds are regulated by SEBI. As per SEBI, mutual funds can be broadly classified into 3 categories – Equity Funds, Debt Funds and Hybrid Funds.
- In the case of equity mutual funds, a holding period of 12 months or more is regarded as long term. However, in the case of debt funds, the investment is considered long term if the holding period exceeds 36 months. Based on the holding period, the long term/short term capital gains tax is applicable.

14. Consider the following statements about E-Way bills

1. E-Way bill is used to check tax evasion in the GST regime.
2. E-way bill is used for intra state as well as inter states movement of goods.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation

- With trucks stuck at national highways due to the lockdown, the government has extended the validity of e-way bills, whose expiry date fell between March 20 and April 15 till April 30.
- Electronic Way Bill (E-Way Bill) is basically a compliance mechanism wherein by way of a digital interface the person causing the movement of goods uploads the relevant information prior to the commencement of movement of goods and generates e-way bill on the GST portal.
- The e-way bill system offers the technological framework to track intra-state as well as inter-state movements of goods of value exceeding Rs 50,000, for sales beyond 10 km in the new Goods and Services Tax (GST) regime.
- Under the e-way bill system, there is no need for a separate transit pass for every state — one e-way bill is valid throughout the country for the movement of goods. Tax officials have the power to scrutinise the e-way bill at any point during transit to check tax evasion.

15. Consider the following statements:

1. NEER is an index that measures the value of a currency against a weighted average basket of currencies.
2. RBI accounts for Consumer Price Index while calculating REER.
3. REER is calculated on the basis of NEER.

Which of the statements given above is/are correct?

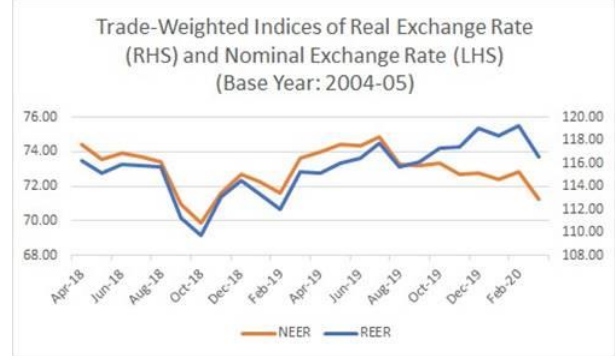
- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Answer: D

Explanation:

- The exchange rate of the rupee can be an apt marker on the state of the Indian economy's competitiveness vis a vis other countries. Essentially, a currency's exchange rate vis-a-vis another currency reflects the relative demand among the holders of the two currencies. This demand, in turn, depends on the relative demand for the goods and services of the two countries.

- If the US dollar is stronger than the rupee, then it shows that the demand for dollars (by those holding rupee) is more than the demand for rupees (by those holding dollars).
- Typically, stronger economies have stronger currencies. For instance, the US economy is relatively stronger than India's and this is reflected in one US dollar being equal to around 76 rupees.
- But the US is not the only other country in the world; India trades with many other countries. To have a better understanding of the Indian economy's overall competitiveness, one has to look at how the rupee is behaving with its major trade partners.



NEER and REER

- Hence, the RBI tabulates the rupee's Nominal Effective Exchange Rate (NEER) in relation to the currencies of 36 trading partner countries. This is a weighted index — that is, countries with which India trades more are given a greater weight in the index. A decrease in this index denotes depreciation in rupee's value; an increase reflects appreciation.
- As the chart shows, in NEER terms, the rupee has depreciated to its lowest level since November 2018. The rupee has been steadily losing value — showing the Indian economy's reducing competitiveness— since July 2019.
- There is one more measure that is even better at capturing the actual change. This is called the Real Effective Exchange Rate (REER) and is essentially an improvement over the NEER because it also takes into account the domestic inflation in the various economies.
- REER is the weighted average of nominal exchange rates, adjusted for inflation. Hence, REER is calculated on the basis of NEER.
- Earlier, RBI used to provide the REER index using the Wholesale Price Index (WPI) for India and CPI for partner countries. However, with the availability of all-India CPI index for India, RBI now computes and provides data on REER using CPI for India.
- Even in REER terms, the rupee has depreciated in March and fallen to its lowest level since September 2019. As the graph shows, the difference between trends of NEER and REER was due to India's domestic retail inflation being lower relative to the other 36 countries. As domestic inflation started rising, the REER, too, started depreciating like the NEER.

16. Consider the following statements about the International Labour Organization (ILO):

1. ILO was created as a part of the Treaty of Versailles.
2. ILO's headquarters is in Geneva.
3. ILO has been awarded the Nobel Peace Prize.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Answer: D

Explanation:

The ILO recently released the ILO Monitor third edition: COVID-19 and the world of work.

Highlights

- Globally, there are some 3.3 billion workers and two billion have jobs in the informal economy, the most vulnerable workers in the labour market. As per the report, almost 1.6 billion workers in the informal economy, nearly half of the global workforce, face an immediate danger of losing their livelihoods due to the coronavirus pandemic.
- Total working hours in the second quarter are expected to be 10.5% lower, equivalent to 305 million full-time jobs, than the last pre-crisis quarter, with the biggest declines forecast for the Americas, Europe and Central Asia.
- Due to lockdowns, these workers globally have seen a 60 % drop in income during the first month of the crisis. This translates into a more than 80 per cent decline in Africa and the Americas, 70 % in Europe and Central Asia, and 21.6 % in Asia and the Pacific.
- The worst-hit sectors are manufacturing, accommodation and food services, wholesale and retail trade, and real estate and business activities.

Measures Suggested

- The ILO calls for urgent, targeted and flexible measures to support both workers and business, particularly smaller enterprises and those in the informal economy.
- Measures for economic reactivation should follow a job-rich approach, backed by stronger employment policies and institutions, better-resourced and comprehensive social protection systems.
- The ILO also stressed that international coordination on stimulus packages and debt relief measures will be critical to making recovery effective and sustainable.

ILO

- ILO was created in 1919, as part of the Treaty of Versailles that ended World War I. In 1946, the ILO became a specialized agency of the newly formed United Nations, which made it the first and the oldest specialised agency of the United Nations whose mandate is to advance social and economic justice through setting international labour standards.
- Headquartered in Geneva, the ILO received the Nobel Peace Prize in 1969, for improving fraternity and peace among nations, and pursuing decent work and justice for workers

17. Yanomami tribe is indigenous to:

- a) Meghalaya
- b) Nagaland
- c) Arunachal Pradesh
- d) None of the above

Answer: D

Explanation

- A Yanomami indigenous boy has died, after contracting COVID-19, in Brazil raising fears for the Amazon tribe, which is known for its vulnerability to disease.

- Brazil is home to an estimated 800,000 indigenous people from more than 300 ethnic groups.
- Indigenous people in Amazon rainforest are particularly vulnerable to imported diseases because they have been historically isolated from germs against which much of world has developed immunity.

Yanomami Tribe

- The Yanomami, also known as South American Indians, speakers of a **Xirianá language** are known for their face paint and intricate piercings.
- They number about 27,000 and live in Amazon rainforest on the border between Venezuela & Brazil.
- The Yanomami practice **slash-and-burn agriculture** and live in small, scattered, semi-permanent villages.
- Largely isolated from the outside world until the mid-20th century, they were devastated by disease such as measles and malaria in the 1970s.



18. Consider the following statements about Swachhata App:

1. Swachhata App is an initiative of the Swachh Bharat Mission in association with the Ministry of Drinking Water and Sanitation.
2. Swachhata App is functional in both Urban as well as Rural areas.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: D

Explanation

- The **Ministry of Housing and Urban Affairs** has launched the revised version of the existing Swachhata app.
- This app has now been modified and strengthened further in order to enable citizens to get their COVID-related complaints redressed by their respective ULBs.
- The revised version of the app has additional categories which include request for fogging/sanitation, food, shelter, medicine, assistance for patient transport and waste pickup from quarantine area. It also has provisions for reporting of suspect cases, violation of quarantine and lockdown.
- The app, a highly popular grievance redressal tool for citizens under the ambit of the Swachh Bharat Mission (Urban), already has over 1.7 Crore+ urban users across the country.

Swachhata App

- It is an initiative of the Swachh Bharat Mission in association with the Ministry of Housing and Urban Affairs and is applicable for all the 4041 towns and cities of India.
- The app can pinpoint the location of the complaint with accuracy using the geo-location of the picture, which leads to faster resolution of the complaint.

- It serves as an effective digital tool enabling citizens to play an active role in the Swachhata of their cities and increase accountability on the part of Urban Local Bodies (ULBs) in resolving Swachh Bharat complaints.
- It is a quantum leap in how complaints and grievances are being redressed by Municipal Corporations in India, as the app amplifies citizen voices and helps build communities that can stay engaged during the course of the Swachh Bharat movement.

19. YUKTI portal has been launched by which Ministry

- a) Ministry of Rural Development**
- b) Ministry of Human Resource and Development**
- c) Ministry of Skill Development and Entrepreneurship**
- d) Ministry of Science and Technology**

Answer: B

Explanation:

- The Ministry of HRD has launched a web-portal YUKTI (Young India Combating COVID with Knowledge, Technology and Innovation).
- It is a unique portal and dashboard to monitor and record the efforts and initiatives of MHRD. The portal intends to cover the different dimensions of COVID-19 challenges in a holistic and comprehensive way.
- In these trying times, the Ministry's primary aim is to keep the academic community healthy, both physically & mentally and to enable a continuous high-quality learning environment for learners. The portal is an effort of the Ministry to achieve this goal.
- It will establish a two-way communication channel between the Ministry of HRD and the institutions so that the Ministry can provide the necessary support system to the institutions.
- It will cover the various initiatives and efforts of the institutions in academics, research especially related to COVID, social initiatives by institutions and the measures taken for the betterment of the total wellbeing of the students.
- It will help in critical issues related to student promotion policies, placements related challenges and physical and mental well-being of students in these challenging times.
- The portal will cover both qualitative and quantitative parameters for effective delivery of services to the academic community at large. Further, it will allow various institutions to share their strategies for various challenges which are there because of the unprecedented situation of COVID-19 and other future initiatives.

20. Consider the following statements about SVAMITVA scheme

- 1. SVAMITVA scheme provides property validation solution for rural India.**
- 2. SVAMITVA scheme is a collaborative effort of Ministry of Panchayati Raj and Survey of India.**

Which of the statements given above is/are correct?

- a) 1 only**

- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation:

- The Prime Minister recently announced SVAMITVA (**S**urvey of **V**illages **A**nd **M**apping with **I**mproved **T**echnology in **V**illage **A**reas) scheme that has the potential to change the dynamics of rural areas.
- The scheme - a collaborative effort of the Ministry of Panchayati Raj, State Panchayati Raj Departments, State Revenue Departments and Survey of India - aims to provide an integrated **property validation solution for rural India**, engaging the latest Drone Surveying technology, for demarcating the inhabitant (Aabadi) land in rural areas.
- The survey will be done across the country in a phase-wise manner over a period of four years - from 2020 to 2024, in which about 6.62 lakh villages in the country will be eventually covered.
- The pilot phase (2020-21) will be implemented in six states - Haryana, Karnataka, Madhya Pradesh, Maharashtra, Uttar Pradesh and Uttarakhand.

Need Of The Scheme

- The need for this Yojana was felt since several villagers in the rural areas **don't have papers proving ownership of their land**.
- In most states, survey and measurement of the populated areas in the villages has not been done for the purpose of attestation/verification of properties.

Features

- The residential land in villages will be **measured using drones to create a non-disputable record**. Drones will draw a **digital map of every property** falling within the geographical limits of a village and demarcate the boundaries of every revenue area.
- **Property card for every property** in the village will be prepared by states using accurate measurements delivered by drone-mapping. These cards will be given to property owners and will be recognised by the land revenue records department.
- The delivery of property rights through an official document will enable villagers to **access bank finance** using their property as collateral.
- **The accurate property records** can be used for **facilitating tax collection, new building and structure plan, issuing of permits** and for **thwarting attempts at property grabbing**. The money generated from the local taxes will be used to **build rural infrastructure and facilities**
- **Freeing the residential properties** including **land of title disputes** and the creation of an official record is likely to result in appreciation in the market value of the properties.
- The scheme will be carried out in close coordination with the Central Panchayati Raj ministry, Survey of India, Panchayati Raj departments and Revenue departments of various states.

21. Consider the following statements about BCG vaccine:

1. **BCG vaccine is used against tuberculosis.**
2. **BCG vaccine is developed using Mycobacterium Bovis, commonly found in cows.**

3. BCG vaccine is included in the Universal Immunisation Programme in India.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Answer: D

Explanation:

- Worldwide the scientific community across the world has been discussing the efficacy of BCG vaccine on Covid-19. Researchers from the New York Institute of Technology (NYIT) analysed the global spread of COVID-19, correlated it with data from the world BCG Atlas that shows which countries have BCG vaccine coverage.
- They came to the conclusion that countries with a policy for universal BCG vaccination have had a lower number of cases than those like the US, where universal BCG vaccination was discontinued after the incidence of TB came down.
- Italy, where the COVID-19 mortality is very high, never implemented universal BCG vaccination. On the other hand, Japan had one of the early cases of COVID-19 but it has maintained a low mortality rate despite not implementing strict forms of social isolation. Japan has been implementing BCG vaccination since 1947.
- The researchers claimed that the vaccine is reported to provide immunity against a large number of respiratory diseases. They however advocated randomised control trials with the vaccine to see the extent of immunity it can provide against the novel coronavirus.

Criticisms Of The Claim

- However, various scientists have questioned the premise that a correlation essentially is one of cause and effect without any other possible explanation. There **does not appear to be a direct evidence** that a **vaccine against a bacterial disease will work against viral infections**.
- Accepting these findings at face value has the potential for complacency in response to the pandemic, particularly in LMICs (low and middle-income countries).
- The dangers of such portrayals misinforming the public should not be underestimated, for example, in countries such as India, the wide BCG coverage offered by their universal vaccination policy may create a false sense of security and lead to inaction.

BCG vaccine

- Bacillus Calmette–Guérin (BCG) vaccine is a vaccine primarily used against tuberculosis (TB). It is developed from Mycobacterium bovis, which is commonly found in cows.
- BCG was **developed in 1921 in France** and is only 60 per cent efficient in controlling TB.
- The BCG vaccine **stimulates strong general immune response**. This results in faster response to infections that could **reduce severity of disease and lead to faster recovery**.
- In countries where tuberculosis or leprosy is common, one dose is recommended in healthy babies as close to the time of birth as possible.

- In areas where tuberculosis is not common, only children at high risk are typically immunized, while suspected cases of tuberculosis are individually tested for and treated. BCG vaccine is a part of the basket of vaccines included in the Universal Immunisation Programme in India

22. Consider the following statements about World Food Programme:

1. The headquarters of World Food Programme is in Rome.
2. World Food Programme was established by the World Economic Forum.
3. World Food Programme is a member of the United Nations Development Group.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Answer: C

Explanation:

The World Food Programme has warned that the coronavirus pandemic could nearly double the number of people around the world facing acute hunger. The warning came as the WFP and other partners released the fourth annual **Global Report on Food Crises 2020** around the world.

2020 - Global Report on Food Crises

- The 2020 report has been released by the **Global Network against Food Crises**—an international alliance working to address the root causes of extreme hunger.
- The 2020 report monitors **food insecurity in 55 countries** vulnerable to food crises and provides in-depth analysis of causes of severe food insecurity for 27 countries.

Key Highlights

- The report found that food insecurity was already on the rise last year before the outbreak of the coronavirus crisis and around 135 million people in 55 countries were in living in situations of acute food crises or outright humanitarian emergencies last year.
- The impact of lost tourism revenues, falling remittances and travel and other restrictions linked to the coronavirus pandemic are expected to leave some 130 million people acutely hungry this year. Thus, the number of people facing acute food insecurity stands to rise to 265 million in 2020, up from the 135 million in 2019.
- An estimated 183 million people experienced **stressed food security** and were at risk of falling into acute levels of food insecurity if faced with even one additional stressor, such as an **economic shock**.
- The **ten countries with the worst food crises** (by numbers of people) were Yemen, the Democratic Republic of the Congo, Afghanistan, Venezuela, Ethiopia, South Sudan, Syria, Sudan, Nigeria (northern regions), and Haiti.

Key Drivers Behind Current Hunger Trends

- **Conflict** (mostly affected **Middle East and Asian** region) continues to be a major driver of food crises around the world.

- **Climate change**-driven shocks and **economic shocks** (affected people of Venezuela, Zimbabwe, Haiti, and Sudan) also played a significant role.
- All of these factors contribute to keeping the most vulnerable populations stuck in severe food insecurity, poverty, and hunger, and they can also push at-risk populations over the brink.

Way Forward: As Suggested by Report

- The report calls for urgent, coordinated action to **step up public health responses** and efforts to protect and strengthen global, regional, and local **food value chains**.
- This includes **strengthening of social safety nets** to protect vulnerable populations from both natural and man-made shocks.
- It also suggested encouraging cooperation among governments to **prevent trade restrictions** that would further reduce economic activity.
- In addition, continued **near-real-time monitoring and data collection** efforts are crucial to accurately understand the impact of COVID-19 on food security, hunger, malnutrition, and poverty

World Food Programme (WFP)

- The World Food Programme (WFP) is the food-assistance branch of the United Nations and the world's largest humanitarian organization addressing hunger and promoting food security. It is a member of the **United Nations Development Group** and part of its executive committee.
- WFP was established in **1961** after the 1960 Food and Agriculture Organization (FAO) Conference, when the US Food for Peace Programmes proposed establishing a multilateral food aid programme.
- The WFP was **formally established in 1963 by the FAO** and the United Nations General Assembly on a three-year experimental basis. In 1965, the programme was extended to a continuing basis.
- From its **headquarter in Rome**, the WFP works to help people who cannot produce or obtain enough food for themselves and their families.
- WFP food aid is also directed to fight micronutrient deficiencies, reduce child mortality, improve maternal health, and combat disease, including HIV and AIDS.
- Food-for-work programmes help promote environmental and economic stability and agricultural production.

Objectives of WFP

The WFP strives to eradicate hunger and malnutrition, with the ultimate goal in mind of eliminating the need for food aid itself. The objectives that the WFP hopes to achieve are to:

- Save lives and protect livelihoods in emergencies.
- Support food security and nutrition and rebuild livelihoods in fragile settings.
- Reduce risk and enable people, communities & countries to meet their own food and nutrition needs.
- Reduce under-nutrition and break the inter-generational cycle of hunger.
- Zero Hunger in 2030.

23. Consider the following statements:

1. **SWAYAM provides educational channels through DTH (Direct to Home) throughout the country.**
2. **SWAYAM Prabha is a Massive Open Online Course (MOOC) platform.**

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: D

Explanation

In the lockdown condition there has been a tremendous increase in demand and the usage of SWAYAM Courses and SWAYAM PRABHA videos. Following which, the Ministry of Human Resource Development, recently held a detailed review of the National online education platform SWAYAM and the 32 DTH Television Education Channels SWAYAM PRABHA.

Highlights Of The Review

- It has been decided that all the 1900 SWAYAM Courses and 60000 SWAYAM PRABHA videos would be translated into ten regional languages and made available to the students so that more benefit can be derived from the same.
- It was also decided that UGC and AICTE will follow up with Universities and institutions to accept SWAYAM credits. This will enable students to do part of their course through MOOC and part in various colleges.
- Further, UGC has been asked to prepare guidelines regarding online and distance learning guidelines to increase Gross Enrolment Ratio.
- Also, to encourage faculty to provide more courses under SWAYAM, appropriate incentives for their career will be provided.
- It was decided to enrich the content in SWAYAM PRABHA by collecting content from who so ever is willing to contribute the same under Vidya Daan Programme.
- Broadcast over DTH will be popularized through all available channels, including radio & social media.

SWAYAM

- SWAYAM (Study Webs of Active–Learning for Young Aspiring Minds) is a Massive open online course (MOOC) platform developed by MHRD. It is designed to achieve the **three cardinal principles of Education Policy** viz., *access, equity and quality*.
- The platform offers free access to everyone and hosts courses from **class 9 till post-graduation**.
- It seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy.
- All the courses are interactive, prepared by the best teachers in the country and are available, free of cost to the residents in India.

SWAYAM Prabha

- SWAYAM Prabha is an initiative of MHRD to provide 32 High Quality Educational Channels through DTH (Direct to Home) across the length and breadth of the country on 24X7 basis. The DTH channels are using the **GSAT-15** satellite for programme telecasts.
- It has curriculum-based course content covering diverse disciplines. This is primarily aimed at making quality learning resources accessible to remote areas where internet availability is still a challenge.

- It has new content every day for at least 4 hours which is repeated 5 more times in a day, allowing the students to choose the time of their convenience.

24. Consider the following statements about Malaria:

1. **Malaria is caused by a parasite.**
2. **Only the male mosquito can transmit Malaria.**
3. **Malaria is not a contagious disease.**

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3 only

Answer: C

Explanation:

- Every year World Malaria Day is observed on 25th April. The day is aimed at taking urgent action in the control of this deadly disease.
- The theme of World Malaria Day 2020 is "**Zero Malaria Starts With Me**". It is a grassroots campaign that aims to keep malaria high on the political agenda, mobilize additional resources, and empower communities to take ownership of malaria prevention and care.
- Between 2000 and 2014, the number of malaria-related deaths fell by 40%, but in recent years, progress has ground to a standstill.
- According to WHO's World malaria report 2019, there were no global gains in reducing new infections over the period 2014 to 2018 and nearly as many people died from malaria in 2018 as the year before.
- Globally, WHO estimates that in 2018, 228 million clinical cases of malaria occurred, and 405,000 people died of malaria, most of them children in Africa. Since many countries with malaria are already among the poorer nations, the disease maintains a vicious cycle of disease and poverty.

Malaria

- Malaria is a serious disease caused by a parasite that commonly infects a certain type of mosquito which feeds on humans. **Four kinds of malaria** parasites infect humans: *Plasmodium falciparum*, *P. vivax*, *P. ovale*, and *P. malariae*. *P. falciparum* is the type of malaria that is most likely to result in severe infections.
- Only certain species of mosquitoes of the Anopheles genus—and **only females of those species**—can transmit malaria. Female Anopheles mosquitoes pick up the parasite from infected people when they bite to obtain blood needed to nurture their eggs.
- Inside the mosquito, the parasites reproduce and develop. When the mosquito bites again, the parasites contained in the salivary gland are injected and pass into the blood of the person being bitten
- Because the malaria parasite is found in red blood cells of an infected person, malaria can also be transmitted through blood transfusion, organ transplant, or the shared use of needles or syringes contaminated with blood.

- Malaria is not a contagious disease as it does not spread from person to person like a cold or the flu.
- Attempts at producing an effective malaria vaccine and vaccine clinical trials are ongoing but the malaria parasite is a complex organism with a complicated life cycle. The parasite has the ability to evade your immune system by constantly changing its surface, so developing a vaccine against these varying surfaces has been found to be difficult.

25. A Science and Technology Empowered Committee constituted for COVID-19 response will be chaired by

- a) **Vinod Paul**
- b) **N. K. Singh**
- c) **Rajiv Gauba**
- d) **Ajit Doval**

Answer: A

Explanation

- **A Science and Technology Empowered Committee** for COVID-19 response has been constituted and will be chaired by **Prof. Vinod Paul**, full time member, NITI Aayog and Prof. K. Vijay Raghavan, Principal Scientific Adviser to the government.
- It will take speedy decisions on testing facilities for COVID-19. The committee would coordinate among science agencies, scientists, industries and regulatory bodies.

26. CHALLENGE COVID-19 COMPETITION (C3) was launched by

- a) **NITI Aayog**
- b) **Central Board of Secondary Education**
- c) **National Council of Educational Research and Training (NCERT)**
- d) **National Innovation Foundation**

Answer: D

Explanation:

- **The National Innovation Foundation** has come up with a call inviting innovative citizens to participate in its Challenge Covid-19 Competition (C3).
- All interested innovators are welcome to participate with their creative ideas and innovations for problems or issues like reducing transmission of Coronavirus.
- **National Innovation Foundation (NIF)**
 - It is an autonomous body of the **Department of Science and Technology (DST)**, Government of India.
 - It was set up in February 2000 at **Ahmedabad, Gujarat** to provide institutional support for scouting, spawning, sustaining and scaling up the grassroots innovations across the country.

27. The term 'Sarige Sanjeevini', recently seen in news, is used for

- a) Combination of Hydroxychloroquine and Azithromycin
- b) Plant species found on Himalayas
- c) Converting old buses into Sanitiser Buses
- d) A species of Tortoise

Answer: C

Explanation

- The **Karnataka State Road Transport Corporation (KSRTC)** is converting its **old buses** that were slated to be scrapped into '**sanitizer buses**' to disinfect people in public places.
- The sanitizer buses branded as '**Sarige Sanjeevini**' will be operated in the city limits for the benefit of police personnel, health workers, pourakarmikas (scavengers) and others who are carrying out essential services during the lockdown.

28. Consider the following statements about Dragonfly Spacecraft:

1. **Dragonfly is a planned spacecraft and mission of European Space Agency that will send a mobile robotic rotorcraft lander to Titan.**
2. **Titan is the largest moon of Saturn and has abundant, complex, and diverse carbon-rich chemistry on the surface.**

Which of the above sentences is/are correct

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of the above

Answer: B

Explanation

- Dragonfly is a planned spacecraft and mission of **NASA**, that will send a mobile robotic rotorcraft lander to **Titan, the largest moon of Saturn**. It is the fourth mission in the **New Frontiers program**.
- Dragonfly will be launched in 2026 and arrive in 2034 to study prebiotic chemistry and extraterrestrial habitability at various locations where it will perform vertical-takeoffs and landings (VTOL).
- **Titan** is unique in having an abundant, complex, and diverse **carbon-rich chemistry** on the surface of a **water-ice-dominated** world with an interior water ocean, making it a high-priority target for **astrobiology and origin of life studies**.
- Titan has a nitrogen-based atmosphere like Earth. But unlike Earth, Titan has clouds & rain of methane.

New Frontiers Program

- It is a **series of space exploration missions** being conducted by **NASA** with the purpose of researching several of the **Solar System bodies**, including the dwarf planet Pluto.

- There are currently **three New Frontiers missions in progress**:
 - i) **New Horizons**, which was launched in 2006 and reached **Pluto** in 2015
 - ii) **Juno**, which was launched in 2011 and entered **Jupiter** orbit in 2016
 - iii) **OSIRIS-REx**, launched in September 2016 towards asteroid **Bennu** for detailed studies from 2018 to 2021 and a sample return to Earth in 2023.

29. The recent defence agreement of Indian government for **AGM-84L Harpoon Block II** air launched missiles and **MK 54 All Up Round Lightweight Torpedoes** was done with which of the following country?

- a) United State Of America
- b) Russia
- c) Israel
- d) Japan

Answer: A

Explanation:

- The U.S. State Department has approved **two potential missile deals with India**, for an estimated \$92 million and \$63 million.
- The first deal, for which Boeing is the contractor, is for **10 AGM-84L Harpoon Block II** air launched missiles, which can be fitted onto **Boeing's 8-PI (Poseidon Eight India) maritime patrol aircraft** and are intended to enhance India's capability in anti-surface warfare while defending its sea lanes.
- The second deal, contracted with Raytheon Integrated Defense System for \$63 million, is for **16 MK 54 All Up Round Lightweight Torpedoes (LWT)** and are expected to enhance India's anti-submarine warfare capability and can be used with the P-8I.
- There are **no known offset agreements** for both deals and any offset agreements will be defined in negotiations between India and the contractors.

30. Remdesivir drug, which is being studied as a Covid-19 treatment, was originally created to fight against which of the following disease

- a) Malaria
- b) Ebola
- c) AIDS
- d) Dengue

Answer: B

Explanation

- **Remdesivir**, the drug created to **fight Ebola**, is being studied as a **Covid-19 treatment** as researchers find some promising results. It was also tried in patients of **MERS and SARS**, both caused by members of the coronavirus family, but experts said it did not show promising results back then.

- Coronaviruses have a **single-strand RNA** as their genetic material. When the novel **coronavirus SARS-CoV2** enters a human cell, an **enzyme called RdRP** helps the virus replicate. **Remdesivir works by inhibiting the activity of RdRP.**
- Gilead Science Inc's antiviral drug remdesivir has been granted emergency use authorization by the U.S. Food and Drug Administration for COVID-19, clearing the way for broader use of the drug in more hospitals around the United States.
- Data released from a trial by the National Institutes of Health (NIH) in the United States showed that remdesivir reduced hospitalization stays by 31% compared to a placebo treatment, but did not significantly improve survival.

India's Stand

- The Indian Council of Medical Research (ICMR) plans to **wait and watch for the results of WHO's Solidarity trials** to make an assessment on the efficacy of remdesivir for COVID-19 treatment.
- However, Remdesivir is currently not available in India. The ICMR has said it can consider using the drug if local manufacturers are willing to procure it.

Other Lines Of Treatment That Being Investigated

- **Hydroxychloroquine** - an anti-malarial drug
- **Ritonavir and Lopinavir** - two antiviral drugs used for treatment of HIV
- **Azithromycin** - An Antibiotic

31. Recently, Facebook launched third party fact checking in which of the following country

- b) India
- c) Pakistan
- d) Sri Lanka
- e) Bangladesh

Answer: D

Explanation:

- Facebook announced the launch of its third party fact checking system in Bangladesh to **discourage the spread of fake news** in the country.
- Facebook, in partnership with **Boom Fact check**, will review and rate the stories, including photos and videos.
- When third party fact-Checkers rate a post as false or fake, it will appear less or at the bottom of the news feed. This will **reduce the spread of the post.**
- In case a certain news item or post or video is suspected to lack authenticity, the third party fact checkers will write articles about the content which is shown in the related articles immediately below the story. If a person shares a news or item with false information, they will receive a notification about its lack of authenticity.
- Facebook started its fact-checking programme in 2016 and now it covers 60 partners in 50 languages.
- **Boom is an Indian fact checking website which is available in English, Hindi and Bengali.**

32. Consider the following statements about National Board for Wildlife

1. It is a statutory body constituted under the Wildlife Protection Act, 1972.
2. It is chaired by Prime minister.

Which of the following statements is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation:

- The National Board of Wildlife (NBWL), under the Union Environment Ministry, issued the final clearance for the ₹55,335-crore **Mumbai-Nagpur Super Communication Highway**.
- The Wildlife Institute of India (WII) had proposed mitigation measures such as underpasses, overpasses etc. for major wildlife zones.
- The project will require felling of over one lakh trees and passes through the 10-km eco-sensitive zone (ESZ) of **Katepurna and Karanja Sohal Blackbuck wildlife sanctuaries** towards one end of the state while cutting through the ESZ of **Tansa lake sanctuary** closer to the Mumbai Metropolitan Region

About National Board for Wildlife

- NBWL is a **statutory body** as it has been constituted under **Section 5 A the Wildlife Protection Act, 1972. (WPA)**
- It is the apex body to review all wildlife-related matters and approve projects in and around national parks and sanctuaries i.e. Protected Areas (PA)
- The WPA mandates that without the approval/recommendation of the NBWL, construction of tourist lodges, alteration of the boundaries of PAs, destruction or diversion of wildlife habitat and de-notification of Tiger Reserves, cannot be done.
- **Composition:** It is a 47-member board (including the chairman) which usually meets once a year. It is chaired by **Prime minister**.
- **Standing Committee:** The National Board may, at its discretion, constitute a Standing Committee under sub-section (1) of Section 5B. The Standing Committee shall consist of the Vice-Chairperson (Union Minister in charge of Forests and Wildlife), the Member Secretary and not more than ten members to be nominated by the Vice-Chairperson from amongst the members of the National Board.

33. In which of the following states Pench National Park is located?

- a) Kerala
- b) Nagaland
- c) Madhya Pradesh
- d) Odisha

Answer: C

Explanation:

- The recent death of a 10-year-old ailing male tiger due to respiratory illness, in the Pench Tiger Reserve (PTR) raises COVID-19 Fears.
- There was a report of a confirmed COVID-19 infection in a tiger at the **Bronx Zoo, in New York, United States**

About Pench National Park

- Pench National Park is located in the **Madhya Pradesh** and also **shares a boundary with Maharashtra**.
- Since it is home to a big number of tigers, it was **established as a tiger reserve** in 1992 and now is working under **Project Tiger**.
- Pench Tiger Reserve comprises the **Priyadarshini Pench National Park, the Pench Mowgli Sanctuary** and a buffer
- The national park is named after the **river- Pench**, which while flowing from north to south, divides the national park in almost equal halves
- The place is an abode of Bengal Tigers accompanied by Chital, Jungle Cat, Wolf, Indian Leopard etc.

34. Consider the following statements with reference to National Green Tribunal (NGT)

1. **The Chairperson of the NGT is a retired Judge of the Supreme Court.**
2. **NGT is empowered to hear matters pertaining to issues coming under the ambit of the Wildlife (Protection) Act, 1972**

Which of the statements given above is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: A

Explanation:

- NGT has urged the State Pollution Control Board (SPCB) and Pollution Control Committee (PCC) to put in serious efforts to mitigate possible risk of **unscientific disposal of the bio-medical waste arising out of the handling of the COVID-19 disease**.
- The bench also expressed the need to review the effectiveness of the monitoring mechanism, including securing information by way of electronic manifest system from the handlers of such waste.
- The bench made the observations after noting that out of 27 lakh Health Care Facilities (HCFS) identified, only 1.1 lakh are authorised under the BMW Management Rules, 2016

About National Green Tribunal

- The NGT was established on October 18, 2010 under the **National Green Tribunal Act 2010**. The stated objective was to provide a specialized forum for effective and speedy disposal of cases pertaining to environment protection, conservation of forests and for seeking compensation for

damages caused to people or property due to violation of environmental laws or conditions specified while granting permissions.

- **Structure**

- The Tribunal is headed by a **sitting or retired Supreme Court judge or the Chief Justice of a High Court.**
- The chairperson is appointed by the Government with the consultation of CJI. The maximum age of chairperson will be 70 years if he is from SC and 67 years if he is from HC.
- Apart from Chairperson, it has at least 10 and maximum 20 Full time Judicial members and at least 10 and maximum 20 Full time Expert Members.
- Judicial Members and Expert Members of the Tribunal are appointed on the recommendations of such Selection Committee.
- Other Judicial members are retired Judge of Supreme Court of India, Chief Justice of High Court, or Judge of a High Court.
- Expert members should have a professional qualification and a minimum of 15 years experience in the field of environment/forest conservation and related subjects.
- Each bench of the NGT will comprise of **at least one Judicial Member and one Expert Member.**
- Chairperson can be removed from his office via an order made by the Central Government after an inquiry made by a Judge of the Supreme Court in which such Chairperson or Judicial Member has been informed of the charges against him and given a reasonable opportunity of being heard in respect of those charges.

- **Tenure:** Chairperson, Judicial Member and Expert Member hold office for 5 years.

- **Powers:** The NGT has the power to hear all civil cases relating to environmental issues and questions that are linked to the implementation of laws listed in Schedule I of the NGT Act. These include the following:

- The Water (Prevention and Control of Pollution) Act, 1974;
- The Water (Prevention and Control of Pollution) Cess Act, 1977;
- The Forest (Conservation) Act, 1980;
- The Air (Prevention and Control of Pollution) Act, 1981;
- The Environment (Protection) Act, 1986;
- The Public Liability Insurance Act, 1991;
- The Biological Diversity Act, 2002

This means that any **violations pertaining only to these laws**, or any order / decision taken by the Government under these laws **can be challenged before the NGT. NGT is not empowered to hear matters pertaining to issues coming under the ambit of the Wildlife (Protection) Act, 1972**

- The NGT is **not bound by** the procedure laid down under the **Code of Civil Procedure, 1908**, but shall be guided by **principles of natural justice**. Further, NGT is also not bound by the rules of evidence as enshrined in the **Indian Evidence Act, 1872**.
- Anybody can approach the NGT. It can be any **individual, media organisation or NGO**.
- Compensation can be claimed in case of death, disability, ' damage to property and loss of business or employment. Though no limit has been fixed for the compensation, the tribunal may provide relief and compensation to the victims as' it may think fit.

- Its decisions are subjected to **judicial review**. The decision of the NGT is binding on the parties, unless they approach the Supreme Court in appeal and the NGT's order is either stayed or reversed.

35. Consider the following statements about Central Pollution Control Board (CPCB)

1. It is statutory organization under the Ministry of Environment, Forests and Climate Change.
2. It is constituted under Environment (Protection) Act, 1986

Which of the statements given above is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: A

Explanation:

The Central Pollution Control Board (CPCB) has issued guidelines for handling of waste generated during COVID-19 patient's treatment.

Guidelines

- Healthcare facilities having isolation wards for Covid-19 patients need to **keep separate color-coded bins/bags** inwards and maintain proper segregation of waste as per Bio-medical Waste Management (BMWM) Rules, 2016
- **Double layered bags** should be used for collection of waste from COVID-19 isolation wards so as to ensure adequate strength and no-leaks.
- Collect and store biomedical waste separately prior to handing over the same to **Common Bio-medical Waste Treatment and Disposal Facility (CBWTF)**. State pollution control boards and pollution control committees must consider operation of a CBWTF

About CPCB

- It is a statutory organization under the **Ministry of Environment, Forests and Climate Change**
- It was **constituted in September, 1974 under the Water (Prevention and Control of Pollution) Act, 1974**. Further, CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.
- **Functions:**
 - **To promote cleanliness of streams** and wells in different areas of the States by prevention, control and abatement of water pollution, and
 - **To improve the quality of air** and to prevent, control or abate air pollution in the country.

36. Consider the following statements about Leather back Sea Turtles

1. It is the world's largest sea turtles
2. It is listed as Vulnerable in IUCN list of threatened species

Which of the statements given above is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation:

Thailand has found the largest number of nests of rare leatherback sea turtles in two decades on beaches bereft of tourists because of the coronavirus pandemic.

About Leatherback turtles

- Leatherback turtles are named so for their shell, which is leather-like rather than being hard like other turtles.
- Leatherbacks are the **largest turtles on Earth**, growing up to **seven feet long and exceeding 2,000 pounds**.
- They are one of the most **migratory**, crossing both the Atlantic and Pacific Oceans. Pacific leatherbacks migrate from nesting beaches in the Coral Triangle all the way to the California coast to **feed on the abundant jellyfish** every summer and fall.
- **Population Range:** They can be found in the tropic and temperate waters of the Atlantic, Pacific, and Indian Oceans, as well as the Mediterranean Sea
- Although their distribution is wide, numbers of leatherback turtles have seriously declined during the last century as a result of intense egg collection and fisheries bycatch
- **Conservation status:** They are considered **endangered in Thailand**, and **listed as a vulnerable species globally by the International Union for Conservation of Nature**



37. Dehing Patkai Wildlife Sanctuary recently in news is located in which among the following state?

- a) Assam
- b) Nagaland
- c) Odisha
- d) Arunachal Pradesh

Answer: A

Explanation:

- Amid the countrywide lockdown, the **National Board for Wild Life (NBWL)** has **recommended coal mining** in a part of an elephant reserve in Assam.
- The NBWL's Standing Committee had discussed a proposal for use of 98.59 hectares of land from the Saleki proposed reserve forest land for a coal mining project by North-Easter Coal Field (NECF), a unit of Coal India Limited.

- Saleki is a part of the Dehing Patkai Elephant Reserve that includes the **Dehing Patkai Wildlife Sanctuary** located in the Dibrugarh and Tinsukia Districts of **Assam**
- The most common mammal species of this sanctuary are hoolock gibbon, pig-tailed macaque, stump-tailed macaque, capped langur, Asian elephant, Bengal tiger, Indian leopard etc.

38. Under Operation Sanjeevani, India has supplied essential medicines to which of the following countries?

- a) **Maldives**
- b) **Mauritius**
- c) **Bangladesh**
- d) **USA**

Answer: A

Explanation

- Under **Operation Sanjeevani**, India has supplied **6.2 tonnes of essential medicines to Maldives**.
- This operation was carried out by Indian Air Force in order to provide assistance in the fight against COVID 19.
- Due to the countrywide lockdown in India, the medicines and consumables couldn't have been transported through any other means.
- **Influenza vaccines and anti-viral drugs** which are used in other countries to treat COVID-19 such as **Lopinavir and Ritonavir** have been delivered.

Indian Help to Maldives since the outbreak of COVID

- **In March 2020**, India had also dispatched **5.5 tonnes of essential medicines** to the Maldives along with a **14-member COVID-19 Rapid Response Team of doctors and specialists**.
- Indian Government has also **evacuated nine Maldives nationals** from Wuhan, China, where the COVID-19 was first identified.

India's Assistance to Maldives: Timeline

- **Operation Cactus, 1988** - The Indian Forces helped the Maldives to neutralize the coup attempt.
- **2004** - Several supplies were sent after the tsunami hit the Maldives.
- **Operation Neer, 2014** - Indian Government **supplied clean drinking water** to the Maldives.

[For detailed discussion on India-Maldives relations, please refer the topic from Yellow book on International Relation]

39. Consider the following statements regarding the New Development Bank (NDB):

1. **NDB was established during the sixth BRICS Summit in Fortaleza.**
2. **The bank is headquartered in Shanghai, China.**

Which of the above statements is/are Incorrect?

- a) **1 Only**
- b) **2 Only**

- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: D

Explanation

- NDB has approved **Emergency Assistance of one billion dollar to India** to combat COVID-19 pandemic. So far, NDB's has fast-tracked the **financial assistance of USD 5 Billion** to BRICS countries, which also includes emergency assistance of USD 1 billion to India.
- India also suggested that assistance under this facility to be **enhanced to 10 billion dollars**.
- Indian Finance Minister participated in the **5th Annual Meeting of Board of Governors of NDB through video-conference**.

About NDB

- Formerly referred to as BRICS Development Bank, **NDB was established by BRICS states** (Brazil, Russia, India, China, and South Africa) in 2014.
- During the **sixth BRICS Summit in Fortaleza** (2014), the leaders signed the Agreement establishing the NDB. Although, it was **the fourth BRICS Summit in New Delhi (2012)** that the leaders of BRICS considered the possibility of setting up a new Development Bank.
- It is **headquartered in Shanghai**, China and its first regional office is in Johannesburg, South Africa.
- The **purpose behind the establishment** of the bank was to mobilize resources for sustainable development and infrastructure projects in BRICS as well as other emerging market economies and developing countries.

Few Indian Projects financed by NDB:

NDB has so far approved 14 Indian projects for an amount of 4,183 million dollar. Some of them are:

- Madhya Pradesh Major District Roads Project
- Bihar Rural Roads Project
- Mumbai Metro Rail Project
- Assam Bridge Project
- Andhra Pradesh Road Sector Project

40. Who among the following has been appointed as the permanent representative to the United Nations, recently?

- a) Santosh Jha
- b) TS Tirumurti
- c) Deepak Mittal
- d) Namrata S Kumar

Answer: B

Explanation

- **TS Tirumurti** has been appointed as next permanent representative to United Nations at New York.

- Tirumurti is an Indian Foreign Service (IFS) officer of the 1985 batch and was currently posted as secretary (economic relations).
- He will replace Syed Akbaruddin, who is set to retire in April 2020.
- The Covid-19 crisis and subsequent travel restrictions have delayed the movement of several Indian envoys to postings abroad.
- They are now expected to begin moving out when the nationwide lockdown is eased next month.

41. Annual Special 301 report is published by

- a) **United States Trade Representative (USTR)**
- b) **United Nations Conference on Trade and Development (UNCTAD)**
- c) **International Labour Organization (ILO)**
- d) **None of the above**

Answer: A

Explanation

- The **United States Trade Representative (USTR)** has published its Annual Special 301 Report.
- USTR identified 33 countries for Priority Watch List or Watch List in the Special 301 Report

India Specific Observations In The Report:

- India continues to be on the '**Priority Watch List**' in the report.
- **Reason** - For lack of adequate intellectual property (IP) rights protection and enforcement.
- It observed that India made "**meaningful progress**" to enhance IP protection and enforcement in some areas over the past year.
- The USTR also noted that **India was ranked among the top five source economies for fake goods** by the OECD in 2019.
- However, it did not resolve recent and long-standing challenges, such as:
 - innovators being able to receive, maintain & enforce patents particularly in pharmaceutical sector;
 - concerns over copyright laws not incentivising the creation and commercialisation of content;
 - an outdated trade secrets framework.
- **Other issues include:**
 - Restrictive patentability criteria to reject pharmaceutical patents
 - Restrictions on transparency of information provided on state-issued pharmaceutical manufacturing licenses
 - High customs duties on medical devices and Information and Communications Technology
 - Absence of an effective system for protecting against the unfair commercial use
 - Weak enforcement by courts and the police, and Lack of familiarity with investigative techniques
 - no centralised IP enforcement agency
- The report urged India to join the **Singapore Treaty on the Law of Trademarks**, a treaty that harmonises trademark registration.

42. Consider the following statements regarding International Atomic Energy Agency (IAEA):

- 1. IAEA is an autonomous intergovernmental organization dedicated to increasing the contribution of atomic energy to the world's peace.**
- 2. Its Secretariat is headquartered in Vienna, Austria.**
- 3. It is also known as the world's "Atoms for Peace" organization.**

Which of the above statements is/are Correct?

- a) 1 and 2 Only**
- b) 2 and 3 Only**
- c) 1 and 3 Only**
- d) 1, 2 and 3**

Answer: D

Explanation

- The IAEA, U.N. atomic agency, is sending an initial batch of Coronavirus testing gears to about **40 countries**. The organization had recently received requests from 90 countries for assistance with COVID-19 testing.
- It will enable them to perform a standard test for the coronavirus involving a technique derived from nuclear science.
- Dozens of laboratories in Africa, Asia, Europe, Latin America and the Caribbean will receive diagnostic machines and kits, reagents and laboratory consumables to speed up national testing.
- They will also **receive biosafety supplies**, such as personal protection equipment (PPE) and laboratory cabinets for the safe analysis of collected samples.

Technique Used By Kits

- Kits use the technique called real time **reverse transcription-polymerase chain reaction or RT-PCR**.
- It detects the coronavirus's RNA, its genetic fingerprint, on a swab sample.
- It is commonly used in developed countries to tell whether someone is infected.

About International Atomic Energy Agency (IAEA)

- It is an autonomous intergovernmental organization dedicated to increasing the contribution of atomic energy to the world's peace and well-being.
- It also ensures that agency assistance is not used for military purposes.
- It was set up as the **world's "Atoms for Peace" organization** in 1957 within the United Nations family.
- The IAEA Secretariat is headquartered at the **Vienna International Centre in Vienna, Austria**.

Relationship With United Nations

- As an independent international organization related to the United Nations (UN) system, the IAEA's **relationship with the UN is regulated by a special agreement**.
- In terms of its Statute, the IAEA **reports annually to the UN General Assembly** and, when appropriate, **to the UN Security Council** regarding States' non-compliance with safeguards obligations, as well as on matters relating to international peace and security.

43. Consider the following statements regarding the World Games:

1. Organized by the International Olympic Committee, the World Games is a multi-sport event that is held every 4 Years.
2. World Games 2021 was scheduled to be hosted by Birmingham, United States.

Which of the above statements is/are Incorrect?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: A

Explanation

- The World Games 2021 has been postponed by nearly an year **to avoid a clash with Tokyo Olympic Games.**
- The 11th Edition of the World Games had originally been planned to take place from 15–25 July 2021. Now it will be held from 7th to 17th July 2022.
- The 11th Edition of the World Games 2021 will be hosted by **Birmingham, United States.**

About the World Games

- Organized by the **International World Games Association (IWGA)**
- A multi-sport event that is held **every 4 Years**, typically **an year after the Summer Olympics.**
- It includes **sporting events for 32 sports that are not part of the Olympic programme.**
- It was first held in 1981 and so far, it has **not yet been held in African countries.**

44. Consider the following statements:

1. Exercise Pitch Black is a biennial multilateral air combat exercise hosted by the Royal Australian Air Force.
2. AUSINDEX is a biennial bilateral maritime exercise between Indian Navy and Royal Australian Navy.

Which of the above statements is/are Correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation

- Exercise Pitch Black was cancelled due to COVID-19 threats. This exercise is a **biennial multilateral air combat exercise** hosted by the **Royal Australian Air Force.**

- Main objective of this exercise is to practice Offensive Counter Air and Defensive Counter Air combat in a simulated war environment.
- The first exercise took place in 1981. **India for the first time** participated in this exercise in 2018.
- In the last edition of Pitch Black 2018, the Indian Air Force (IAF) for the first-time deployed fighter aircraft - Su-30MKI fighters, C-130 and C-17 transport aircraft.
- **AUSINDEX** – Joint naval exercise between India and Australia

45. Noor, a military satellite, has been launched by

- a) Saudi Arab
- b) Iran
- c) Pakistan
- d) Oman

Answer: B

Explanation

- Iran claims to have **launched its first military satellite** into orbit. According to Iran, the **satellite called Noor** was launched aboard the **Qased, Iran's first-ever three-stage launch vehicle**, and placed into orbit a 425 km above the Earth.
- It was launched from **Iran's Central Desert** and reached an altitude of 425 kilometers, or 265 miles, above the Earth.
- This is being termed as **Iran's first successful rocket launch in some time** after repeated failed attempts to put a vehicle into space. Iran has suffered a string of launch failures since 2017.
- Although this was not the first successful satellite launch for Iran. The country put up its **first communications satellite in 2009**.

Analysis

- There is **technological overlap** between space launches and intercontinental ballistic missiles (ICBMs).
- Hence, western powers are criticising Iran as they believe that the recent space launch will **enable Iran to strengthen its missile programme**.
- However, Iran denies that the aim of its space programme is to pursue ICBM technology.
- Analysts, on the other hand, believe that through its space launch, Iran is achieving the objective of **flexing muscle without giving the US the legal grounds to go to the UNSC**.

46. Consider the following statements regarding Mars Mission of different countries:

1. Tianwen-1 is the mars exploration mission of China.
2. So far, United States, Russia and India have been able to launch successful Mars Mission.

Which of the following statements is/are correct?

- a) 1 Only
- b) 2 Only

- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: A

Explanation

- China has named its **first Mars exploration** mission as ‘**Tianwen-1**’ (means Heavenly Questions or Questions to Heaven).
- This mission will **include an orbiter, a lander and a rover** and is expected to be launched later this year.
- With the mission, China aims to catch up with the other nations that have launched successful mars missions including the **United States, European Union, Russia and India**.

India and Mars

- India became the **first Asian country** to have successfully launched its Mars orbiter mission, Mangalyaan which has entered the orbit of the red planet in 2014.
- India also became the **first country to have entered the Martian orbit in its first attempt**.

47. Which of the following countries has become first Arab country to legalise cannabis farming?

- a) Oman
- b) Jordan
- c) Yamen
- d) Lebanon

Answer: D

Explanation

- **Lebanon** has become first Arab country to legalise cannabis farming for medical & industrial purposes.
- This step has been taken in order to **generate lucrative exports and foreign currency** as the country struggles to cope with a **financial crisis**.

Background

- The idea of legalising cannabis cultivation to produce high value-added medicinal products for export was explored in a report by McKinsey that was commissioned by the Lebanese government in 2018.
- The consultancy firm reportedly estimated that the industry could generate as much as \$1bn annually.

Current Financial Crisis In Lebanon

- The country is in the grip of an **unprecedented financial crisis** that sparked an uprising in October.
- The local currency has **nearly halved** in value since then, while a crippling dollar shortage has impacted imports. Prices have soared, and unemployment has risen sharply.
- The arrival of the coronavirus and the subsequent strict lockdown has made matters worse.

Lebanon and Cannabis

- Although growing the plant was previously illegal, **cannabis has long been farmed openly in the fertile and impoverished Bekaa Valley**.

- According to the United Nations, the country is the **world's third largest supplier** of cannabis resin, or hashish, **after Morocco and Afghanistan**.

48. Operation Meghdoot is related to

- a) Bringing Artificial Rain in parts of Karnataka**
- b) Atmospheric study to forecast Indian Monsoon**
- c) Combat Operation against Naxalites in India**
- d) The capturing of Siachen glacier**

Answer: D

Explanation

- On April 13, the Indian Army observed the **36th Siachen Day**, remembering the gallant martyrs of Siachen.
- Siachen Day commemorates the courage and fortitude displayed by troops of the Indian Army in securing the **highest and coldest battlefield in the world**.
- **On April 13, 1984**, the Indian Army launched "**Operation Meghdoot**" to secure **Bilafond La and other passes on the Saltoro Ridgeline** from Pakistani aggression.

Background:

- Siachen lies in the **Karakoram Range** in North-West India. Siachen Glacier is 76.4 km long and covers about 10,000 sq km of uninhabited terrain.
- It was in 1974 that Pakistan started **permitting mountaineering expeditions** in the Siachen Glacier.
- By the spring of 1983, it was clear that India needed to maintain a close watch on Siachen.
- The conflict began when **Pakistan allowed Japanese expedition to scale Rimo I** (an important peak in the region) in 1984. This led to the launch of Operation Meghdoot.

49. Recently, the Army Medical Corps Raising Day was celebrated. It was celebrated under the motto

- a) Aarogyam Bhavatu**
- b) Stay Fit, Stay Healthy**
- c) Survey Santu Nirmaya**
- d) None of the above**

Answer: C

Explanation

- On April 3, the Army Medical Corps (AMC) celebrated its **256th Raising Day**.
- It was raised based on the Royal Medical Corps.
- It was held with the **motto 'Survey Santu Nirmaya'**, meaning 'Let all humans be free from disease and disability'.

About Army Medical Corps

- It is a **specialist corps** in the Indian Army which primarily provides medical services to all Army personnel, serving and veterans, along with their families.
- It came into existence as a homogeneous corps of officers and men **on the pattern of the Royal Army Medical Corps on 3 Apr 1943** by the **amalgamation of the Indian Medical Service, the Indian Medical Department and the Indian Hospital & Nursing Corps.**
- It has excelled in all fields, be it warzone, foreign missions, peacetime assignments or humanitarian assistance with aid to civil authorities in emergency situations.

50. Trends in World Military Expenditure is an annual report published by

- Stockholm International Peace Research Institute
- United Nations Disarmament Commission
- International Peace Institute
- None of the above

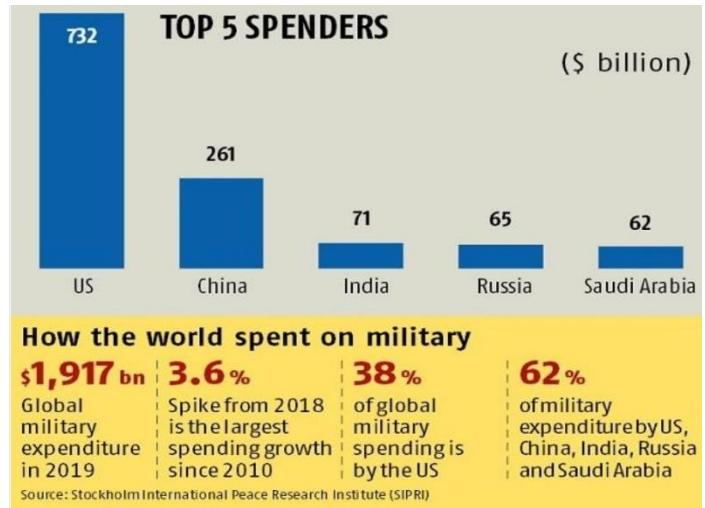
Answer: A

Explanation

The **Stockholm International Peace Research Institute (SIPRI)** has released the “**Trends in World Military Expenditure 2019**” Report.

India Specific Observation

- India has emerged as the **third largest military spender** in the world, just behind the US and China.
- Expenditure in 2019 - \$71.1 billion
- India’s expenditure grew by **6.8 per cent from 2018** and the country climbed up the rankings from its **earlier fourth spot.**
- India’s **tensions and rivalry with Pakistan and China** were among the major drivers for its increased military spending.
- **Other reasons include - increasing salary** of nearly 1.4 million personnel serving in the security forces and **pensions for more than 2 million former military personnel**



- India’s **military expance during 2010-19 decade grew** by 37 per cent. However, the **country’s military burden fell** from 2.7 per cent of the Indian GDP in 2010 to 2.4 per cent in 2019.
- Its rival Pakistan’s military expenditure rose by 70 per cent over the decade to reach \$10.3 billion, with the burden rising from 3.4 per cent of GDP in 2010 to 4 per cent in 2019.

[Also refer the topic “**Trends in international arms transfers 2019**” from **March 2020** edition of the CA Magazine]

51. Consider the following statements regarding Ravi River:

1. It originates in the Chamba district of Himachal Pradesh.
2. It enters the Punjab plain near Madhopur.

Which of the above statements is/are Correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation

- The Border Roads Organisation (BRO) has constructed a **permanent bridge on river Ravi**, which connects **Kasowal enclave in Punjab** to the rest of the country.
- The 484-meter bridge was constructed under **Project Chetak**.
- The bridge will enable the **farmers to transport their harvest** to the market comfortably.
- Before the permanent bridge was built, the enclave had been connected via pontoon bridge of limited load capacity. The pontoon bridge used to be dismantled every year prior to the monsoon so that it wouldn't wash away in the strong currents of the river.
- This meant thousands of acres of fertile land across the river could not be tilled by farmers during the monsoon. Thus, the locals and the army required a permanent bridge to give all-weather connectivity to the enclave.

About Ravi river

- The Ravi was known as **Parushani or Iravati** to Indians in Vedic times and **Hydraotes to the Ancient Greeks**.
- It originates in the **Himalayas in the Chamba district** of Himachal Pradesh following a north-westerly course.
- It turns to the south-west, near Dalhousie, and then cuts a gorge in the **Dhaola Dhar** range entering the **Punjab plain near Madhopur**.
- It then flows along the Indo-Pak border for some distance before entering Pakistan and joining the Chenab River.
- The total length of the river is about 720 km.

52. The Education for Justice (E4J) initiative has been launched by

- a) Ministry of Social Justice and Empowerment
- b) Global Foundation for Social Justice
- c) International Labour Organization
- d) The United Nations Office on Drugs and Crimes

Answer: D

Explanation

- The United Nations Office on Drugs and Crimes (UNODC) has launched a 'Lockdown Learners' series of online dialogues with students and educators in India **on COVID-19 and its impact on Sustainable Development Goals, peace and rule of law.**
- It has been launched by the United Nations body under its flagship **Education for Justice initiative.**
- **Aim** - Sensitise students on **concerns of vulnerable groups and emerging issues** such as cybercrime, misinformation, gender-based violence, discrimination, corruption among others," the UNODC.

Education for Justice

- **The Education for Justice (E4J) initiative** seeks to prevent crime and promote a culture of lawfulness through education activities designed for primary, secondary and tertiary levels.
- These activities help educators teach the next generation to better understand and address problems that can undermine the rule of law and encourage students to actively engage in their communities and future professions in this regard.
- A set of products and activities for the primary and secondary levels is being developed in partnership with UNESCO.

About United Nations Office on Drugs and Crime:

- UNODC is a United Nations office that was **established in 1997** as the Office for Drug Control and Crime Prevention.
- It was established by **combining the United Nations International Drug Control Program (UNDCP) and the Crime Prevention and Criminal Justice Division** in the United Nations Office at Vienna.
- **Headquarters** - Vienna, Austria
- **Parent organization** - United Nations Secretariat

53. Consider the following statements regarding the International Development Association (IDA):

1. IDA is the part of the World Bank that helps the world's poorest countries by lending money on concessional terms.
2. IDA also provides significant levels of debt relief through its different initiatives.
3. Eligibility for IDA support depends on a country's relative poverty, defined as GNI per capita below an established threshold.

Which of the above statements is/are Correct?

- a) 1 and 2 Only
- b) 2 and 3 Only
- c) 1 and 3 Only
- d) 1, 2 and 3

Answer: D**Explanation**

- The Union Finance Minister participated in the **101st Meeting** of the **Development Committee** of World Bank-IMF Plenary through video conference.

- **Agenda** of the meeting included:
 - Update on World Bank Group Response to the COVID-19 Emergency, and
 - The **Covid-19 Debt Initiative: International Call for Action in Support of IDA Countries**.

India's Response In The Fight Against COVID: As Highlighted During The Meeting

- Announced **support measures worth US \$ 23 billion** comprising free health insurance to health workers; cash transfers, free food and gas distribution; and social security measures for affected workers.
- To help **firms, especially SME firms**, cope with sudden loss of economic opportunity, the Government has provided relief in statutory and regulatory compliance matters related to income tax, GST, customs, financial services and corporate affairs.
- India is supplying critical medicines to the needy countries.

What is IDA

- IDA is the part of the World Bank that helps the world's poorest countries.
- It aims to **reduce poverty by providing loans** (called "credits") and grants for programs that boost economic growth, reduce inequalities, and improve people's living conditions.
- It **complements the World Bank's original lending arm**—the International Bank for Reconstruction and Development (IBRD).

Functions of IDA

- IDA **lends money on concessional terms**. This means that IDA credits have a zero or very low interest charge and repayments are stretched over 30 to 38 years, including a 5- to 10-year grace period.
- IDA also provides **grants to countries at risk of debt distress**.
- In addition to concessional loans and grants, IDA **provides significant levels of debt relief** through the Heavily Indebted Poor Countries (HIPC) Initiative and the Multilateral Debt Relief Initiative (MDRI).

Borrowing Countries

- Eligibility for IDA support depends first and foremost on a **country's relative poverty, defined as GNI per capita below an established threshold** and updated annually (\$1,175 in fiscal year 2020).
- IDA also supports some countries, including several small island economies, that are **above the operational cutoff but lack the creditworthiness** needed to borrow from the IBRD.
- Some countries, such as Nigeria and Pakistan, are IDA-eligible based on per capita income levels and are also creditworthy for some IBRD borrowing. They are referred to as **"blend" countries**.

54. Consider the following statements regarding the Asian Infrastructure Investment Bank (AIIB):

1. It is headquartered in Beijing.
2. France, Germany, Italy and the United Kingdom are the members of AIIB.

Which of the above statements is/are Correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: C

Explanation

- The **Asian Infrastructure Investment Bank (AIIB)** is considering a proposal for financing **\$500-million project in India** to strengthen country's national health care systems.
- The **scope of funding** will also include the purchase of equipment and detection capacity as country battles COVID-19 pandemic.
- AIIB is doubling available funds under its COVID-19 Crisis Recovery Facility to provide assistance upto \$10 billion. Earlier, it had announced to make \$5billion available to help public and private sector clients manage through the COVID-19 pandemic.
- **Three key areas** where AIIB is intervening:
 - To help alleviate health care pressures in the form of health infrastructure and pandemic preparedness.
 - Liquidity support through on-lending facilities and credit lines via financial institutions to address working capital and liquidity shortages.
 - Immediate fiscal and budgetary support so governments can focus on ad-dressing the human and financial impacts of COVID-19.

About AIIB

- The **Asian Infrastructure Investment Bank (AIIB)** is a multilateral development bank with a mission to improve social and economic outcomes in Asia.
- **Headquartered in Beijing**, it began **operations in January 2016** and have now grown to 102 approved members worldwide.
- **Fourteen of the G-20 nations** are AIIB members including France, Germany, Italy and the United Kingdom.
- India is the **second-largest shareholder** in AIIB, contributing USD 8.4 billion.
- China is the largest shareholder with **voting shares of 26.61 % followed by India (7.6%)**.
- **Some Of The Infrastructural Projects Of India Financed By AIIB**
 - Andhra Pradesh 24x7 – Power For All project
 - Andhra Pradesh Rural Roads Project
 - Transmission System Strengthening Project
 - Bangalore Metro Rail Project
 - AIIB has also approved lending of \$200 million to National Investment and Infrastructure Fund (NIIF).

55. Which Indian personality has been named as the new ambassador for World Wide Fund (WWF) India's Environment Education program?

- a) **Viswanathan Anand**
- b) **Marry Kom**
- c) **Vandana Shiva**
- d) **Sunita Narain**

Answer: A

Explanation

- Chess legend **Viswanathan Anand** has been named as the new ambassador for WWF India's Environment Education program.
- As an ambassador, he will support **wildlife conservation and work to educate children** across India on issues related to the environment.
- The announcement comes at a time when **WWF India is celebrating its 50 years** of conservation in India.

About World Wide Fund for Nature (WWF):

- Constituted in 1961 as an NGO
- Headquarters in Vaud, Switzerland.
- Symbol of WWF - The giant panda
- WWF India was established as a Charitable Trust in November 1969

WWF's Environment Education Programme:

- Environment Education is the oldest programme of WWF-India.
- It was established in 1976.

56. Consider the following statements regarding Khadi and Village Industries Commission (KVIC):

1. It is a non-statutory body.
2. It comes under the administrative control of Ministry of Micro, Small and Medium Enterprises.

Which of the above statements is/are correct?

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: B

Explanation

Khadi and Village Industries Commission (KVIC) has successfully developed a double layered Khadi mask. It has procured orders for supplying it in large quantities.

About KVIC

- KVIC is a **statutory body** formed by the Government of India under the KVIC Act of 1956.
- It seeks to plan, promote, facilitate, organise and assist in the establishment and development of khadi and village industries in the rural areas.
- It is an apex organisation under the **Ministry of Micro, Small and Medium Enterprises**, with regard to khadi and village industries within India and is a **non-profit organization**.

Number of Schemes by KVIC for Development of Khadi and Village Industries:

- Product Development, Design Intervention and Packaging (PRODIP)

- Market Development Assistance (MDA)
- Strengthening Infrastructure of Existing Weak Khadi Institutions and Assistance for Marketing Infrastructure
- Scheme for Enhancing Productivity & Competitiveness of Khadi Industry and Artisans
- Scheme of Fund for Regeneration of Traditional Industries (SFURTI)
- Prime Minister's Employment Generation Programme (PMEGP)

57. The Tribal Cooperative Marketing Development Federation of India (TRIFED) functions under the administrative control of

- a) **Ministry of Social Justice and Empowerment**
- b) **Ministry of Micro, Small and Medium Enterprises**
- c) **Ministry of Tribal Affairs**
- d) **Ministry of Commerce & Industries**

Answer: C

Explanation

- **TRIFED has collaborated with UNICEF** for developing a digital communication strategy.
- This communication strategy is for **promoting a digital campaign for Self Help Groups (SHGs)** in order to ensure **tribal gatherers carry on their work safely**.
- The programme highlights the **importance of social distancing**.
- According to the plan, SHGs are to be promoted as **Van Dhan Social Distancing Awareness cum Livelihood Centres**.
- These Centres will educate the communities about social distancing, personal hygiene and also about adopting cashless practices.
- UNICEF will help TRIFED in creating **Digital Multimedia Content, social media campaigns, Vanya Radio and webinars**.

About TRIFED:

- The Tribal Cooperative Marketing Development Federation of India (TRIFED) came into existence in 1987.
- It is a national-level apex organization functioning under the **administrative control of Ministry of Tribal Affairs**.
- The rationale behind the creation of TRIFED was to institutionalize the trade of Minor Forest Produce (MFP) and Surplus Agriculture Produce (SAP) collected/cultivated by tribals.

VAJIRAM & RAVI

BRIDGING GAPS

World Heritage Day

- The International Day for Monuments and Sites also known as World Heritage Day is an international observance held on 18 April each year around the world.
- The day was proposed by the International Council on Monuments and Sites (ICOMOS) in 1982 and approved by the General Assembly of UNESCO in 1983.
- The aim is to promote awareness about the diversity of cultural heritage of humanity, their vulnerability and the efforts required for their protection and conservation.
- The theme this year is “*Shared Cultures, Shared Heritage, Shared Responsibility*”. It is decided by ICOMOS every year.

ICOMOS

- The ICOMOS is a professional association that works for the conservation and protection of cultural heritage places around the world.
- **Headquartered in Paris**, ICOMOS was founded in 1965 in Warsaw as a result of the Venice Charter of 1964, and offers advice to UNESCO on World Heritage Sites.
- ICOMOS is a partner and founding member of the **Blue Shield**, which works to protect the world's cultural heritage threatened by wars and natural disasters.

World Heritage Site

- To be selected as a World Heritage Site by UNESCO, it must be an already classified landmark, unique in some respect as a geographically and historically identifiable place having special cultural or physical significance. It may signify a remarkable accomplishment of humanity, and serve as evidence of the intellectual history on the planet.
- The sites are intended for practical conservation for posterity, which otherwise would be subject to risk from human or animal trespassing or threat from local administrative negligence.

Raja Ravi Verma

- April 29 is the birth anniversary of the famed Indian painter Raja Ravi Varma (1848-1906), remembered for giving Indians their *western, classical representations of Hindu gods and goddesses*.
- His works are held to be among the best examples of the ***fusion of European techniques with a purely Indian sensibility***. While continuing the tradition and aesthetics of Indian art, his paintings employed the latest European academic art techniques of the day.
- Through his printing press, Varma's humanised depiction of Hindu pantheon travelled beyond the surfaces of costly canvases, and into the prayer and living rooms of working-class homes.
- Varma is also known for having mastered the reproduction of his work on the lithographic press—through which his paintings spread far and wide.
- His 1873 paintingl ‘**Nair Lady Adorning Her Hair**’ won Varma prestigious awards including Governor's Gold Medal when it was presented in the Madras Presidency, and Certificate of Merit at an exhibition in Vienna.
- In 1904, the British colonial government awarded Varma with the **Kaiser-i-Hind Gold Medal**.
- In 2013, a crater on the planet Mercury was named in his honour.

- His most famous works include **Damayanti Talking to a Swan, Shakuntala Looking for Dushyanta and Shantanu and Matsyagandha.**

Nihangs

- Recently, a group of Nihangs attacked a Punjab police party and chopped off the hand of an assistant sub-inspector when stopped for a curfew pass.
- Nihang is an order of Sikh warriors, characterised by **blue robes, antiquated arms** such as swords and spears, and **decorated turbans surmounted by steel quoits.**
- Etymologically the word nihang in Persian means an alligator, sword and pen but the characteristics of Nihangs seem to stem more from the Sanskrit word nihshank which means unblemished, pure, carefree and indifferent to worldly gains and comfort.
- The word nihang also occurs in a hymn in the Guru Granth Sahib, where it alludes to a **fearless and unrestrained person.**
- Nihangs observe the Khalsa code of conduct in its strictest sense and do not profess any allegiance to an earthly master. Instead of saffron they hoist a **blue Nishan Sahib (flag)** atop their shrines.
- Any person irrespective of caste, creed or religion can become a Nihang provided he has **unshorn hair** as per the Sikh traditions at the time of entering the sect.
- The order can be traced back to the creation of the Khalsa by Guru Gobind Singh in 1699. However, there are some sources which trace their origin to Guru Gobind Singh's younger son, **Fateh Singh** (1699-1705), who once appeared in the Guru's presence dressed in a blue chola and blue turban with a dumala (piece of cloth forming a plume).
- Nihangs today constitute a small community. About a dozen bands, each headed by a jathedar (leader), are still carrying on with the traditional order. In the absence of a centralised command, the Nihangs are loosely organised.



Nihangs Role In Sikh history

- Nihangs had a major role in defending the Sikh panth after the fall of the first Sikh rule (1710-15) when Mughal governors were killing Sikhs, and during the onslaught of Afghan invader Ahmed Shah Durrani (1748-65).
- Nihangs also took control of the religious affairs of the Sikhs at Akal Bunga (now known as Akal Takht) in Amritsar. They did not consider themselves subordinate to any Sikh chief and thus maintained their independent existence.
- Their clout came to an end after the fall of Sikh Empire in 1849 when the British authorities of Punjab appointed a manager (sarbrah) for the administration of the Golden Temple in 1859.

World Press Freedom Index (WPFI) 2020

India has dropped two places down to be **ranked 142nd out of 180** countries, on WPFI.

Highlights Of The Report

- **Norway is ranked first** in the Index for consecutive fourth year.

- **South Asia** in general features poorly on the index, with Pakistan dropping 3 places to 145, and Bangladesh dropping one place to 151.
- **China at 177th position** is just three places above **North Korea, which is at 180th**
- **Impact Of Corona Outbreak On Press Freedom:**
 - The looming health crisis could serve as an excuse for governments to take advantage of the fact that politics are on hold, the public is stunned and protests are out of the question, in order to impose measures that would be impossible in normal times.
 - **China and Iran “censored their major coronavirus outbreaks extensively”**. There is a clear correlation between suppression of media freedom in response to the coronavirus pandemic, and a country’s ranking in the index.
 - The pandemic has amplified the spread of rumours and fake news as quickly as the virus itself.
- **Weak regulation of digital technologies** has created “information chaos, blurring lines between fact, fiction, propaganda and advertising.

India Specific Findings

- With no murders of journalists in India in 2019, as against 6 in 2018, the security situation for the country's media might seem to have improved
- However, there have been **constant press freedom violations**, including **police violence against journalists, ambushes by political activists**, and reprisals instigated by criminal groups or corrupt local officials.
- It attributed the decline in index to "**pressure on the media to toe the Hindu nationalist government's line**. The "coordinated hate campaigns" waged on social networks against journalists who dare to speak or write about subjects that annoy Hindutva followers are "alarming". The campaigns are particularly virulent when the targets are women.
- The report also cited the longest “**electronic curfew**” in the history in **Jammu and Kashmir** since August 5, when the Indian authorities stripped the region of its special status and bifurcated it into Union Territories.

About World Press Freedom Index

- It is released by **Reporters Sans Frontieres (RSF), or Reporters Without Borders**. Based in Paris, it is an **independent NGO with consultative status with the United Nations, UNESCO, the Council of Europe and the International Organization of the Francophonie (OIF)**.
- It works to **document and combat attacks on journalists around the world**. The Index **ranks 180 countries** and regions according to the level of freedom available to journalists
- **The criteria used for compiling the Index** are pluralism, media independence, media environment and self-censorship, legislative framework, transparency, and the quality of the infrastructure that supports the production of news and information.
- It does not rank public policies even if governments obviously have a major impact on their country’s ranking. **Nor is it an indicator of the quality of journalism** in each country or region.

Narcotic Drugs and Psychotropic Substances (NDPS) Act

A recent Supreme Court ruling has strengthened the ability of the police to tackle the menace of drug peddling across the country.

Background

- Supreme Court in **E Micheal Raj case 2008** had ruled that since adulterated drugs contained several neutral substances which are not psychotropic in nature, it would be wrong to punish a person based on weight of seized drug.
- It had ruled that the punishment for possessing drugs, whether small or commercial quantity, would be based **after determining the weight of pure banned substance and not by entire weight of seized drug.**
- The 2008 judgment would make it difficult to punish drug-paddlers as illicit drugs are seldom sold in a pure form. They are almost always adulterated or cut with other substance.

New Ruling

- The Court held that punishment for possession of drugs **will not depend on the exact quantity of drug present in a consignment.** Rather, **traces of an offending drug in the seized mixture will be sufficient to declare the entire quantity to be an offending drug** under the Narcotic Drugs and Psychotropic Substances (NDPS) Act of 1985.
- NDPS Act is a special law and has a laudable purpose to serve and is intended to combat the menace otherwise bent upon destroying the public health and national health.
- The punishment part in drug trafficking is an important one but **its preventive part is more important.** Therefore, prevention of illicit traffic in Narcotic Drugs and Psychotropic Substances Act, 1988 came to be introduced. The aim was to **prevent illicit traffic** rather than punish after the offence was committed.
- The top court said that the problem of drug addicts is international and the mafia is working throughout the world. It is a crime against the society and it has to be dealt with iron hands. Use of drugs by the young people in India has increased. The drugs are being used for weakening of the nation

India's Efforts In Fight Against The Menace Of Drugs

- **Article 47 of the Indian Constitution (DPSP)** directs the State to endeavour to bring about prohibition of the consumption, except for medicinal purposes, of intoxicating drugs injurious to health.
- India is a signatory to the **single Convention on Narcotic Drugs 1961**, as amended by the 1972 Protocol, **the Conventions on Psychotropic Substances, 1971** and the **United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.**
- Enactment of The **Narcotic Drugs and Psychotropic Substances Act, 1985**

The Epidemic Diseases (Amendment) Ordinance, 2020

Keeping in mind the instances healthcare professionals being targeted and attacked during COVID-19 pandemic, the Epidemic Diseases (Amendment) Ordinance, 2020 was promulgated. The Ordinance amends the Epidemic Diseases Act, 1897

Key Features Of The Ordinance Include

- The Ordinance specifies that **no person can commit or abet an act of violence against a healthcare service personnel**, or cause damage or loss to any property during an epidemic.
- **Punishment:** Contravention of this provision is **punishable with imprisonment between 3 months and 5 years, and a fine between Rs 50,000 and 2 lakh rupees.** If an act of violence causes grievous harm, imprisonment shall be between 6 months to 7 years, and a fine between 1 lakh to 5 lakh rupees.

- **The Ordinance defines healthcare service personnel** as a person who is at risk of contracting the epidemic disease while carrying out duties related to the epidemic. They include: (i) public and clinical healthcare providers such as doctors, (ii) any person empowered under the Act to take measures to prevent the outbreak of the disease, and (iii) other persons designated as such by the state.
- **An 'act of violence'** includes harassment or causing harm, injury, hurt, or danger to life, obstruction in discharge of duties, and loss or damage to the property or documents of the healthcare service personnel.
- **Investigation:** Cases registered under the Ordinance will be investigated by a **police officer not below the rank of Inspector**. The investigation must be **completed within 30 days** from the date of registration of the First Information Report

For details on Epidemic Diseases Act, 1897 please refer The Recitals – March 2020.

Article 164 of the Constitution

Maharashtra Chief Minister (CM) Uddhav Thackeray will not be able to **continue as CM unless he is elected to any of the houses of Maharashtra legislature** before May 28.

Background

- He took oath as chief minister on November 28 last year. He was -- and is -- **not a member of either of the two houses of Maharashtra legislature**.
- He has to get elected to either of the houses of the state legislature before May 24, as **Article 164(4)** of the Constitution stipulates. It allows a non-legislator to occupy a post in the council of ministers, including the office of the chief minister for six months.
- However, the Election Commission has already postponed Rajya Sabha polls, byelections and civic body elections in the wake of the Corona pandemic. But recently, it announced May 21 as the election date for 9 of the seats in legislative council.

Alternatives Available

If someone is chosen as a minister in Council of Minister, he has to get elected to any of the Houses within 6 months to continue as Minister. Apart from it, there are two more options available for him.

A. Nomination by Governor

- The **Governor can nominate** him to the **legislative council** from his discretionary quota.
- **Article 171** of the Constitution says the **Governor can nominate eminent persons from the field for literature, science, art, cooperative movement and social service**.
- And if governor nominates somebody to the legislative council, his/her decision cannot be challenged in the court, at least as of the precedent right now.
- **Legal hurdle in the Governor's nomination**
 - **Section 151A of Representation of the People Act 1951** puts a bar on the governor's discretionary power to nominate a person to the legislative council.
 - It says election or nomination to vacant seats in the legislative council cannot be done "**if the remainder of the term of a member in relation to a vacancy is less than one year**". The terms of the two vacancies in the Legislative Council end on June 6.

B. Reappointment as CM

- Technically, he can be **reappointed as the minister again after he resigns and takes oath afresh**.

- But there is an obstacle which relates to a case in Punjab, where Tej Parkash Singh of the Congress was appointed a minister in 1995 and was **reappointed at the expiry of six months' period in 1996 without getting elected to state assembly.**
- Litigation followed and, in 2001, the Supreme Court declared the **resign-and-reappoint bid as "improper, undemocratic, invalid and unconstitutional"**. This judgment did not have a bearing on Tej Parkash Singh but may come in the way of Uddav Thackeray if he takes the same route.

National Legal Services Authority (NALSA)

- NALSA has said that around 11,077 undertrials have been released from prisons nationwide as part of the mission to decongest jails following the COVID-19 pandemic.
- NALSA had been providing assistance to prisoners who were eligible to be released on parole or interim bail under the relaxed norms, through its panel lawyers.

About NALSA

- NALSA has been constituted under the **Legal Services Authorities Act, 1987** to provide free Legal Services to the weaker sections of the society. **Article 39 A** of the Constitution of India provides for **free legal aid to the poor and weaker sections** of the society, to promote justice on the basis of equal opportunity.
- The Chief Justice of India is the Patron-in-Chief and the Senior most Hon'ble Judge, Supreme Court of India is the Executive Chairman of the Authority.
- **Principal objective of NALSA**
 - *Provide free & competent legal services to weaker sections of society & to ensure that opportunities for securing justice are not denied to citizen by reason of economic or other disabilities.*
 - **Organize Lok Adalats** for amicable settlement of disputes.
 - **Spreading legal literacy** and awareness, undertaking social justice litigations etc.

E-Gram Swaraj Portal

- Prime Minister has launched E-Gram Swaraj Portal on the National Panchayati Raj Diwas.
- The E-Gram Swaraj Portal will mark the **complete digitization of the villages** to strengthen e-governance in Panchayati Raj institutions in the whole country. The egramswaraj.gov.in portal is one single interface on which the details will be listed panchayat wise.
- The platform will provide **records of work from planning to the implementation** in every village panchayat under **Gram Panchayati Development Plan (GPDP)**.

Benefits

- Monitoring and recording all the work via Gram Swaraj Portal/App will help **speed-up the implementation of projects** in village areas.
- As it will contain the details of ongoing development works and the fund allocated for the projects, one can **access and know about the groundwork.**
- All the details related to Panchayat Sachiv and Panch can be viewed and works of the Ministry of Panchayati Raj also will be accessible through Gram Swaraj Portal.
- It will provide a **boost in transparency by decentralized planning** of development projects, with progress reports updates and increased accountability.

Integrated Command and Control Center

Municipalities implementing the Smart Cities Mission have started using their Integrated Command and Control Centres (ICCCs) as “war rooms” for COVID-19 response

About Integrated Command and Control Center (ICCC)

- For management of operations, management of disasters and handling of exceptions on daily basis the foremost and important source/ intelligence is provided by ICCC.
- *Data of complex nature are processed* at a comprehensive level. Thus, it provides **intelligence for formulating policies and better planning**.
- Information and data are collected through various sensors and applications which are positioned across a certain location. After the analysis of information or data some suitable and workable details are put forward to act upon.
- In India recently, the **ICCC has been set up in few cities, under the scheme of Smart Cities**. The ICCCs set up under the Mission are meant to **coordinate traffic management, surveillance, utilities and grievance redressal**. Now, they are being used as a part of the government’s response to the coronavirus pandemic.

National Civil Services Day

- Every year, on April 21, the public services rendered by the civil servants is celebrated in the form of Civil Services Day.
- It was on this day in 1947 that the country's first home minister **Sardar Vallabhbhai Patel** addressed the probationers of Administrative Services Officers in 1947 at Metcalf House, Delhi. He described the civil servants the ‘**steel frame of India**’.
- The first such function was held in Vigyan Bhawan, New Delhi 21 April 2006. To mark this occasion, **Prime Minister’s Awards for Excellence in Public Administration** are presented to Districts/Implementing Units for implementation of Priority programme and innovation categories.
- The present model of the Indian civil service was formed after 1947. Cabinet secretary is the highest position for a civil servant. **N R Pillai** was the first to serve the post from 1950 to 1953.

Punjab Village and Small Towns Act

- Authorities in Panchkula invoked British-era law, titled the “Punjab Village and Small Towns Act”, to **curtail people’s movement during the lockdown**.
- The order, under section 3 of this Act, has declared that all able-bodied male inhabitants of the villages be liable to be on patrol duty both during the day and night. The aim of the patrol in the present case is **to keep a watch on people entering villages without a valid pass and to make sure villagers follow social distancing norms**.
- The law was first enacted in 1918 in erstwhile Punjab to make provisions for nightly patrol duty by inhabitants of small villages and towns in cases of emergency.

Provisions Under The Act

- Under this Act, if the Deputy Commissioner of a district in Punjab or Haryana is of the opinion that in a village, special measures need to be taken to secure public safety, he has the power to make an order requiring all “**able-bodied adult male inhabitants**” to **patrol the village**. The time period of

the applicability of the order is up to the Deputy Commissioner and the maximum time period is up to one year.

- “The Deputy Commissioner shall have power to alter the number of persons required for patrol duty and the method of their selection, and shall inform the village panchayat of his decision.
- Those who are not following the provisions will have to pay a fine imposed by the village panchayat or a fine imposed by the deputy commissioner, not exceeding Rs 100.

New Domicile Rule for J&K

The Union government has issued a notification defining “domiciles” in the new Union Territory (UT) of Jammu and Kashmir for protecting jobs in the Group D category and entry-level non-gazetted posts for the domiciles.

Background

- Until last year, J&K enjoyed a special status under the constitutional provisions of Article 370 and 35A, which didn't allow anyone from the rest of India to obtain domicile status there.
- **Article 35 A** empowered J&K assembly to define a J&K resident, who alone were eligible to apply for jobs or own immovable property.
- However, Centre revoked J&K's special status under Article 370 and Article 35A of the Constitution and bifurcated it into two union territories (UTs) of J&K and Ladakh.

New Domicile Rules

- Section 3A of the J&K Reorganization (Adaptation of State Laws) Order 2020, under the **J&K Civil Services (Decentralization and Recruitment) Act**, has been introduced to define domicile as that “who has **resided for a period of 15 years in the UT of J&K or has studied for a period of 7 years and appeared in class 10th/12th examination in an educational institution located in the UT of J&K.**
- Children of Central Govt. officials, All India Services, PSUs, autonomous body of Centre, Public Sector Banks, officials of statutory bodies, Central Universities, recognized research institutes of Centre who have served in J&K for a total period of 10 years” will be domiciles.
- Additionally, persons registered as a migrant by the Relief and Rehabilitation Commissioner (Migrants) in the UT of J&K, will also be included in the definition. “Children of such residents of J&K as reside outside UT of J&K in connection with their employment or business or other professional or vocational reasons” but their parents fulfil any of the conditions provided earlier.
- The provisions of the Act authorize the **Tehsildar as competent authority for issuing the domicile certificate**, as opposed to deputy commissioner or any officer specially notified by the state government by way of a gazette notification in the form of a SRO.
- 29 state laws have been repealed while 109 have been amended. Section 5A states that **no person shall be eligible for appointment to a post carrying a pay scale for not more than level 4 “unless he is a domicile of UT of J&K.**
- Through the same order, the Centre has **repealed the J&K Civil Services (special provisions) Act.**

The following two years will be a very crucial transition period for Kashmir from being a state to now being a full-fledged Union territory. As far as the future of the reorganization is concerned, laws will have to be changed, amendments will have to be made accordingly, administration will have to be restructured and the governance will need to be overhauled.

Fake News in India

Government of India issued a directive asking social media companies to voluntarily curb fake news and misinformation related to the coronavirus on their platforms. It has also launched a **Chatbot on WhatsApp** to address user queries and quell rumours on the coronavirus pandemic.

What Is A Fake News

- Fake news, or hoax news, refers to **false information or propaganda** published under the guise of being authentic news. With the advent of new age digital and social media, fake news has pervaded all spheres of life - political and social.
- Over years, fake news have emerged as a big challenge in India both for the government and the civil society, even as it led to violence and tension in the society, at times even killings.

Legal Recourses Available For Curbing Fake News

- **The Press Council of India:** It can warn, admonish or censure the newspaper, the news agency, the editor or the journalist if it finds that a newspaper or a news agency has offended against the standards of journalistic ethics.
- **News Broadcasters Association (NBA):** Complaints can be lodged with the NBA, which represents the private television news and current affairs broadcasters. It is self-regulatory in nature and probes complaints against news broadcasters in a fair manner.
- **Indian Broadcast Foundation (IBF)** which was created in 1999 to look into the complaints against contents aired by 24x7 channels.
- **Broadcasting Content Complaint Council (BCCC):** A complaint relating to objectionable TV content or fake news can be filed to the BCCC.
- **Defamation Suit:** If a person finds a fake news defamatory s/he can file a civil or criminal case for defamation. **IPC Section 499** makes defamation a criminal offence. **Section 500** provides for punishment for criminal defamation that can extend upto a jail term of two years with or without fine.
- **IPC Sections 153 and 295** can be invoked and action can be initiated against someone creating or spreading fake news if it can be termed as hate speech.
- **Section 505(1)(b) of IPC**—spreading false and mischievous content that results in ‘fear or alarm to the public, or to any section of the public whereby any person may be induced to commit an offence against the State or against the public tranquillity’. Under this law, the convicted can be punished with imprisonment of a maximum of six years and a fine.
- **Section 54 of the Disaster Management Act, 2005:** Whoever makes or circulates a false alarm or warning as to disaster or its severity or magnitude, leading to panic can be punished with imprisonment which may extend to one year or with fine.

Challenges In Tackling Fake News In India

- There is **no specific law** to deal with fake news. Free publication or broadcast of news in India flows from the fundamental right to freedom of expression as enshrined under Article 19 of the Constitution.
- **The sheer vastness of internet** (over 50 crore users in India) and social media users (an estimated over 40 crore WhatsApp users alone) makes tracing the origin of fake news almost impossible.
- **Inability of the intermediaries** to identify “unlawful acts” and inability to remove the objectionable content expeditiously when notified.
- **Implementation of traceability of messaging** would weaken the encryption of platforms such as WhatsApp and undermine digital security and user privacy.

- **Poor responsibility of Social media operators:** Under the IT Act and the rules notified in 2011 for social media intermediaries, their liability didn't arise if they were not responsible for the inception, transmission and reception of content via their networks.
- **Incompetent Law enforcement agencies:** Competence and capacity of agencies, which need to take action against fake-content generators and transmitters, has to be widely expanded both in terms of numbers and quality.
- **Lack of rules:** Unlike mainstream media that falls under comprehensive regulation, the online platforms have scope for wrongdoing due to the lack of binding rules, and the ability to keep owners and editors anonymous.

Way forward

- **Specific Law:** The existing legal provisions do cater exclusively to penalizing creation of false content and the malicious distribution thereof, but there is a need for designated legislation which enables for timely/instant removal of such content once it has been published.
- **Information Trust Alliance (ITA):** A big section of the digital society would have vouched for an industry-wide **self-censorship and weeding regime**. Recently such an attempt was announced by Facebook and Google, about forming an Information Trust Alliance (ITA) to weed out fake content.
- **Fact-checkers:** Intermediaries need to expand their network of fact-checkers, which they employ individually, till they come with an optimal arrangement.
- **Law enforcement agencies,** on their part, need to take action against content generators and transmitters of such fake news.
- **Media education:** A joint online media education campaign to support and promote media education messages.

The need of the hour is a **cocktail of stricter law enforcement as well as an awareness drive** through constant messaging and foster and inculcate cyber manners.

Members of Parliament Local Area Development Scheme (MPLADS)

- As a measure to fight against coronavirus and its adverse impact on the economy, the Government has **suspended MPLADS scheme for two years**
- The suspension of the MPLADS would help government **save a total of around Rs 8,000 crore in two years**, which will go to the consolidated fund of India. The government has allocated Rs 3,960 crore, or Rs 5 crore to each MP (in both houses of Parliament), for 2020-21.

What Is MPLAD Scheme

- It is an ongoing **Central Sector Scheme** which was launched in 1993-94. The Scheme enables the MP to **recommend works for creation of durable community assets** based on locally felt needs to be taken up in their constituencies in the area of national priorities namely drinking water, education, public health, sanitation, roads etc.
- **The Ministry of Statistics and Programme Implementation** has been responsible for the policy formulation, release of funds and prescribing monitoring mechanism for implementation of the Scheme.

Features of The Scheme

- The MPLADS is a Scheme **fully funded by Government of India**. The annual MPLADS fund entitlement per MP constituency is **Rs. 5 crore**.

- **Lok Sabha Members** can recommend works **within their Constituencies** and **Elected Members of Rajya Sabha** can recommend works **within the State of Election** (with select exceptions). Nominated Members of both the Houses can recommend works anywhere in the country.
- MPs are to recommend every year, works costing at least **15 % and 7.5 %** of the MPLADS entitlement for **areas inhabited by Scheduled and ST population respectively**.
- In order to encourage trusts and societies for the betterment of tribal people, a **ceiling of Rs. 75 lakh is stipulated for building assets by trusts and societies** subject to conditions prescribed in the scheme guidelines.
- All works to meet locally felt infrastructure and development needs, with an emphasis on creation of durable assets in the constituency, are permissible under MPLADS as prescribed in the scheme guidelines. Expenditure on specified items of non-durable nature are also permitted as listed in the guidelines.

Implementation Of The Scheme

- **Recommendation of work:** A Member of Parliament shall give his/ her choice of Nodal District to the Ministry of Statistics and Programme Implementation with copy to the State Government and to the District Magistrate of the chosen District.
- **Release of Funds:** The annual entitlement of **Rs 5 crore shall be released**, in two equal instalments of Rs 2.5 crore each **directly to the District Authority of the Nodal District**
- **Execution: The District Authority shall identify the Implementing Agency** capable of executing the eligible work qualitatively, timely and satisfactorily. It shall be responsible for timely and effective implementation of such works
- **Convergence:** MPLAD Scheme can be converged in individual/stand-alone projects of other Central and State Government schemes. Funds from local bodies can similarly also be pooled with MPLADS works. Wherever such pooling is done, funds from other scheme sources should be used first and the MPLADS funds should be released later, so that MPLADS fund results in completion of the project.

Criticism Against Suspension of MPLADS

- On the background of coronavirus pandemic, there was inaction and apathy at the central level, and **proactive and creative policy initiatives at the state level**, but the states do not have enough resources. To facilitate more **decentralised and rapid responses**, funds such as MPLADS could have played a crucial role.
- The move is **anti-federal** and an attempt by the government to **centralise the power**, rendering MPs powerless.
- MPLADS is a nimble instrument which is available with public representatives for **customised micro-level interventions** in order to alleviate distress in this time of need. It is something that is required to help the most vulnerable, poor and the needy

Given the kind of health crisis the country is facing, with some states and districts more impacted by the coronavirus outbreak, MPLADS fund could have filled the gaps in relief work left by the central and state governments.

National Security Act

The Uttar Pradesh government has said that six persons associated with the Tablighi Jamaat will be charged under the National Security Act (NSA) for harassing nurses in the district hospital.

Background

- The NSA is an act that empowers the government to **detain a person** if the authorities are satisfied that he/she is a threat to national security or to prevent him/her from disrupting public order.
- The NSA Act 1980 has its roots in the colonial era. In **1818, Bengal Regulation III** was enacted to empower the British government to arrest anyone for maintenance of public order without giving the person recourse to judicial proceedings.
- In 1919, the **Rowlatt Act** allowed confinement without a trial. The Jallianwalla Bagh tragedy was a direct result of the protest against these Rowlatt Act.
- Post-independence, Indira Gandhi introduced the controversial Maintenance of Internal Security Act (**MISA**) in **1971**, which was similar to the Rowlatt Act. It was repealed in 1977, and eventually the National Security Act (NSA) 1980 was promulgated.

Provisions of NSA Act

- **Grounds For Preventive Detention Of A Person Include**
 - Acting in any manner prejudicial to the defence of India, the relations of India with foreign powers, or the security of India.
 - Regulating the continued presence of any foreigner in India or with a view to making arrangements for his expulsion from India.
 - Preventing them from acting in any manner prejudicial to the security of the State or from acting in any manner prejudicial to the maintenance of public order or from acting in any manner prejudicial to the maintenance of supplies and services essential to the community it is necessary so to do.
- Under NSA, **an individual can be detained without a charge for up to 12 months**; the state government needs to be intimated that a person has been detained under the NSA.
- A person detained under **NSA can be held for 10 days without being told the charges against them**. The detained person can appeal before a high court advisory board but they are not allowed a lawyer during the trial.

Criticisms Against The Act

- **Section 50 of Cr.PC** mandates that the **person arrested has to be informed of the grounds of arrest**, and has the **right to bail**. But under NSA, a person could be kept in the dark about the reasons for his arrest for up to five days, and in exceptional circumstances not later than 10 days.
- **Article 22(1)** of the Constitution says an arrested person **cannot be denied the right to consult, and to be defended by, a legal practitioner** of his choice. But under NSA, the arrested person is also not entitled to the aid of any legal practitioner in any matter connected with the proceedings before an advisory board, which is constituted by the government for dealing with NSA cases.
- **Sections 56 and 76 of the Cr. PC** also provides that a person has to be produced before a court within 24 hours of arrest but this right is not available to a person detained under the NSA
- **National Crime Records Bureau (NCRB)**, which collects crime data in India, **does not include cases under the NSA** as no FIRs are registered. Hence, no figures are available for the exact number of detentions under the NSA
- It is criticized for its **misuse by the authorities**. Experts describe the validity of the Act even during *peacetime as 'anachronism'*.

Most Recent Use Of The National Security Act

- On January, 2020, the Lieutenant Governor of Delhi passed an order conferring the Commissioner of Police with the power to detain under NSA for a period of three months — between January and April. The order came at a time when the national capital was witnessing protests **against the Citizenship Amendment Act (CAA) and the National Register of Citizens (NRC)**
- In January 2019, Uttar Pradesh arrested **three persons under NSA in connection with an alleged cow-slaughter case.**
- In November 2018, Manipur journalist Kishore Chandra Wangkhem was detained for 12 months under the NSA for a **Facebook post against the chief minister.**

These cases point to the fact that governments sometimes use it as an **extra-judicial power**. It is time to reconsider the law because in four decades of its existence, the NSA has been in the news for all the wrong reasons.

Pre Conception and Pre Natal Diagnostic Techniques (Prohibition of Sex Selection) (PC&PNDT) Act

- A section of the media was speculating that the PC&PNDT Act 1994 has been suspended by the Ministry of Health and Family Welfare.
- MoHFW clarified that it has not suspended the PC&PNDT Act but in view of the ongoing lockdown, it issued a notification to **suspend certain provisions under the PC&PNDT Rules 1996**. These Rules pertain to **applying for renewal of registration** if falling due in this period, **submission of reports by diagnostics centres** and submission of quarterly progress report (QPR) by the States/UTs.

About PC&PNDT (Prohibition of Sex Selection) Act

- The PC-PNDT Act makes it **illegal to determine the sex of the unborn child or even use sex-selection technologies**. The law first came into force in 1996 as the Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994, in response to the **falling sex ratio** and fears that **ultrasound technologies** were being used to determine the sex of the foetus.
- The law was amended in 2003 to **bring the new technique of preconception sex selection within the ambit of the Act** – essentially, banning practices where medical practitioners try to influence the sex of the child before conception by using techniques such as sperm sorting (where a sperm cell is specifically chosen because of its sex chromosome) etc.

Main Provisions In The Act

- The Act provides for the prohibition of sex selection, before or after conception.
- It **regulates the use of pre-natal diagnostic techniques**, like ultrasound machine by allowing them their use only to detect genetic abnormalities, metabolic disorders, chromosomal abnormalities, certain congenital malformations, haemoglobinopathies, Sex linked disorders.
- No laboratory or centre or clinic will conduct any test including ultrasonography for the purpose of determining the sex of the foetus.
- No person, including the one who is conducting the procedure as per the law, will communicate the sex of the foetus to the pregnant woman or her relatives by words, signs or any other method.
- Any person who puts an advertisement for pre-natal and pre-conception sex determination facilities in the form of a notice, circular, label, wrapper or any document, or advertises through interior or other media in electronic or print form or engages in any visible representation made by means of hoarding, wall painting, signal, light, sound, can be **imprisoned for up to three years and fined Rs. 10,000.**

Issues Associated With The Act

- **Women are often unaware of their rights** under the Act; they also do not know which authorities to approach for help if coerced into a sex determination test.
- **The minimal punishment** of a maximum of three years of imprisonment and a maximum fine of Rs 10,000/- is not a serious enough deterrent, especially when viewed against the high demand for and profit margin in such services.
- **Lack of witnesses and insufficient evidence** are cited as major reasons that result in cases falling through, thereby resulting in low conviction rates.
- The Indian Medical Association (IMA) and Indian Radiological and Imaging Association have been demanding amendments to the rules and regulations under the law, saying that the doctors are being punished even for minor errors which don't amount to actual sex selection.

Way Forward

- The **maintenance of records** (clinic records, minutes of meetings and court case documents) needs to be strengthened.
- **Inspections and monitoring mechanisms:** All authorities at the state, district and sub-district levels should be mandated to strengthen their monitoring activities and undertake regular inspection of clinic records.
- There is an urgent need to **organize more workshops to sensitize the judiciary and public** on the nature of the crimes under the Act since their level of awareness is low.
- Considering the number of cases withdrawn, instructions should be issued to the implementing authorities that **cases should be filed after careful consideration and examination of all the facts**

PM CARES Fund

Keeping in mind the need for having a dedicated national fund with the primary objective of dealing with any kind of emergency or distress situation, like posed by the COVID-19 pandemic, and to provide relief to the affected, **a public charitable trust** under the name of '**Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund**' (PM CARES Fund)' has been set up.

Objectives

- To undertake and support relief or assistance of any kind relating to a public health emergency or any other kind of emergency, calamity or distress, either man-made or natural, including the creation or upgradation of healthcare or pharmaceutical facilities, other necessary infrastructure, funding relevant research or any other type of support.
- To render financial assistance, provide grants of payments of money or take such other steps as may be deemed necessary by the Board of Trustees to the affected population.
- To undertake any other activity, which is not inconsistent with the above Objects.

Constitution of the Trust

- **Prime Minister is the ex-officio Chairman** of the PM CARES Fund and *Minister of Defence, Minister of Home Affairs and Minister of Finance*, Government of India are ex-officio Trustees of the Fund.
- The Chairperson of the Board of Trustees (Prime Minister) shall have the power to nominate three trustees to the Board of Trustees who shall be eminent persons in the field of research, health, science, social work, law, public administration and philanthropy.
- Any person appointed a Trustee shall act in a pro bono capacity.

Other Details:

- The fund **consists entirely of voluntary contributions** from individuals/organizations and **does not get any budgetary support**. The fund will be utilised in meeting the objectives as stated above.
- Donations to PM CARES Fund would qualify for **100% exemption under the Income Tax Act, 1961**. It will also qualify to be **counted as Corporate Social Responsibility (CSR) expenditure** under the Companies Act, 2013
- PM CARES Fund has also got **exemption under the Foreign Contribution (Regulation) Act (FCRA)** and a separate account for receiving foreign donations has been opened. This enables PM CARES Fund to accept donations and contributions from individuals and organizations based in foreign countries. This is consistent with respect to Prime Minister's National Relief Fund (PMNRF). PMNRF has also received foreign contributions as a public trust since 2011.

About 'Prime Minister's National Relief Fund' (PMNRF)

- It was launched in 1948 by the then PM Jawaharlal Nehru, to **support people displaced from Pakistan**. However, this fund now provides **assistance to persons affected by natural calamities** such as floods, earthquakes etc. and to the **victims of riots and accidents**. It also covers expenses for **medical treatments** like heart surgeries, cancer treatment and acid attack etc.
- The fund consists **entirely of public contributions** and does not get any budgetary support.
- **Prime Minister is the Chairman** of PMNRF and is assisted by Officers/ Staff on **honorary basis**. The disbursement out of the fund is made at the discretion of the Prime Minister.
- PMNRF has not been constituted by Parliament. The fund is recognized as a **Trust under the IT Act**. Contributions towards PMNRF are notified **for 100% deduction from taxable income**.

Why PM CARE Fund Is Created When There Is PMNRF?

- PM CARES could be a **more democratic and constitutional way** of managing crisis situations like the Coronavirus pandemic and for other exigencies in the future than the PMNRF was till date.
- In PMNRF, PM has the sole discretion of appointing a secretary to manage the fund and **no separate office or staff is allocated for managing it**. Managing the fund is a **honorary function and no separate remuneration** is paid for it.
- Under PMNRF, the criterion for **disbursement of money and selection of beneficiaries is purely at the 'discretion of the PM.'** PM CARES now delegates that power of deliberation and decision making to **three other ministers of the government**.
- As chairman of PM CARES trust, PM still has responsibility of sanctioning & approving his ministers' recommendations; but unlike PMNRF, he is not proverbial 'judge, jury and executioner'.
- While the modalities and operational framework of PM CARES are yet unknown, **PMNRF over the years has not been allowed to be audited by Comptroller and Auditor General (CAG) of India**. The vetting of PMNRF's account has been **done by third party auditors till date**.
- The PMNRF's present corpus of Rs 3,800 crore is **grossly insufficient to meet the massive financial implications** of tackling an emergency situation like the Coronavirus pandemic.
- PMNRF has now become **an investment vehicle** instead of fulfilling its primary objective. In 2018-19, PMNRF made an investment of Rs 1,301 crore in state development loans (SDLs) and Rs 250 crore was invested in fixed deposits with IDFC Bank.

With a more democratic and constitutionally sound trust in place, expectations would be that PM CARES becomes a war chest that India can readily rely on in emergencies when the future of an entire country is at stake.

NAREDCO and ASSOCHAM Seek Relief Package

- NAREDCO, the industry body of real estate developers and the industry association Assocham have asked the government to provide a relief package of more than \$200 billion, which is around 10 % of nation's GDP. The amount can be pumped into the economy in a staggered manner to retrieve the business cycle without incurring further loss.
- The real estate sector accounts for 7 % of the GDP and employs 11 % of the country's population.
- The sector has been facing dropping sales due to sagging buyer confidence and an overall slowdown in the economy. The crisis in non-banking finance companies (NBFCs) after the collapse of IL & FS and Dewan Housing Finance Ltd (DHFL) led to a severe credit squeeze.
- Now with coronavirus pandemic impacting all sectors of the economy, the troubles of real estate industry appear to have been compounded.
- Industry leaders say the extension of lockdown on construction sites may lead to **an unprecedented challenge of re-acquiring the workforce**, which will further delay constructions and developers will have to bear significant losses as **monsoons** are approaching.
- Hence, breathing space must be provided to companies which have faced huge losses due to rapidly-decreasing stock prices, as this has made high net worth companies prone to be taken over by foreign investors, the results of which can be devastating for India.

Demands

- The industry seeks working capital to ensure that the Indian economy doesn't get hit badly, business organizations don't default and saddle banks with NPAs, and cause job losses.
- The bodies have asked for one-time restructuring of loans for all corporates and reduction of interest rate/repo-rate by another 100 bps by the RBI among others.
- They've further asked the government to reduce GST across the board by 50% for 3 months and 25% for the fiscal. Also, a request has been made that the final GST due should be payable in 6 quarterly instalments starting October 2020 with no interest.
- NAREDCO also called for suspending all cases under the National Company Law Tribunal (NCLT) for the next six months amid the economic slowdown.

NAREDCO

- National Real Estate Development Council (NAREDCO) was established as an autonomous self-regulatory body in 1998 under the aegis of Ministry of Housing and Urban Affairs.
- It was formed with the mandate to induce transparency and ethics in real estate business and transform the unorganized Indian real estate sector into a matured & globally competitive sector.
- NAREDCO works to create and sustain an environment conducive to the growth of real estate industry, partnering industry and government alike through advisory and consultative processes.

ASSOCHAM

- The Associated Chambers of Commerce and Industry of India (ASSOCHAM) is one of the apex trade associations of India. The organisation represents the interests of trade and commerce in India, and acts as an interface between issues and initiatives.

- The goal of this organisation is to promote both domestic and international trade, and reduce trade barriers while fostering conducive environment for the growth of trade and industry of India.

Banking Fraud Oversight Wing

- The Reserve Bank of India (RBI) is in the process of putting together an exclusive wing for banking fraud oversight, which will have teams for meta-data processing and analysis, artificial intelligence analysis units, as well as pro-active risk assessment cell.
- The new team is likely to be formed as soon as within the next month, and could have a capacity of up to 600 officers.
- The banking regulator is also planning to bring in experts from the private sector working in all these domains to train the new members in the fraud oversight wing. These new teams will also be given training in the latest technologies, so that they can also prevent another Yes Bank kind of event.

Need For The Wing

- The idea for the fraud oversight wing is to train the teams in the latest technologies, as most banking officials have never done credit risk assessment or are not accustomed to new technology.
- After the loan fiasco at Punjab National Bank, the RBI had been thinking of ways to pro-actively detect such frauds.
- The idea of a fraud oversight wing was floated in October 2019 by the top management of RBI. The working conditions, however, were very strict and anyone opting for that cadre would not be allowed to leave for three years.
- To overcome the problem, the RBI sought to create an entire new wing and hire fresh people, including industry veterans who would lead the teams.

Long Term Repo Operations

- The Reserve Bank of India has received Rs 1.13 lakh crore worth of bids in the targeted long-term repo operation (TLTRO) conducted for an amount of Rs 25,000 crore with a three-year tenor.
- The central bank said liquidity availed under TLTRO by banks has to be deployed in investment grade corporate bonds, commercial paper, and non-convertible debentures.

LTRO

- The LTRO is a tool under which the central bank provides **one-year to three-year money** to banks at the prevailing repo rate, accepting government securities with matching or higher tenure as the collateral.
- While the RBI's current windows of liquidity adjustment facility (LAF) and marginal standing facility (MSF) offer banks money for their immediate needs ranging from 1-28 days, the LTRO supplies them with liquidity for their 1- to 3-year needs.
- LTRO operations are intended to prevent short-term interest rates in the market from drifting a long way away from the policy rate, which is the repo rate.
- Since January 2019, the repo rate (the rate at which banks borrows quick money from RBI) has been reduced by RBI on various occasions but only a part of these rate cuts have as yet been passed on to borrowers by banks and other lenders.
- When charged with this slow transmission of rate cuts, bankers complained that repo loans constituted only a miniscule portion of their overall funds, making it difficult for them to cut lending rates.

- The RBI believes that offering banks durable longer-term liquidity at the repo rate can help them lower the rates they charge on retail and industrial loans, while maintaining their margins.
- LTRO also shows the market that RBI will not only rely on revising repo rates and conducting open market operations for its monetary policy, but also use new tools to achieve its intended objectives.

International Monetary and Financial Committee (IMFC) Meeting

- Amidst Covid-19 induced lockdown in most parts of the world, India's Union Finance Minister attended through video conference the plenary meeting of the IMFC.
- The discussions at the meeting were based on IMF Managing Director's Global Policy Agenda titled, "Exceptional Times – Exceptional Action".
- The members of the IMFC updated the committee on the actions and measures taken by member countries to combat Covid-19 and on IMF's crisis-response package to address global liquidity and members' financing needs.
- In her intervention, the Indian FM outlined various measures taken in India to tackle the health crisis as well as to mitigate its impact. The Finance Minister also informed the IMFC about India's role as a responsible member of the global community in providing critical medicines to other nations.

IMFC

- IMFC is the Ministerial-level committee of the International Monetary Fund (IMF). The size and the composition of the IMFC mirrors that of the Executive Board.
- The IMFC has 24 members who are central bank governors, ministers, or others of comparable rank. Each member country and each group of member countries that elects an Executive Director appoints a member of the IMFC.
- The IMFC advises and reports to the IMF Board of Governors on the supervision and management of the international monetary and financial system, including on responses to unfolding events that may disrupt the system.
- It also considers proposals by the Executive Board to amend the Articles of Agreement and advises on any other matters that may be referred to it by the Board of Governors.
- Although the IMFC has no formal decision-making powers, in practice, it has become a key instrument for providing strategic direction to the work and policies of the Fund.

Draft Electricity Amendment Bill 2020

- The Union Ministry of Power has come up with a draft Electricity Amendment Bill 2020, which is the fourth draft of Electricity (Amendment) Bill since 2014. The Ministry has sought comments of the stakeholders on the Bill within three weeks from April 17.
- The amendments seek to remove the regulatory shortcomings that were being experienced in the functioning of the sector and to bring in investment and ease of doing business in the power sector.

Provisions Of The Bill

- The Bill provides that the Electricity Act would be applicable to the entire country, including the Union Territories of Jammu and Kashmir and Ladakh.
- It also provides that the cross (power) border trade shall cover import or export of electricity from India and any other country. The transaction related to passage of electricity through India would be treated as transit between two other countries.

- The bill enables state as well as central power regulators to specify transmission charges under open access. Earlier, both functions were with the central commission.
- For the renewable sector, the draft bill proposes to bring National Renewable Energy Policy and may bring in a minimum percentage of the purchase for the states from renewable sources.

Electricity Contract Enforcement Authority

- The bill seeks to set up an Electricity Contract Enforcement Authority (ECEA), which will have the power of a civil court and the sole authority to settle disputes related to power purchase agreement between discoms (distribution companies) and gencos (generation companies).
- The ECEA will deal with the issues of non-performance of contracts leading to uncertainty and upsetting of investment decisions and ease of doing business in the power sector.
- The decision of the ECEA can be challenged at the Appellate Tribunal for Electricity (APTEL) and subsequently, at the Supreme Court.

Sub-licensing And Franchisee Models

- In India, most electricity distribution companies are run by states and many are under financial stress despite many reforms brought in by the central government.
- The draft proposes to **privatise discoms** by way of sub-licensing and franchisee models, which would not require a separate licence from the state commission.
- The sub-licensing will allow states to choose a private company for the distribution of electricity supply of a particular area to help it bring down losses of both electricity and finances.

Subsidy Not To Be Provisioned In Tariffs

- Currently, the state regulators adjust many costs for future recovery which includes subsidy commitment which eventually increases electricity tariff, resulting in weakening of the financial health of discoms. The bill proposes to restrict postponing of revenue recovery and reduction in cross-subsidy to bring in a cost-reflective, simplified tariff.
- The amendment will allow states to grant subsidy but without provisioning it in the tariff determined by the state regulators. The states will have to grant subsidy through a Direct Benefit Transfer (DBT) for the consumers it plans to give relief.

National Load Despatch Centre

- Ministry of Power had in Aug' 2019 emphasised for a strict payment mechanism by electricity distributions companies, as payment delay led to operational & financial issues for the generating companies.
- Now, the amendment provides additional roles to the National Load Despatch Centre that include scheduling and dispatch of power across the country in accordance with contracts.
- The bill says that there would be no schedule or despatch of electricity unless there is adequate security of payment as per the contract.

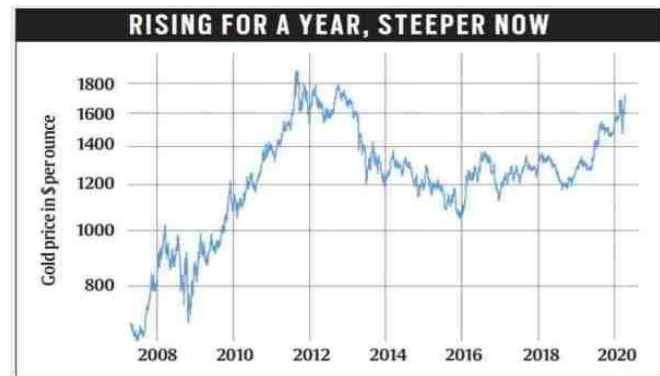
Rise In Gold Price

- Due to the coronavirus-induced global economic uncertainty and the developments surrounding it, the price of gold — the precious metal generally accepted as a safe haven asset and a hedge against inflation — is on the rise.
- However, much before Covid-19's impact spread across economies, gold prices had started their upward trajectory since May 2019 leading to a nearly 40 per cent jump in less than a year, from \$1250 (an ounce) to around \$1700 (an ounce) plus now.

- The present gold prices in India are even higher, as they jumped from around Rs 32,000 per 10 grams to nearly Rs 46,800 per 10 gram during the same period, a nearly 45 per cent return.
- Given the factors that could push its price further, analysts say the price of the yellow metal could rise by another 30-35%.

Reasons For The Rise In Gold Price

- Last year, there were reports based on economic indicators suggesting that the US economy could enter into recession after a record 11 years of economic surge since the global financial crisis of 2008.
- This expectation of recession led to the beginning of the gold rally, and the Covid-19 impact, added momentum to the rising gold prices as a major global recession now looks certain.
- The nearly 40 per cent crash in benchmark equity indices in the US and India, forced the US Fed to announce a record amount of liquidity infusion and a bond buying programme of more than \$3 trillion.
- Any expansion in the paper currency tends to push up gold prices, and on March 27, the RBI too cut its key policy rate by 75 basis points and announced liquidity infusion of Rs 3.74 lakh crore in the financial markets.
- Apart from this, major gold buying leading central banks of China and Russia over the last two years have also supported higher gold prices.



Trend In Rising Gold Price

- While gold by itself does not produce any economic value, it is an efficient tool to hedge (protection against adverse financial circumstances) against inflation and economic uncertainties. It is also more liquid when compared with real estate and many debt instruments which come with a lock-in period. Hence, after any **major economic crash and recession**, gold prices continue their upward run.
- Various findings also suggest that gold prices fall with a **rise in equity prices**.
- Also, gold prices move in tandem with increased **economic policy uncertainty**, thereby indicating the safety feature of the asset.
- After the collapse of Lehman Brothers in September 2008 in the US, which led to a worldwide economic crisis, gold prices jumped from around \$700 an ounce in October 2008 to peak at around \$1900 an ounce in September 2011.
- In the next four years, gold was on a steady decline and crashed to nearly \$1000 an ounce in December 2015 and between 2015 and 2019, gold was in a range of \$1000 an ounce and \$1350 an ounce, after which it started its steady run.

Can Gold Price Crash

- Any sudden sale of gold holdings by central banks to deal with the economic crisis, and crisis in other risk assets prompting investors to compensate their losses through sale of gold ETFs (exchange traded funds), are the key events that could stop the gold rise.
- The adverse economic impact of Covid-19 is expected to stay on for much longer — with comparisons being made to the great depression of 1929 in the US.

- As and when economic recovery picks up pace, investors will start allocating more funds to risk assets like stocks, real estate and bonds and pull out money from safe assets such as gold, US dollar, government debt and Japanese yen.
- Also, as per historical trends, when equity and risk assets start an upward trend, gold typically falls significantly as was the case from 2011 till 2015.

World Bank Report On Remittances

- The World Bank recently released a report on the impact of Covid-19 on migration and remittances.
- Globally remittances are projected to decline sharply by about 20 % this year due to the economic crisis induced by the pandemic and shutdowns.
- The projected fall, which would be the sharpest decline in recent history, is largely due to a fall in the wages and employment of migrant workers, who tend to be more vulnerable to loss of employment and wages during an economic crisis in a host country.
- Remittance flows are expected to fall across all regions, most notably in Europe and Central Asia (27.5 %), followed by Sub-Saharan Africa (23.1 %), the Middle East and North Africa (19.6 %), Latin America and the Caribbean (19.3 %), and East Asia and the Pacific (13 %).

Highlights For India

- India is the world's biggest recipient of remittances, which bolster the country's foreign exchange reserves and help fund its current account deficit. In 2019, India is estimated to have received \$83.1 billion in remittances from people working overseas, about 12% of the total expected global inflow.
- However, the sharp decline in crude prices will hurt remittances from oil-producing countries such as Saudi Arabia and the United Arab Emirates.
- Remittances to India are likely to drop by 23 % from USD 83 billion last year to USD 64 billion this year due to the coronavirus pandemic, which has resulted in a global recession.

Cut In Nutrient Based Subsidy

- Centre has cut the subsidy for non-urea fertilizers this year to ₹22,186 crore. That is about 3% lower than ₹22,875 crore which was the estimated expenditure on the nutrient based subsidies in 2019-20.
- The Cabinet Committee on Economic Affairs decided to reduce the subsidy for nitrogen-based fertilizers to ₹18.78 per kg, for phosphorous-based fertilizers to ₹14.88 per kg, and set the subsidy for potash-based fertilizers at ₹10.11 per kg,
- And while the subsidy for sulphur-based fertilisers had been raised last year to ₹ 3.56 per kg, from ₹2.72 per kg, this year it has been slashed to just ₹2.37 per kg.
- The CCEA also approved the inclusion of a complex fertilizer, **ammonium phosphate**, under the nutrient-based subsidy scheme.

Nutrient Based Subsidy

- The Nutrient Based Subsidy (NBS) Policy is being implemented by the Department of Fertilizers, Ministry of Chemicals & Fertilizers since 2010.
- Under NBS, a fixed amount of subsidy, decided on annual basis, is provided on each grade of subsidized Phosphatic & Potassic (P&K) fertilizers, except urea, based on its Nutrient Content.

- At present, the government is making available fertilisers, namely urea and 21 grades of P&K fertilisers to farmers at subsidised prices through manufacturers/importers.
- In case of urea, the government fixes the maximum retail price (MRP). The difference between the production cost and the MRP is reimbursed to manufacturers.
- The scheme was set up to ensure the availability of phosphatic and potassic fertilizers to farmers at an affordable price, as the retail prices of such non-urea fertilisers are decontrolled and set by manufacturers
- Further, NBS also aimed to ensure balanced use of fertilisers, consequently protecting the soil quality and improving agricultural productivity.
- Thus, more grades of P&K fertilizers have been brought under the purview of NBS, which gives the farmers a wider choice to use complex fertilizer grades.

Impact Of Low Oil Price On Sugar

- On April 21, prices of raw sugar for May delivery at New York crashed to 9.75 cents per pound, the lowest closing for futures contract since 2008. Even commodities such as corn and palm oil have seen price declines following the slide in crude.
- One reason for this collapse is the closure of restaurants, weddings and other social functions not taking place, and people avoiding ice-creams and sweetened cold beverages that might cause throat infections.
- However, sinking crude prices appear to be an even bigger factor. The juice from crushing sugarcane can be crystallised into sugar or fermented into alcohol.
- When oil prices are high, mills — especially in Brazil — tend to divert cane for making ethanol (alcohol of 99%-plus purity) that is used for blending with petrol.
- In 2019-20 (April-March), only 34.32% of cane crushed by Brazilian mills went for manufacturing 26.73 mt of sugar. The rest was used to produce 31.62 billion litres of ethanol.
- But with oil prices tanking mills will not find it attractive to divert cane for ethanol. Brazil's mills, which have started crushing (the Indian season is from October), are seen to produce up to 36 mt of sugar and hardly 26 billion litres of ethanol this year.

Impact on India

- Dip in sugar consumption, together with higher Brazilian output, is bad news for both Indian sugar mills and cane farmers. Exports slowing down and not much domestic lifting of sugar by institutional consumers has significantly undermined the ability of mills to make cane payments.
- Uttar Pradesh's factories have till now crushed cane worth roughly Rs 32,000 crore in the 2019-20 season, but managed to pay only Rs 16,456 crore. Maharashtra mills, too, had paid only Rs 11,310 crore out of their total cane dues of Rs 12,539 crore as on April 15.
- However, India is counting on Indonesia's increased import requirements and its decision last month to slash the duty on Indian raw sugar from 15% to 5%. Indonesian refiners are projected to import 3.3 mt of raws this year, up from 2.6 mt in 2019.

Change in FDI Policy

- In a move that will restrict Chinese investments, the Centre has made prior government approval mandatory for foreign direct investments from countries which share a land border with India.

- Previously, only investments from Pakistan and Bangladesh faced such restrictions. Pakistani investors face further restrictions in requiring government approval for FDI in defence, space and atomic energy sectors as well.
- Investors from countries not covered by the new policy only have to inform the RBI after a transaction rather than asking for prior permission from the relevant government department.
- While the note did not name any country, analysts see the amendments as aimed at possible Chinese investments. The decision came days after China's central bank, the People's Bank of China (PBoC) had raised its shareholding in HDFC to over 1 per cent.
- With many Indian businesses coming to a halt due to the lockdown imposed to contain the COVID-19 pandemic and valuations plummeting, a number of domestic firms may be vulnerable to opportunistic takeovers or acquisitions from foreign players.

China's Increasing Footprint In India

- China's footprint in the Indian business space has been expanding rapidly and China's FDI has grown five-fold since 2014. As of Dec' 2019, its cumulative investment in India exceeded \$8 billion. A Brookings India paper pegs total current and planned Chinese investment in India at over \$26 billion.
- Perhaps the most underestimated aspect of Chinese investment has been the way that Chinese capital now undergirds the technology start-up space in India, with Chinese venture capitalists funding household names such as Paytm, Flipkart, Swiggy, Zomato, Oyo, Ola, BigBasket, Byju's, SnapDeal, Quikr and MakeMyTrip.
- This means that China is embedded in Indian society, the economy, and the technology ecosystem that influences it.
- The Brookings paper also warned that boundaries between China's state and private sectors are blurry at best. This blurred separation raises the question of whether the Chinese private sector can indeed be considered as an entirely distinct entity from the state.
- This question becomes even more relevant with Chinese and other foreign firms acquiring controlling stakes in Indian companies, particularly in the technology sector where definitions of security or strategic implications are rapidly evolving.

China's Response

- China has called for India to revise these "discriminatory practices" and treat investments from different countries equally. As per China, the additional barriers set by Indian side for investors from specific countries violate WTO's (World Trade Organization) principle of non-discrimination, and go against the general trend of liberalization and facilitation of trade and investment.
- More importantly, they do not conform to the consensus of G20 leaders and trade ministers to realize a free, fair, non-discriminatory, transparent, predictable and stable trade and investment environment, and to keep markets open.

India's Argument

- India maintains the policy is not aimed at any one country and the amendments are not prohibiting investments as it has just changed the approval route for these investments. Also, there are many sectors in India that are already subject to this approval route.
- Furthermore, India's concerns are similar to those being expressed elsewhere in the world. A number of European countries have already moved in that direction. In recent years, apprehensions have grown, in both the developing and developed world, that China is targeting their infrastructural, industrial and technological assets for control.

New Features in e-NAM

- The Ministry of Agriculture & Farmers' Welfare has launched new features of National Agriculture Market (e-NAM) Platform to strengthen agriculture marketing by farmers.
- The new features will reduce their need to physically come to wholesale mandis for selling their harvested produce, at a time when there is critical need to decongest mandis to effectively fight against COVID-19.

New Features**1. Negotiable Warehouse Receipt (e-NWRs) Module in e-NAM Software**

- Warehouse trading module with payment feature is launched to enable small & marginal farmers to directly trade their stored produce from selected Warehousing Development and Regulatory Authority (WDRA) registered warehouses which are declared deemed market by the State.
- Farmers will be able to place their produce in WDRA accredited warehouses.

Benefits

- Depositor can save the logistics expenses and will have better income.
- Farmers can sell the produce across the nation to get better price and at the same time can save himself from hassle of mandis.
- Farmers with their produce in WDRA accredited warehouses will be able to avail the benefit of pledge loan if required.
- Price stabilization by matching supply and demand through time and place utility.

2. FPO Trading Module

- It will enable FPOs to upload their produce from their premise/collection centres to help distant bidders to visualise the produce before bidding.
- FPOs have the option for delivery of produce either from their premises or by bringing to mandi premise after successful bidding.

Benefits

- It will not only decongest the mandis but also reduce the hassle of FPOs to deal with mandis.
- It will help FPOs by reducing transaction costs (transportation) and enhancing their bargaining power.
- Facilitates FPOs to avail online payment facility with ease of doing business.

3. Launch of Logistic Module

- Presently, e-NAM provides a database of individual transporters to the traders. Now, a provision has been made for linking large logistic aggregator platforms, to provide choices to users.
- Traders would be able to use the link to navigate to the logistics provider's website and select appropriate services.
- With these additions, more than 3,75,000 number of trucks from large logistic providers would be added for logistic purpose.

Benefits

- It will help in seamless transportation of agri produce.
- It will promote inter-State trade under e-NAM by providing online transport facilities for distant buyers.

e-NAM

- National Agriculture Market or eNAM is an online trading platform for agricultural commodities launched in 2016 as a pan-India electronic trade portal linking APMCs across the States.
- The market helps in better price discovery and provides facilities for smooth marketing of their produce.
- Already 585 mandis in 16 States and 02 Union Territories have been integrated on e-NAM portal.

Catastrophe Containment and Relief Trust (CCRT)

- The International Monetary Fund has approved 500 million to cancel six months of debt payments for 25 of the worlds most impoverished countries so they can help tackle the COVID19 pandemic.
- Majorly all the countries that the IMF Board has approved are in Africa, other than Afghanistan, Yemen, Nepal and Haiti.
- The money will come from the IMF's revamped CCRT which will use recent pledges of 185 million from the United Kingdom and 100 million from Japan. The fund is pushing to raise the amount available to \$1.4 billion.
- IMF's CCRT, responsible for the debt payment relief, was first set up in 2015 amid the Ebola outbreak in West Africa and now has been repurposed as a help to the fight against the pandemic.
- The CCRT allows the IMF to provide grants for debt relief for the poorest and most vulnerable countries hit by catastrophic natural disasters or public health disasters.
- The relief on debt service payments frees up additional resources to meet exceptional balance of payments needs created by the disaster and for containment and recovery.

Dollar Swap

- India is working with the United States to secure a dollar swap line that would help in better management of its external account and provide extra cushion in the event of an abrupt outflow of funds.
- In a swap arrangement, the US Fed provides dollars to a foreign central bank, which, at the same time, provides the equivalent funds in its currency to the Fed, based on the market exchange rate at the time of the transaction.
- The parties agree to swap back these quantities of their two currencies **at a specified date in the future**, which could be the next day or even three months later, using the **same exchange rate as in the first transaction**.
- Thus, these swap operations carry no exchange rate or other market risks, as transaction terms are *set in advance*. The absence of an exchange rate risk is the major benefit of such a facility.
- India already has a \$75 billion bilateral currency swap line with Japan, which has the second highest dollar reserves after China. RBI also offers similar swap lines to central banks in the SAARC region within a total corpus of \$2 billion.

Need For A Dollar Swap Line

- Despite the slump in global crude oil prices and reduction in imports due to the pandemic outbreak, a sharp outflow of funds resulting from foreign portfolio investors (FPIs) looking for safer havens amidst the current global uncertainty, has pulled down India's foreign exchange reserves.

- In roughly a month, India's foreign exchange reserves have fallen by nearly \$13 billion — from an all-time high of \$487.23 billion on March 6 to \$474.66 billion as on April 3.
- According to RBI, 63.7% of India's foreign currency assets — or \$256.17 billion — are held in overseas securities, mainly in the US treasury. Thus, experts believe that the country's reserves at this stage — which are roughly equivalent to 12 months of import requirements — are sufficient to tide over any difficulty.

Daporjio Bridge

- A key bridge over the Subansiri river in Arunachal Pradesh close to the Line of Actual Control (LAC) was recently inaugurated that will allow the speedier movement of men and logistics material towards the Line of Actual Control (LAC) with China.
- The Daporjio bridge was constructed by the Border Roads Organisation (BRO) in record 27 days despite the lockdown and adhering to all COVID-19 precautions.
- The bridge has now been upgraded from class 24 tonnes to class 40 tonnes allowing heavier vehicles to pass catering for not only Army requirements but future infrastructure development requirements of the upper Subansiri district.

Subansiri River

- The Subansiri river, also known as the **Gold River**, is a tributary of the Brahmaputra river in the Indian states of Assam and Arunachal Pradesh.
- It originates in the Himalayas in China and flows into India and joins the Brahmaputra River. It is the largest tributary of the Brahmaputra.

Operation Twist

- The Reserve bank of India recently decided to bring back its bond swapping programme billed as India's Operation Twist with an aim to help monetary transmission.
- The term Operation Twist is an Indian version of unconventional measures taken by the US Federal Reserve in 2011 in its bid to boost economic growth after getting hit by the global financial crisis.
- Operation Twist is RBI's simultaneous selling of short-term securities and buying of long term securities through open market operations (OMO). Under this mechanism, the short-term securities are transitioned into long-term securities.
- In the current operation, the central bank will purchase long-dated securities with tenor between 6-10 years aggregating Rs10,000 crore, while it will sell short-dated securities maturing June 2020, October 2020 and April 2021.
- Whenever there is a long-term investment deficit in the country and the investors are hesitant to make long-term investments in the economy, the government jumps in to revive growth by lowering the interest rate for long-term investment ventures.
- There is an inverse relationship between the bond prices and their yields. As the central bank buys long-term securities (bonds), their demand rise which in turn pushes up their prices.
- However, the bond yield comes down with an increase in prices. Yield is the return an investor gets on his (bond) holding/investment. The interest rate in an economy is determined by yield.
- Thus, lower long-term interest rates mean people can avail long-term loans (such as buying houses, cars or financing projects) at lower rates.

- This also results in a dip in the expected returns from long-term savings which tilts the balance from saving towards spending. Hence, cheaper retail loans can help encourage consumption spending which is the largest GDP component in the economy.

Remote Monitoring of Covid-19

- The All India Institute of Medical Sciences (AIIMS)-Rishikesh, in collaboration with Bengaluru-based Defence PSU Bharat Electronics Limited (BEL), has developed a health monitoring system to remotely assess the health of Covid-19 patients quarantined in homes and hospitals.
- Besides aiming at significantly reducing the risk of exposure to healthcare workers, the solution is also expected to reduce the increasing demand of PPE and other logistics.

Features

- BEL developed the Proof of Concept (PoC) model of a system integrating non-invasive health monitoring sensors to measure critical parameters such as temperature, pulse rate, SPO2 (Saturated Oxygen level) and respiration rate.
- BEL, which has proven expertise in Network Centric and IoT systems, has also networked these sensors for remotely monitoring the critical parameters.
- A mobile app/web browser has been developed for people to get enrolled with AIIMS-Rishikesh once they show symptoms of Covid-19.
- AIIMS-Rishikesh will study patient complaints and based on the assessment by clinical experts, a health monitoring kit will be handed over to the patient for periodical monitoring of the critical parameters.
- Patient health metrics, along with patient location, are uploaded on a regular basis on to a centralised Command & Control Centre (CCC) on Cloud using either the patient's mobile phone or integral GSM SIM.
- The software will give out alerts in the form of messages to medical officers and healthcare workers when the health parameters exceed the threshold. It will also record the severity of the patient's condition in different colour codes.
- Data analytics software of the CCC will also graphically map the geo-distribution of Covid-19 suspects/patients in the State. This would help the hospital administration in visualising the hot spots and taking necessary action to isolate and cordon off these areas to check the spread the virus.

Bharat Electronics Limited

- Bharat Electronics Limited is an Indian state-owned aerospace and defence company.
- It is owned by the Indian Government and primarily manufactures advanced electronic products for the Indian Armed Forces.
- BEL is one of nine PSUs under the Ministry of Defence of India and has been granted Navratna status.

Price Monitoring and Resource Unit

- The National Pharmaceutical Pricing Authority (NPPA) has set up a Price Monitoring and Resource Unit (PMRU) in Jammu and Kashmir. PMRUs have already been set up by NPPA in 11 States, including, Kerala, Odisha, Gujarat, Rajasthan, Punjab, Haryana, Nagaland, Tripura, Uttar Pradesh, Andhra Pradesh and Mizoram.

- The PMRU, a registered society, shall function under the direct control and supervision of State Drug Controller of Jammu & Kashmir.
- The unit shall be funded by NPPA for its recurring and non-recurring expenses.

Functions

- The PMRU shall help NPPA and State Drug Controller in ensuring availability and accessibility of medicines at affordable prices.
- It is also expected to organise seminars, training programs and other information, education and communication (IEC) activities in the areas of availability and affordability of medicines for all.
- It will also collect samples of medicines, collect and analyse data and make reports with respect to availability and over-pricing of medicines for taking action under the provisions of Drug Price Control Order (DPCO).

SAMADHAN Challenge

- The Innovation Cell of the Ministry of Human Resources Development and All India Council for Technical Education in collaboration with Forge and InnovatioCuris has launched a mega online challenge - SAMADHAN - to test the ability of students to innovate.
- The students participating in this challenge will search and develop such measures that can be made available to the government agencies, health services, hospitals and other services for quick solutions to the Coronavirus epidemic and other such calamities.
- Apart from this, through this challenge, work will be done to make citizens aware, to motivate them, to face any challenge, to prevent any crisis and to help people get livelihood.
- The students and faculty will be motivated for doing new experiments and new discoveries and provide them with a strong base leading to spirit of experimentation and discovery.

Sewage Surveillance To Estimate Coronavirus Spread

- Sampling sewage for viral particles is a time-tested method of environment surveillance and is routinely resorted to for understanding circulation of several viruses — wild and vaccine-derived polio, rota virus, Hepatitis E and typhoid — in the community.
- Now, **researchers in France** have found that sewage surveillance can help in understanding the circulation of novel coronavirus (SARS-CoV-2) in the human population.
- People infected with the virus have been found to shed the virus in their stools and by studying sewage samples, it is possible to know the viral load in the community through modelling. This will be possible once data on how many viral particles are shed by individuals and how the viral particles get diluted in sewage are available.

The Study

- The study was carried out in greater Paris for a month (March 5 to April 7), and samples were picked twice a week from 23 raw and eight treated wastewater sites.
- According to the scientists, there are two ways to take sewage samples
 - Pick up at several places to monitor the presence of the virus in a community living in upstream catchment area and/or
 - Pick up at terminal sites where the sewage of the city/town is treated or let out into water bodies.

- The study found that the rise and fall in coronavirus concentrations closely matched the COVID-19 outbreak in the region. Most interestingly, the team found high concentration of viral RNA about a week before multiple deaths were recorded in Paris on March 10.

Significance Of Sewage Surveillance In Coronavirus Estimation

- In the case of novel coronavirus, sewage surveillance becomes particularly useful as a large percentage of infected population is either asymptomatic or show only mild symptoms.
- Hence, there is a great likelihood that circulation of the virus in the community will be detected quite late, if at all. The circulation is likely to continue undetected till community testing is increased significantly or till people become severely ill, requiring hospitalisation.
- However, the study has shown that the environmental surveillance is able to track community transmission, by picking up an increase in virus concentration in sewage much before cases show up or overburden the healthcare system.
- The ability of sewage surveillance to track community spread even when people are asymptomatic is similar to antibody testing or pooled testing. However, sewage sampling is not a replacement to testing for infection in people but is only a supplement.

Way Ahead

- Environmental surveillance is key to know and understand community transmission but one should be clear when to carry out sewage surveillance. The right time would be when cases have come down once the outbreak has been controlled or before cases show up so as to predict an outbreak.
- As per scientists, the best time and place to carry out sewage sampling in India for coronavirus would be when testing of people has been sorted and in places where no cases have been reported.

E-platform To Train Covid Warriors

- India's first line of workers is already engaged in COVID relief and doing commendable job. However, a larger force will be needed to replace the first line and to tackle the exponential or geometric increase in positive COVID cases in the subsequent stages of the pandemic.
- Accordingly, to take care of the training needs of the frontline workers, the Government has launched a training module for management of COVID-19 named 'Integrated Govt. Online training' (iGOT) portal on Ministry of HRD's DIKSHA platform for the capacity building of frontline workers.
- Courses on iGOT have been launched for Doctors, Nurses, Paramedics, Technicians, Auxiliary Nursing Midwives (ANMs), State Government Officers, Civil Defence Officers, Various Police Organisations, National Cadet Corps(NCC), National Service Scheme and various other volunteers.
- The platform delivers role-specific content to each learner at his/her place of work or home and to any device of their choice and is expected to provide training to around 1.5 crore workers and volunteers in the coming weeks.
- To begin with, nine courses on iGOT have been launched on topics like Basics of Covid, ICU Care and Ventilation Management, Clinical Management, Infection Prevention through PPE, Infection Control and Prevention, Quarantine and Isolation, Laboratory Sample Collection and Testing, Management of Covid 19 Cases, Covid 19 Training.

DIKSHA platform

- National Teacher Platform (NTP) branded as "Diksha" is an initiative of the Ministry of Human Resource Development. It is a state-of-the-art platform built to host Open Educational Resources (OER) and tools for Teachers.

- It is built considering the whole teacher's life cycle - from the time student teachers enroll in Teacher Education Institutes (TEIs) to after they retire as teachers
- Teachers can access relevant personalised professional development training anytime and anywhere. Further, teachers have access to their own personalised workspace where they can plan and track their progress including courses completed, performance in tests etc.
- The uniqueness of the DIKSHA platform is its federated architecture which makes it possible for iGOT portal to leverage it and help train lakhs of 'Corona warriors'. The portal will provide agencies like the Health Department and NCC with the ability to upload their content suited for its various users and users to take training.

CollabCAD: New Initiatives Under ATL

- Atal Innovation Mission, NITI Aayog and National Informatics Centre (NIC) have jointly launched **CollabCAD**, a collaborative network, computer enabled software system, providing a total engineering solution from 2D drafting & detailing to 3D product design.
- The aim of this initiative is to provide a **great platform to students of Atal Tinkering Labs (ATLs)** across country to create and modify 3D designs with free flow of creativity and imagination.
- It will help user to build models in virtual 3D space and create engineering drawings for shop floor which makes it a complete package for smart manufacturing.

Tinker from Home

- Moreover, in light of the current situation, the ATL program has launched a 'Tinker from Home' campaign to ensure that the children across the county have access to useful easy-to-learn online resources to keep themselves fruitfully occupied.
- The objective of the initiative is to harness the creativity and innovativeness of children by encouraging **learning through self-initiation**.
- AIM also launched the Game Development module in partnership with DELL Technologies and Learning Links Foundation. It is an online platform where students can start their learning journey while tinkering from home. Through the platform, they can learn to create their own games and also share it with others. The platform envisages to make students transition from 'game players' to 'game makers'.

Atal Innovation Mission

- Atal Innovation Mission (AIM) is a flagship initiative set up by the NITI Aayog to promote innovation and entrepreneurship across the length and breadth of the country.
- The objective is to serve as a platform for the promotion of innovation hubs, grand challenges, startup businesses and other activities, particularly in technology driven areas.
- AIM undertakes the following programs to encourage and support innovation in the country.
 - Atal Tinkering Labs
 - Atal Incubation Centres
 - Atal New India Challenges and Atal Grand Challenges
 - Industry, Academia, Government and Global Collaborations

Atal Tinkering Labs

- Atal Tinkering Laboratories (ATLs) are established in schools across India with a vision to 'Cultivate one Million children in India as new Innovators.'

- The objective of this scheme is to foster curiosity, creativity, and imagination in young minds; and inculcate skills such as design mindset, computational thinking, adaptive learning, physical computing.
- Students also get a chance to work with tools and equipment to understand the concepts of STEM (Science, Technology, Engineering, and Math).

Inactivated Vaccine For Covid-19

- Researchers from the Centre for Cellular and Molecular Biology (CCMB) have embarked upon developing an inactivated virus vaccine for the novel coronavirus.
- Inactivated vaccines are known for their safety and easy production. In developing an inactivated vaccine, the active virus is cultured in large numbers and then killed either by a chemical or heat.

Functioning Of An Inactivated Vaccine

- Although the pathogen is killed, or made to lose its reproduction capacity, various parts of the virus are intact. For example, the spike protein with which it enters the cells. The antigen (the chemical structure) that is recognised by the immune system is left unimpaired.
- When this dead microbe is introduced, the immune system is tricked to respond by producing antibodies against specific antigens still left intact, without knowing that the pathogen is dead. Inactivated polio vaccine and the rabies vaccines are made this way.
- As the pathogen is dead, it cannot reproduce nor cause even a mild disease. Thus, it is safe to administer to even people with lesser immunity, like the old and those who have co-morbidity.

Challenge

- The important technological challenge is culturing the virus outside of the human host. As the novel coronavirus has evolved to life on human cells, especially in cells with active ACE2 receptors, locating the right source of the cell line to culture the virus outside of the human body is key to this technology.
- CCMB is using the epithelial cell line from African green monkey grown in Petri dish to artificially culture and harvest the deadly virus.
- A few more options of cell lines will be explored to find the right one on which the novel coronavirus can infect, grow and multiply.
- Finding a right cell culture technology for the novel coronavirus will also help in drug development. Once a virus infects the cells, the potential drug candidate can be tested against the same.

Rapid Tests Discontinued In India

- The Indian Council of Medical Research (ICMR) has put an end to the question of rapid tests by telling states that the newly procured kits for such tests had failed quality checks.
- In the recent past, some States had raised issues regarding their performance, during the testing exercise that they had undertaken, with accuracy ranging between 6% to 71%.
- ICMR, thereafter, evaluated the kits in field conditions and the results have shown wide variation in their sensitivity despite early promise of good performance for surveillance purposes. States have now been told to not use these kits and return them to be sent back to the suppliers.

RT-PCR Test vs Rapid Antibody Test

Please refer The Recitals- March 2020 for this.

Global Experience With Rapid Tests

- Singapore was the first country to use rapid tests, while South Korea has been the standout example. In its containment strategy, South Korea aggressively used mass testing, including with serological kits, to reduce the number of cases.
- While it is testing that has earned it global praise, it is also a fact that South Korea's success was as much because of its hospital infrastructure that was already increased during the earlier outbreaks.
- The WHO has been cautious about rapid testing, as it had said earlier, that before these tests can be recommended, they must be validated in the appropriate populations and settings.
- Inadequate tests may miss patients with active infection or falsely categorize patients as having the disease when they do not, negatively impacting disease control efforts.
- WHO recommends the use of these rapid tests only in research settings and should not be used in any other setting, including for clinical decision-making, until evidence supporting use for specific indications is available.

Pooled Testing

- Indian Council of Medical Research (ICMR) issued an advisory for using pooled samples for testing of COVID-19 in order to increase the number of tests conducted by laboratories across the country.
- **Andaman and Nicobar** became the first to conduct pool tests in the country. Five samples per testing kit are used. So, less than 25 kits are being used for testing 100 samples.
- ICMR has given approval to Uttar Pradesh for pool testing.

What Is Pooled Testing

- In a pooled testing algorithm, samples of multiple individuals are put together in a tube and screened through the PCR test.
- In case the pooled test turns out to be positive, individual samples are tested, which is referred to as pool de-convolution. If there's no positive result, all individual samples in the pool are regarded as negative, resulting in substantial cost savings.

Need of Pooled Testing

- The number of COVID-19 cases in India is registering a rise and tests conducted is very low due to the paucity of testing kits.
- Pooled Testing can be helpful in increasing the capacity of testing and saving a lot of resources — time, cost and manpower.
- Pooled screening can also help in tracking down the asymptomatic cases of the disease, thereby tracking community transmission.
- Israeli researchers have successfully tested over 60 patients simultaneously.

ICMR Recommendations

- While more than two samples can be pooled together, the number should not exceed five samples to avoid sample dilution, which can lead to false negatives.
- This method can be used in areas where the prevalence of COVID-19 is low, which means a positivity rate of less than 2%. Still a watch should be kept on increasing positivity in such areas.
- In areas with a positivity rate between 2% to 5%, sample pooling of PCR screening may be considered in a community survey of surveillance among asymptomatic individuals. Not recommended for individuals with known contact with confirmed cases, Health Care Workers.

- Pooling of samples is not recommended in areas or populations with positivity rates of over 5%.

Corona Case Positivity

- It is the ratio of the number of positive cases in a particular area to the total number of people tested in that particular area.
- Tamil Nadu has the highest rate (around 10%), Delhi (around 9%), UP (around 4%) etc.

Some Facts Related To Corona

- IIT-Roorkee has developed a low-cost portable ventilator, named **Prana-Vayu**, in association with AIIMS-Rishikesh, which can be manufactured for just ₹25,000.
- **Project Praana** (Sanskrit/Kannada for “**breath/life**”) is a voluntary prototype ventilator design effort run by a group of engineers primarily associated with Indian Institute of Science (IISc). It is an open-source basis in which the design and specifications can be freely shared with as many manufacturers in India as possible. It aims to use components available in India to build a mechanical ventilator, whose production can be rapidly scaled up.
- The Railways’ Rail Coach Factory (RCF) in Kapurthala came out with a prototype ventilator, **named Jeevan**, which has an original design and will cost a fraction of what regular ventilators cost.
- Delhi government launched ‘**Operation SHIELD**’ against COVID-19 at various locations identified as containment zones in the Capital. It includes **Sealing** of the immediate area after geographical marking, **Home quarantine** of all in the area, **Isolation** and tracing of people who have been first and second contacts, **Essential supplies**, which involves doorstep delivery of essential items to the people, **Local sanitisation** and disinfection of those areas, and **Door-to-door** checking so that people having symptoms of COVID-19 are isolated and testing can be done after taking samples.
- IIT Bombay students develop low-cost mechanical ventilator **Ruhdaar**.
- To bring the scientific and factual aspects of this pandemic outbreak onto the public domain, a *multi-institutional, multi-lingual Science-based website*, called ‘**CovidGyan**’ (<https://covid-gyan.in>) has been created. It is the brainchild of Tata Institute of Fundamental Research (TIFR), Indian Institute of Science (IISc), and Tata Memorial Centre (TMC).

Sequencing Novel Coronavirus

- National Institute of Virology (NIV), Pune, has shared nine whole genome sequences of the novel coronavirus (SARS-CoV-2) with the **Global Initiative on Sharing All Influenza Data (GISAID)**. So far, 3,086 sequences of the virus isolated from humans have been shared by 57 countries.
- **Genome sequencing** involves **revealing the order of bases present in the entire genome of an organism**. It is figuring out the order of DNA nucleotides, or bases, in a genome—the order of As, Cs, Gs, and Ts that make up an organism’s DNA. The human genome is made up of over 3 billion of these genetic letters.
- Viruses have higher mutation rates compared to that of microbes and their genetic material keeps on changing quickly as they replicate rapidly.
- Sequencing the genome of SARS-CoV-2 will help understand **where the virus came from, if there are different strains circulating in India, and how the virus has spread**.

Global Initiative on Sharing All Influenza Data (GISAID)

- GISAID is a public platform **started by the WHO in 2008** for countries **to share genome sequences**.

- Created as an alternative to the public domain sharing model, GISAID provides a publicly accessible database designed by scientists for scientists, to improve the sharing of influenza data.
- In **2010** the Federal Republic of **Germany** became the official host of the **GISAID** platform.

Chandigarh-based Institute of Microbial Technology (IMTech) has also taken up the task of large-scale genome sequencing of the SARS-Cov 2 after the **Centre for Cellular and Molecular Biology (CCMB)** and the **Institute of Genomic and Integrated Biology (IGIB)**.

Cytokine Storms

Evidence is emerging that a subset of the infected patients develop severe COVID-19 because of an overreaction of their immune systems, which triggers what is known as a “**cytokine storm syndrome**”.

Working Of The Immune System

- The immune systems in human bodies protect from bacteria, viruses, and parasites by removing them from systems. The immune system **gets activated by things that the body does not recognise as its own**. These things are called **antigens**, and include bacteria, fungi and viruses.
- An effective immune system response involves **inflammation**, an important and indispensable part of the process. The **release of inflammatory mediators** increases the blood flow to the area, which allows larger numbers of immune system cells to be carried to the injured tissue, thereby aiding the repairing process.
- However, **if this inflammatory response is not regulated**, it can lead to very dangerous consequences **triggering a ‘cytokine storm’**.
- A cytokine storm or cytokine storm syndrome (CSS) is characterised by the **overproduction of immune cells and the cytokines** themselves because of a dysregulation in the process. Cytokines are **signalling proteins** that are released by cells at local high concentrations.
- A severe immune reaction, leading to the secretion of too many cytokines in the bloodstream, can be harmful since an excess of immune cells can attack healthy tissue as well. The damage to the surrounding cells can be catastrophic, leading to sepsis and potentially death.
- Cytokine storms are **not exclusive to coronavirus patients**. It is an immune reaction that can occur during other infectious and non-infectious diseases as well.
- CSS is seen as a likely major cause of mortality in both the **1918-20 Spanish Flu** that killed more than 50 million people worldwide, and the **H1N1 (swine flu) & H5N1 (bird flu)** outbreaks in recent years.
- In the case of any flu infection, a cytokine storm is **associated with a surge of activated immune cells into the lungs**, which, instead of fighting off the antigen, leads to lung inflammation and fluid build-up, and respiratory distress.
- Increased pro-inflammatory cytokine responses against human coronaviruses such as SARS-CoV-1 (which caused SARS), SARS-CoV-2 (which is responsible for the current COVID-19 pandemic), and MERS can result in acute lung injury and acute respiratory distress syndrome (ARDS).

CQAS and Geofencing

- **COVID-19 Quarantine Alert System (CQAS)** is an application developed and tested by the **DoT** and **Centre for Development of Telematics (C-DOT)** in coordination with telecom service providers to track if a person has jumped quarantine or escaped from isolation.

- The application **uses geofencing technology** and will collate phone data, including the device's location, on a common secured platform and **alert the local agencies in case of a violation by COVID patients under watch or in isolation**. The "geo-fencing" is accurate by up to 300 m.
- The Centre is using powers under the **Indian Telegraph Act** to "fetch information" from telecom companies every 15 minutes to track COVID-19 cases across the country. Section 5(2) of the Indian Telegraph Act, 1885, authorises State or Centre to access information of a user's phone data in case of "occurrence of any public emergency or in the interest of the public safety."
- **Kerala** was one of the first States to use geo-fencing to track COVID-19 cases.
- **Provision For Data Safety**
 - Location information is received periodically over a secure network for the authorised cases **with "due protection of the data received"**.
 - The **phone number should be deleted from the system** after the period for which location monitoring is required is over and the data would be deleted four weeks from thereon.

Geofencing

- Geofencing is a **location-based service** in which an app or other software **uses GPS, RFID, Wi-Fi or cellular data to trigger a pre-programmed action** when a mobile device or RFID tag enters or exits a virtual boundary set up around a geographical location, known as a geofence.
- It can prompt mobile push notifications, trigger text messages or alerts, send targeted advertisements on social media, allow tracking on vehicle fleets, disable certain technology or deliver location-based marketing data depending on how a geofence is configured.

Aarogya Setu Application

- Aarogya Setu application is a **tracking app** developed by the **National Informatics Centre (NIC)** to track Covid-19 cases around and helps in fighting the virus on an individual level.
- The application **supports 11 languages** - 10 Indian languages and English.
- Ensuring data encryption, it will help track the coronavirus infection by using the smartphone's **GPS system and Bluetooth** and provide information that will help in determining if a person has been near a Covid-19 infected person or not.
- It has a **tool for self-testing**. The user is asked to answer a number of questions. In case some of the answers suggest Covid symptoms, the information will be sent to a government server. The data will then **help the government take timely steps and initiate the isolation procedure**, if necessary.
- The **data is shared only with the government**. The app doesn't allow the names and numbers to be publicly disclosed.

National Informatics Centre (NIC)

- National Informatics Centre (NIC) was **established in 1976** and is under the aegis of the Ministry of **Electronics and Information Technology**.
- It has rich experience in **providing ICT and eGovernance support to bridge the digital divide** and has emerged as a promoter of digital opportunities for sustainable development.
- NIC spearheaded "**Informatics-Led-Development**" by implementing ICT applications in social and public administration and facilitates electronic delivery of services to the government (G2G), business (G2B), citizen (G2C) and government employees (G2E).

- Besides establishing a **Nationwide State-of-the-Art ICT Infrastructure**, it has also built a large number of digital solutions to support the government at various levels, making the last-mile delivery of government services to the citizens a reality.

SATYAM

- The **Department of Science and Technology (DST)** has invited proposals under the **Science and Technology of Yoga and Meditation (SATYAM) programme** to study appropriate intervention of yoga and meditation in fighting COVID-19 and similar kinds of viruses.
- COVID-19 usually has **three dimensions** — related to **stress** (worry, sitting at home), **respiratory** and **the immune system**. Projects may address improving immunity, respiratory systems and interventions to overcome stress, anxiety and depression-related issues due to isolation, uncertainty and disruption in normal life.

Science and Technology of Yoga and Meditation (SATYAM)

- SATYAM, a cognitive science programme, was conceptualised by the **DST under its Cognitive Science Research Initiative (CSRI)** in 2015.
- This new programme is **aimed to foster scientific research on the effects of yoga and meditation on physical & mental health** and on cognitive functioning in healthy people as well as in patients with disorders.
- **Themes:** Basic themes being covered under SATYAM include, among others,
 - i) Investigations on the effect of Yoga and Meditation on physical and mental health and well-being,
 - ii) Investigations on the effect of Yoga and Meditation on the body, brain, and mind in terms of basic processes and mechanisms.
- **Project duration:** The project is tenable for a maximum period of three (3) years.

National Analytical Platform for Dealing with Intelligent Tracing, Tracking and Containment (NAADI)

- The **Centre for Development of Advanced Computing (C-DAC)**, in association with the Indian Council for Medical Research and Union department of telecommunications, has prepared a data science-based tool, called NAADI, to make easy the **task of tracking the movements of Covid-19 patients or quarantined people** across the country.
- It has many features that would be helpful for the administrators, decision makers, health workers and common citizens.
- This tool has been made under **Supercomputer** using **Artificial Intelligence, Machine Learning, Healthcare Analytics based Research, Covid-19 (SAMHAR)**.

Centre for Development of Advanced Computing (C-DAC)

- It is an autonomous Scientific Society and premier R&D organization, Headquartered at Pune, of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.
- It was established in 1988 to build Supercomputers and to achieve self-sufficiency in the field, in the context of denial of import of Supercomputers by the USA.

- However, the research of C-DAC now includes High Performance Computing, Grid Computing, Cloud Computing, Big data analytics, Block chain etc.

SAMHAR-COVID19

- **C-DAC**, under the aegis of the National Supercomputing Mission (NSM), a Ministry of Electronics & Information Technology (MeitY) and Department of Science & Technology (DST) initiative, in association with **NVIDIA & OpenACC**, announces the SAMHAR-COVID19 Hackathon.
- It will provide researchers to find solutions for Identifying, Tracking and Forecasting outbreaks of COVID19 and Facilitating Drug Discovery as well.

Indo-U.S. Science and Technology Forum (IUSSTF)

- Indo-U.S. Science and Technology Forum (IUSSTF) has invited proposals for '**COVID-19 Indo-US Virtual Networks**' from scientists and engineers from the two countries to carry out **joint research activities on the pandemic**, leveraging existing infrastructure and funding.
- Science, engineering, and technology will play a critical role in finding solutions through the development of new vaccines, devices, diagnostic tools, and information systems, as well as strategies to help communities and nations manage and deploy resources to combat this pandemic

About Indo-U.S. Science and Technology Forum (IUSSTF)

- IUSSTF was established under an **agreement between the Governments of India and the United States of America in March 2000**.
- It is an **autonomous bilateral organization** jointly funded by both the Governments that promotes Science, Technology, Engineering and Innovation through substantive interaction among government, academia and industry.
- The **Department of Science & Technology**, Governments of India and the **U.S. Department of States** are respective nodal departments.
- It acts as a catalyst to **promote long-term scientific collaborations** between India and U.S. through partnerships amongst individual scientists, scientific institutions and the scientific community at large.

Covid-19 Sample Collection Kiosk (COVSACK)

- **Defence Research & Development Laboratory (DRDL), Hyderabad**, in consultation with the doctors of **Employees' State Insurance Corporation (ESIC), Hyderabad** developed COVID Sample Collection Kiosk (COVSACK).
- The COVSACK is a kiosk for use by healthcare workers for taking COVID-19 samples from suspected infected patients. Patient under test walks into the Kiosk and a nasal or oral swab is taken by a healthcare professional from outside through the built in gloves.
- The Kiosk is automatically disinfected without the need for human involvement, making the process free of infection spread.

Defence Research & Development Laboratory (DRDL)

- DRDL is responsible for the **design and development of state-of-the-art Missile Systems** and technologies required for the deterrence and defence of the country.
- It comes under the **Defence Research and Development Organisation (DRDO)**

- **Headquarters location: Hyderabad**
- **Founded: June 1961**

Centre for Augmenting WAR with COVID-19 Health Crisis (CAWACH)

- In a rapid response to combat COVID-19, **Department of Science & Technology** approved setting up of a **CAWACH** at a total cost of Rs 56 Cr to **scout, evaluate and financially support the innovations**, deployable in the market within the next 6 months, and **start-ups that address COVID-19 challenges**.
- The **Society for Innovation and Entrepreneurship (SINE)**, a technology business incubator at IIT Bombay supported by DST, has been identified as the **Implementing Agency** of the CAWACH.
- CAWACH will **identify up to 50 innovations and startups** that are in the area of novel, low cost, safe and effective ventilators, respiratory aids, protective gears, novel solutions for sanitizers, disinfectants, diagnostics, therapeutics and any effective interventions to control COVID-19.
- It will provide **access to pan India networks for testing, trial and market deployment of these products and solutions** in the identified areas of priority COVID-19 solutions.

TrueNat Beta CoV Test

- The **Indian Council of Medical Research (ICMR)** validated the **usage of TrueNat**, a diagnostic machine for Tuberculosis , for COVID-19 tests.
- The TrueNat machines are used to **test drug-resistant Tuberculosis (TB)**.
- It is a small machine that is battery operated and requires minimal training. It can also be easily used in a smaller setting.
- The sample of the throat and the nasal swab is collected by the trained technicians wearing personal protective equipment.
- The machine can easily give the result between 30-60 minutes.
- The machine can run up to 32-48 samples of multiple diseases such as COVID-19, HIV, and TB.

AI-based Voice Tool to Detect Covid-19

- A team from **DY Patil Institute of Biotechnology and Bioinformatics (Mumbai)** has developed an **artificial intelligence-based tool to test COVID-19** through voice-based diagnosis using a smartphone app.
- Currently, the tool is **being tested by the University of Tor Vergata in Rome** and has already been tested on 300 individuals.
- **Mechanism:**
 - The AI tool is based on a voice-based diagnosis through an app. It analyses **noise distortion** to identify if a person could be infected.
 - The same person has one voice when they are healthy, and another if they have a pathology. Since coronavirus compromises lungs and airwaves, the voice is definitely affected.
- This tool can be of **great impact in doing the first level of screening to identify positives at zero cost and no wait time** and only those who tested positive can go for the lab tests.

- This can reduce the current bottleneck on the medical infrastructure, help the government **to identify hotspot regions in advance** through location tracking integration via a smartphone.
- It might be a great solution to **reach patients remotely**, without the risk of exposure, both to the patient and lab personnel.

Chitra GeneLAMP-N

- Sree Chitra Tirunal Institute for Medical Sciences and Technology has developed a diagnostic test kit, **called Chitra GeneLAMP-N**, that can confirm COVID19 in 2 hours at low cost. A total of 30 samples can be tested in a single batch in a single machine allowing a large number of samples to be tested each day.
- The confirmatory diagnostic test, which detects the N Gene of SARS- COV2 using **reverse transcriptase loop-mediated amplification of viral nucleic acid (RT-LAMP)**, will be one of the world's first few if not the first of its kinds in the world.
- It is **highly specific** for SARS-CoV-2 N-gene and can detect two regions of the gene, which will ensure that the test does not fail even if one region of the viral gene undergoes mutation during its current spread.
- Current **Polymerase chain reaction (PCR)** kits in India enable detection of E gene for screening and **RNA-dependent RNA polymerase (RdRP, RDR)** gene for confirmation. Chitra GeneLAMP-N gene testing will allow confirmation in one test without the need for a screening test and at much lower costs.

Post-Intensive Care Syndrome (PICS)

- Some Covid-19 patients suffer from post-intensive care syndrome (PICS), which can happen to any person who has been in the ICU.
- PICS is defined as new or worsening **impairment in physical (ICU-acquired neuromuscular weakness), cognitive (thinking and judgment), or mental health status** arising after critical illness and persisting beyond discharge from the acute care setting. Further, such patients may experience **neuromuscular weakness**, which can manifest itself in the form of poor mobility and recurrent falls.
- Psychological disability may arise in a person in the form of depression, anxiety and post-traumatic stress disorder (PTSD).

Sepsivac

- Sepsivac is a drug jointly developed by the Ahmedabad-based Pharmaceutical company and the **Council for Scientific and Industrial Research (CSIR)**. It will be **tested on 50 COVID-19 patients** to check its effectiveness.
- Sepsivac was **originally developed for treating sepsis by a class of pathogens called gram negative bacteria**, that are known to cause life-threatening infections. Given the similarities in the immune-system response in critically ill COVID-19 patients, it is theorised, the **therapy could stimulate a benign response**.
- A large quantity of **cytokines, chemicals signalling the presence of an infection**, are produced in the early stages of the body's response against an infection to stimulate the production of antibodies. However, **cytokines also cause inflammation of organs** and can be counter-productive in protecting the body. **Keeping them in check is the goal of so-called immuno-modulators, or medicines like Sepsivac.**

- The drug **uses the Mycobacterium w (Mw)** as it produces a different immune-system response. CSIR has also planned **to evaluate Mw for faster recovery of COVID-19 infected patients** and providing preventive treatment to persons coming in contact with COVID-19 infected patients like family members and health care workers.
- It has been claimed that Sepsivac reduces the days on ventilator, in ICU and hospital and incidence of secondary infection.

Reverse Vaccinology

- A **vaccine candidate** against SARS-CoV 2 has been developed through '**reverse vaccinology**' by The Tamil Nadu Dr. M.G.R. Medical University.
- Reverse vaccinology is the name given to the **examination of the genome of an organism** in order **to identify novel antigens and epitopes** that might constitute vaccine candidates.
- The basic idea behind this technique is that an **entire pathogenic genome can be screened using bioinformatics** approaches to find genes. Next, those genes are filtered for desirable attributes that would make good vaccine targets. Once the candidates are identified, they are produced synthetically and are screened in animal models of the infection.
- Traditional methods may take decades to unravel pathogens and antigens, diseases and immunity. The advantage of using 'reverse vaccinology' is that **genome sequence and vaccine targets can be found in less time and efficiently.**
- The downside is that **only proteins can be targeted using this process.** Whereas, **conventional vaccinology approaches can find other biomolecular targets** such as **polysaccharides** (long chains of carbohydrate molecules).
- The 'reverse vaccinology' has been available for the last 10 to 15 years. Using this technique, vaccinations were developed for **meningococcal & staphylococcal infections** all through the world.

UV Sanitisation Box and Hand-held UV device

- **Defence Institute of Physiology & Allied Sciences (DIPAS)** and **Institute of Nuclear Medicine & Allied Sciences (INMAS), DRDO laboratories in Delhi** have designed & developed new products to enable COVID-19 disinfection process namely **Ultraviolet C Light based sanitisation box and hand held UV-C (ultraviolet light with wavelength 254 nanometres) device.**
- The UV-C consists of a shorter, more energetic wavelength of light. It is particularly good at destroying genetic material in COVID-19. The radiation warps the structure RNA which prevents the viral particles from making more copies of themselves.
- The UV-C kills microbes quickly. Sanitisation of the items by employing UV-C light avoids the harmful effects of the chemicals used for the disinfection. This is environment friendly and is a contact free effective sanitisation method.

Defence Institute of Physiology and Allied Sciences

- Located in Delhi and established in 1962, it is an Indian **defence laboratory** of the **Defence Research and Development Organisation (DRDO).**
- It conducts physiological and biomedical research to improve human performance in extreme and wartime environments. DIPAS is organised under the Life Sciences Directorate of DRDO.

Institute of Nuclear Medicine & Allied Sciences

- Located in Delhi and established in 1961, it is a **laboratory** of the **Defence Research and Development Organisation (DRDO)**.
- It is involved in **Nuclear medicine research** and responding to **nuclear accidents and explosions**.
- The department of nuclear medicine under the institute offers a **two-year diploma** in radiation medicine since 1968, making it the **first formal training program** in nuclear medicine in the world.

Centre for Fire, Explosive and Environment Safety (CFEES)

- Located in Delhi and established in 1992, it is an Indian **defence laboratory** of the **Defence Research and Development Organisation (DRDO)**.
- Its main function is the development of technologies and products in the area of **explosive, fire and environmental safety**. CFEES is organised under the Armaments Directorate of DRDO.

About DRDO

- DRDO is India's largest research organisation. It is an **agency under the Ministry of Defence**.
- Headquartered in New Delhi, DRDO was **formed in 1958** by amalgamating the Defence Science Organisation and a few technical development establishments.
- DRDO's **first project for the Indian military** was in **surface-to-air missiles (SAM)** known as **Project Indigo**. However, it received little success and was therefore discontinued.
- In March 2019, DRDO developed **India's first anti-satellite system** that made India one of the space superpowers.
- In 2016, It successfully tested its **first indigenously developed heavy-duty drone, Rustom 2**, which is an unmanned armed combat vehicle developed on the lines of the US's Predator drone.
- DRDO **co-developed INS Arihant**, India's first nuclear ballistic missile submarine, which became operational in 2018.
- DRDO has also developed several ballistic missiles under its **Integrated Guided Missile Development Programme**, which includes missiles like Prithvi, Trishul, Agni, Akash and Nag

Antiviral Nano-coatings

- As part of the **Nano Mission Programme**, the Department of Science and Technology (DST) has approved support for upscaling an antiviral nano-coatings for making triple layer medical masks & N-95 respirator in large quantities to combat COVID19.
- **Silver** is known to have **strong antimicrobial activity against bacteria, viruses, and fungus**.
- The **N9 blue nanosilver**, which is a highly potent antimicrobial agent, was developed and will be further **modified to form nanocomplexes with Zinc compounds to achieve a synergistic effect**. Subsequently, these nanomaterials will be applied as coatings on facemasks and other PPEs to improve their ability to protect.

Feluda (Fncas9 Editor Linked Uniform Detection Assay)

- **Scientists at the Council of Scientific & Industrial Research — Institute of Genomics and Integrative Biology (CSIR-IGIB)** have developed a **low-cost, paper-strip test** which can detect the new coronavirus within an hour.

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- The test, named **Feluda** after a fictional detective character created by **Satyajit Ray**, is expected to cost around Rs 500 against the RT-PCR test that costs Rs 4,500 in private labs.
- The test is based on a bacterial immune system protein called Cas9. It uses cutting-edge gene-editing tool Crispr-Cas9 system.
- This technology is not limited to COVID-19 and can work on any DNA-RNA or single mutations, disease mutations etc.

Satyajit Ray(1921-1992)

- Satyajit Ray was an Indian filmmaker, screenwriter, music composer, graphic artist, lyricist and author, widely regarded as **one of the greatest filmmakers of all time**.
- **Notable work** : **Pather Panchali**, Aparajito, Sonar Kella and many more
- **Awards**: Academy Honorary Award, **Bharat Ratna** and many more
- **Books**: **The Complete adventures of Feluda**, Our Films, Their Films and many more
- **'Pather Panchali'** finds **15th place** on **BBC's 100 Best Foreign Language Films list of 21st century**.

Armyworm

- Farmers in Assam reported armyworm attacks on the standing crops.
- Fall Armyworm (FAW), native of the **tropical and sub-tropical regions of the Americas**, is a dangerous transboundary insect with a high potential to spread rapidly due to its natural distribution capacity and opportunities presented by international trade.
- Its scientific name, **Spodoptera frugiperda**, derived from a latin word 'frugiperda' which means lost fruit, is named so because of the species' ability to destroy crops.
- It is **polyphagous** (ability to feed on different kinds of food) and can spread across large tracts of land as it can fly over large distances. India's tropical climate could allow the pest to thrive and spread further.
- It can be controlled with insecticides (like lambda-cyhalothrin), through natural predators (such as coccinellid beetles which feed on FAW) or by inter-cropping.



Telemedicine and Telehealth Care

- Telemedicine is the practice of medicine using technology to deliver care at a distance. A physician in one location uses a telecommunications infrastructure to deliver care to a patient at a distant site.
- Telehealth refers broadly to electronic and telecommunications technologies and services used to provide care and services at-a-distance.
- Telehealth is different from telemedicine in that it refers to a broader scope of remote health care services than telemedicine. Telemedicine refers specifically to remote clinical services, while telehealth can refer to remote non-clinical services, such as providing training, administrative meetings, and continuing medical education. According to the World Health Organization, telehealth includes, "Surveillance, health promotion and public health functions."

Edge Computing

- Edge computing is a distributed computing paradigm which brings computation and data storage **closer to the location** where it is needed, to improve response times and save bandwidth.
- It enables data to be analysed, processed, and transferred at the edge of a network i.e. the data is **analysed locally**, closer to where it is stored, in real-time without latency. Latency is a time interval between the stimulation and response.
- The basic difference between edge computing and cloud computing lies in where the data processing takes place i.e. cloud computing means storing and accessing data and programs over the Internet instead of the computer's hard drive. Edge computing, on the other hand, manages the massive amounts of data generated by Internet of Things (IoT) devices by storing and processing data locally.
- However, it doesn't mean the cloud will disappear in Edge computing but it means the cloud is coming to you.

Chitra Acrylosorb Secretion Solidification System

- Scientists at Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) have designed and developed a **highly efficient superabsorbent material** for liquid respiratory and other body fluid solidification and disinfection for the safe management of infected respiratory secretions. The material titled '**Chitra Acrylosorb Secretion Solidification System**'.
- A super-absorbent gel with embedded disinfecting material has an attractive proposition for the safe collection, consolidation, and quarantine of secretions before their incineration that help in Safe disposal of infected secretions from the patients in a variety of infectious conditions.
- **AcryloSorb** can absorb liquids at least 20 times more than its dry weight and also contains a decontaminant for in situ disinfection. Containers filled with this material will immobilize the contaminated fluid by solidifying it (gel-like), thus avoiding spillage and will also disinfect it.

Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST)

It is an autonomous medical institute under the Department of Science and Technology (DST), Govt of India. It is an Institute of **National Importance** in India established in 1976 at **Thiruvananthapuram**.

What Makes Saturn's Atmosphere So Hot

- New analysis of data from NASA's **Cassini spacecraft** found that electric currents, triggered by interactions between solar winds and charged particles from Saturn's moons, spark the **auroras** and heat the planet's upper atmosphere.
- An aurora, sometimes referred to as **polar lights**, northern lights (**aurora borealis**), or southern lights (**aurora australis**), is a **natural light display** in the Earth's sky, predominantly seen in the high-latitude regions (around the Arctic and Antarctic).

Cassini Spacecraft

- The **Cassini–Huygens space-research mission**, commonly called **Cassini**, involved a collaboration between **NASA**, the **European Space Agency (ESA)**, & **Italian Space Agency (ASI)** to send a probe to study the planet **Saturn & its system**, including its rings and natural satellites.

- The Flagship-class robotic spacecraft comprised both **NASA's Cassini probe** and **ESA's Huygens lander**, which landed on **Saturn's largest moon, Titan**. Cassini was the fourth space probe to visit Saturn and the first to enter its orbit.
- It was launched on October 15, 1997, and was active in space for nearly 20 years, with 13 years spent orbiting Saturn and studying the planet and its system after entering orbit on July 1, 2004.
- The mission ended on September 15, 2017, when Cassini's trajectory took it into Saturn's upper atmosphere and it burned up.

Koi Sleepy Disease

- It is caused by **carp edema virus (CEV)**, a pox virus which is a potential carp killer and poses a constant threat to **co-cultured fish (ornamental fish farming)**.
- Virus affects the gills, lungs and kidney of fish.
- Goldfish (*Carassius auratus*) and koi carp (*Cyprinus carpio koi*) are the most commonly traded ornamental fish species.

Madhuban Gajar

- Madhuban Gajar, a **biofortified carrot variety with high β -carotene and iron content**, was developed by **Shri Vallabhai Vasrambhai Marvaniya**, a farmer scientist from Junagadh district, Gujarat.
- **National Innovation Foundation (NIF), India**, an autonomous institute under the Department of Science and Technology, conducted validation trials for this variety at **Rajasthan Agricultural Research Institute (RARI), Jaipur**.
- The Madhuban Gajar is a highly nutritious carrot variety **developed through the selection method with higher β -carotene content (277.75 mg/kg) and iron content (276.7 mg/kg) dry basis**.
- The variety is being cultivated in more than 1000 hectares of land in **Gujarat, Maharashtra, Rajasthan, West Bengal, and Uttar Pradesh** during the last three years.
- It is **used for various value-added products** like carrot chips, juices, and pickles. Among all the varieties tested, beta-carotene and iron content were found to be superior.
- Shri Vallabhai Vashrambhai Marvaniyawas was conferred with a National Award by the President of India at Rashtrapati Bhavan, New Delhi during Festival of Innovation (FOIN), 2017. He was also conferred with Padma Shri in the year 2019 for his extraordinary work.

Biofortification

- Biofortification is the **process of breeding crops with higher levels of vitamins and minerals**, or higher protein and healthier fats. This can be done either through **conventional selective breeding**, or through **genetic engineering**.
- It is the most practical means to improve public health. Breeding for improved nutritional quality is undertaken with the objectives of improving – Protein content and quality, Oil content and quality, Vitamin content, and Micronutrient and mineral content.
- Biofortification differs from ordinary fortification because it **focuses on making plant foods more nutritious as the plants are growing**, rather than having nutrients added to the foods when they are being processed.

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- This is an important improvement on ordinary fortification when it comes to providing nutrients for the rural poor, who rarely have access to commercially fortified foods. As such, biofortification is seen as an **upcoming strategy** for dealing with deficiencies of micronutrients in low and middle-income countries.
- **Other examples:** CR Dhan 310, DRR Dhan 45, MACS 4028, Pearl millet, Pusa Mustard 30 etc. These biofortified varieties assume great significance to achieve nutritional security of the country.

Festival of Innovation & Entrepreneurship (FINE)

- The Festival of Innovation & Entrepreneurship (FINE), previously known as Festival of Innovation (FOIN), is **hosted in the month of March at The President's House**.
- It is a unique **initiative of the Office of the President of India in association with the National Innovation Foundation (NIF)** to recognise, respect and reward grassroots innovations and foster a supportive ecosystem.
- FINE would **provide a platform to the innovators for building the linkages with potential stakeholders** whose support can improve their prospects in coming years for the larger social good. It will also **help in promoting lateral learning and linkages among the innovators to enrich the ecosystem for new India**.
- In sync with the policies of the government of India, FINE will provide a window to the creative and innovative solutions for social development through grassroots innovations, student ideas and other technologies for agriculture, rural development, sanitation, health, women and child development, biotechnology and medical innovation for grassroots.

SunRISE Mission

- **Sun Radio Interferometer Space Experiment (SunRISE)** is NASA's new mission to study how the Sun generates and releases giant space weather storms, known as **solar particle storms**, into planetary space.
- NASA chose SunRISE in August 2017 and has awarded \$62.6 million to design, build and launch it no earlier than July 1, 2023.
- **Functioning of SunRISE**
 - The 11-month mission **consists of six CubeSats operating as a single large radio telescope** to simultaneously **observe radio images of low-frequency emission from solar activity** and share them via NASA's Deep Space Network.
 - The **CubeSats will create 3D maps that pinpoint where giant particle bursts originate on the sun** and how they evolve as they expand into space.
 - The spacecraft will also work together **to map the magnetic field lines reaching from the sun out into interplanetary space**.
- **Significance of SunRISE:**
 - By improving the understanding of the working of the solar system, the mission will help NASA in **protecting astronauts traveling to the Moon and Mars** by providing **better information on how the Sun's radiation affects the space environment** they must travel through.
 - It will also help in **understanding how these storms affect interplanetary space**.
- This is **one of NASA's Missions of Opportunity**, designed to maximize the scientific knowledge gained by piggybacking new, relatively inexpensive missions on rocket launches already approved

and preparing to go into space. **For example:** SunRISE is scheduled to rideshare on a rocket carrying a commercial satellite provided by Maxar of Westminster, Colo. Once in orbit, the host spacecraft will deploy the six SunRISE CubeSats and then continue its prime mission.

Missions of Opportunity

- These are **part of the Explorers Program**, which is the oldest continuous NASA program **designed to provide frequent, low-cost access to space** using principal investigator-led space science investigations relevant to the **Science Mission Directorate's (SMD) astrophysics and heliophysics programs**.
- The program is managed by NASA's Goddard Space Flight Center in Greenbelt, Maryland, for SMD.

Supermoon & Super Pink Moon

- A Supermoon (Super Full Moon) occurs **when a Full Moon takes place at perigee** — the closest approach of the Moon to the Earth's orbit.
 - The Moon orbits Earth in an ellipse, an oval that brings it closer to and farther from Earth as it goes around. The **farthest point** in this ellipse is called the **apogee** and is about 405,500 km from Earth on average and its **closest point is the perigee**, which is an average distance of about 363,300 km from Earth.
 - When the **Earth and Moon are closer to each other, it is called a Supermoon** and they are **farther away from each other, it is called a Micromoon**.
- **Difference Between Full Moon and Supermoon:** While a full moon (moon is completely visible in a circular form) comes once in a month, the Super Moon is a bit different from it. Just like a full moon, the Super Moon too is visible as a complete circle but it appears more bright and bigger in size.

Super Pink Moon

- According to the old Native American culture, the **Full Moon in the April** month is called the **Pink Moon**. The name Pink Moon comes from the pink flowers known as **Wild Ground Phlox or Moss Phlox** that bloom in **spring in North America** and cover the ground like a pink blanket around the time of April's Full Moon.
- This appearance of the moon is considered as the brightest and the biggest. Pink SuperMoon is at a distance of 3,57,085 km from earth whereas the usual distance between Earth and Moon is around 384,000 km.
- The experts have stated that the distance between Earth and Moon during the Pink SuperMoon is less because of the elliptical orbit of the Moon around the Earth (orbit is not completely circular). Therefore, the angle of orbit changes a bit. Also, the Moon's size is expected to be 14 % bigger and 30% brighter than what it usually is.

World Chagas Disease Day

- For the first time, the global community celebrated **14 April** as the first World **Chagas Disease Day**. It was on this date in 1909 that the first patient, a Brazilian girl named Berenice Soares de Moura, was diagnosed for this disease by **Dr Carlos Ribeiro Justiniano Chagas**.
- Chagas disease, also called **American trypanosomiasis**, has been termed as a "**silent and silenced disease**", not only because of its slowly progressing and frequently asymptomatic clinical course but also because it affects **mainly poor people** who have no political voice or access to health care.

- It is a **tropical parasitic disease** caused by the protist **Trypanosoma cruzi**. It is a vector-borne disease usually transmitted by faeces and urine of triatomine bugs or kissing bugs, which belongs to the family of assassin bugs.
- Chagas disease is classified as a neglected tropical disease. It will provide a unique opportunity to add a global voice in favour of this and other neglected tropical diseases.

Neglected tropical diseases

- They are a diverse group of tropical infections which are common in low-income populations in developing regions of Africa, Asia, and the Americas. They are called so as they generally receive lesser treatment and research funding.
- Examples: **Dracunculiasis (Guinea-Worm disease), Yaws, Blinding Trachoma, Leprosy, Lymphatic Filariasis.**

High-Protein Biscuits

The **Central Food Technological Research Institute (CFTRI)** has made available high-protein biscuits to the COVID-19 patients undergoing treatment in the AIIMS, New Delhi. The biscuits contain **14% of protein** while usual biscuits contain around 8-9% protein.

Central Food Technological Research Institute (CFTRI)

- It is one of the constituent laboratories under the aegis of the **Council of Scientific and Industrial Research (CSIR)**.
- It was opened on **21 October 1950 in Mysore, Karnataka**.
- CFTRI also has its **resource centres** in **Hyderabad, Lucknow and Mumbai**, rendering technical assistance to numerous entrepreneurs.
- **India is the world's second largest food grain, fruit and vegetable producer**, and the institute is engaged in research in the production and handling of grains, pulses, oilseeds, along with ahty spices, fruits, vegetables, meat, fish, and poultry.
- The institute develops **technologies to increase efficiency and reduce post-harvest losses**, add convenience, increase export, find new sources of food products, integrate human resources in food industries, reduce costs, and modernize.

g-CNQDs

- Scientists at the **Institute of Nano Science and Technology (INST)**, an autonomous institute under Department of Science and Technology, have found a **low-cost metal-free nanomaterial for visible light microbial disinfection** which can be an alternative to silver and other metal-based materials.
- **Carbon Nitride Quantum Dots (g-CNQDs)** are found to be efficient for visible-light-driven antibacterial activity apart from being biocompatible with mammalian cells. It can be a viable anti-bacterial alternative to metal/non-metal semiconductors and expensive silver.
- These nanomaterials possess enhanced biocidal activity attributed to **larger surface area** of g-CNQDs having more reactive sites and optical absorption both in the ultraviolet and visible region. The g-CNQDs have the ability to generate **reactive oxygen species (ROS)**.
- The dependence on visible light is also advantageous over regular ultraviolet mediated disinfection, which requires cautious handling of the UV light-emitting devices.

Electrostatic Disinfection

- **CSIR-Central Scientific Instruments Organisation (CSIR-CSIO)**, Chandigarh, has designed and developed an **innovative technology for effective disinfection and sanitization** to fight with corona pandemic.
- CSIR-CSIO has **transferred this technology** to a Nagpur-based company, Rite Water Solutions Pvt. Ltd., for commercialization and large-scale production. This technology has been found **very efficient and effective** to stop the spread of coronavirus and pathogens.

Working Principles

- Electrostatic Disinfection Machine is developed based on the **electrostatic principle**.
- It produces **uniform and fine spray droplets** of disinfectants in the size range of 10-20 micrometre to kill microorganisms and viruses. Due to the small size of droplets, the **surface area of spray droplets increases** thereby enhancing the interaction with harmful microorganisms and coronavirus.
- The machine uses very less disinfection material as compared to conventional methods, which helps to save natural resources with negligible increase of chemical waste in the environment.
- This innovative concept of electrostatic spraying will help in **disinfection and sanitization of public places** especially hospitals, poultry, trains and buses, airports and airplanes, offices, classrooms and hotels.

Solid-State Sensor To Detect The Heavy Metal Ions

- The **Centre for Nano and Soft Matter Sciences (CeNS)** has developed a compact solid-state sensor to detect the heavy metal ions in water. It is a portable device which can help onsite detection in remote areas.
- It can be used for efficient onsite detection of the heavy metal ions, e.g., lead ions (Pb²⁺) down to 0.4 parts per billion (ppb). The sensor film was prepared by forming a composite between **manganese doped zinc sulfide** quantum dots and reduced **graphene oxide** on a glass substrate.
- Heavy metal ions such as lead, mercury etc pose severe potential threats to living beings as they can easily be accumulated in body and can't be detoxified by any chemical or biological processes.

Centre for Nano and Soft Matter Sciences (CeNS)

- CeNS, located at **Bengaluru**, is an autonomous research institute under the Department of Science and Technology (DST), Government of India.
- The Centre is engaged in **materials research** at all relevant length scales with special focus on a variety of **metal and semiconductor nanostructures, liquid crystals, gels, membranes and hybrid materials**.

Gamma-ray Flux Variability of Blazars

- Researchers from the **Indian Institute of Astrophysics (IIA)**, Bangalore, **an autonomous institute of the Department of Science & Technology**, have conducted the first systematic study on the **gamma-ray flux variability nature of different types of blazars**.
- The research **characterised the amplitude and time scale of flux variations** and then looked for similarity and/or differences in the amplitude and time scale between different types of blazars.
- The reduction of large volumes of data for a large number of sources was accomplished by the use of the **High-Performance Computing facility** of the IIA.

● **Significance**

- The study could **provide clues to the processes happening close to the black hole**, not visible through direct imaging.
- The results of this work will **fill the gap on the knowledge of the high energy flux variability nature of blazars**, which is otherwise limited.
- The expertise of handling high energy data from celestial sources gained in this work will build capacity to interpret the gamma-ray data that will emerge from India's upcoming facility, the **Major Atmospheric Cerenkov Experiment (MACE) Telescope** as well as from any X-ray missions by India in the future.

Blazars

- Blazars are the **most luminous and energetic objects in the known universe** and were found to be **emitters of gamma-rays in the 1990s**.
- At the centre of most galaxies, there's a massive black hole that can have mass of millions or even billions of Suns that accrete gas, dust, and stellar debris around it.
- As these materials fall towards the black hole, their gravitational energy gets converted to light forming **Active Galactic Nuclei (AGN)**. A minority of AGN (~15%) emit collimated charged particles **called jets** travelling at speeds close to the speed of light.
- Blazars are **AGN whose jets are aligned with the observer's line of sight**. Some blazars are thought to host binary black holes in them and **could be potential targets for future gravitational-wave searches**.

Major Atmospheric Cerenkov Experiment Telescope (MACE)

- MACE is the **world's second-largest, ground-based gamma-ray imaging telescope** with a 21-metre-diameter dish, established at **Hanle, Ladakh**.
- The **largest telescope of the same class** is the 28-metre-diameter telescope, which is part of the **High Energy Stereoscopic System (HESS)** in Namibia.
- The project is a collaboration of scientists from **Bhabha Atomic Research Centre (BARC), Tata Institute of Fundamental Research (TIFR)** and the **Indian Institute of Astrophysics**, along with the **Electronics Corporation of India Limited**.
- MACE is named after Russian scientist **Pavel Cherenkov**, who discovered that **charged particles glow when they pass through a non-conducting medium** under certain conditions. This phenomenon known as the **Cherenkov radiation** causes the characteristic blue glow in underwater nuclear reactors.
- It will help to **explore the exciting energy range of the gamma ray energy region** in between satellites and the traditional Atmospheric Cerenkov experiments.
- The **gamma rays** are high energy processes in the universe. Their study will help to understand the study of **high energy physics close to black holes, compact objects, dark matter and high gravitational fields**.

Pseudocapacitor

- Scientists at the **Institute of Nano Science and Technology (INST), Mohali**, have developed a stable material for **pseudocapacitors** or **supercapacitors** which **store electrical energy** by electron

charge transfer. The material can offer a low-cost scalable energy storage solution as an alternative to batteries.

- The INST team have formulated an interesting synthetic strategy to overcome the long-standing challenges of pseudocapacitors, their cycling stability, and rate capability.
- The team has developed the pseudocapacitive material, a hybrid **xerogel structure** (a solid formed from a gel by drying with unhindered shrinkage), for the very first time. The hybrid material was fabricated by the integration of a well-known organic molecule, dopamine onto a conductive matrix, like graphene.
- **Pseudocapacitors** are a type of supercapacitors which store electrical energy by electron charge transfer between electrode and electrolyte. This is accomplished through electrosorption, reduction-oxidation reactions, and intercalation processes, termed pseudocapacitance.

Aerogel

- An **aerogel** is obtained when the liquid phase of a gel is replaced by a gas in such a way that its solid network is retained, with only a slight or no shrinkage in the gel. It was firstly achieved under supercritical conditions but it is now possible under ambient drying conditions as well.
- Shrinkage < 15%

Xerogel

- A **Xerogel** is obtained when the liquid phase of a gel is removed by evaporation. It may retain its original shape, but often cracks due to the extreme shrinkage that is experienced while being dried.
- Shrinkage >90%
- Therefore the method of drying will dictate whether an aerogel or xerogel will be formed.

Lithium Abundance in Interstellar Space

- Researchers at the **Indian Institute of Astrophysics (IIA)** have discovered hundreds of **Lithium (Li)-rich giant stars** indicating that Li is being produced in the stars and accounts for its abundance in the interstellar medium.
- They have shown for the first time that the Li enhancement in giants is associated with **central Helium (He)-burning stars, also known as red clump giants**, thereby opening up new vistas in the evolution of the red giant stars.
- This is an important discovery that will **help to eliminate many proposed theories** such as planet engulfment or nucleosynthesis during red giant evolution in which helium at the centre is not burning.
- Lithium (Li) is **one of the three primordial elements**, apart from Hydrogen and Helium (He), produced in the **big bang nucleosynthesis (BBN)** whose models predict primordial Li abundance.
- Identifying sources of Li enrichment in our Galaxy has been a great interest to researchers to validate Big Bang Nucleosynthesis as well as a stellar mixing process.

Big Bang Nucleosynthesis (BBN)

- Big Bang nucleosynthesis is the **production of nuclei other than those of the lightest isotope of hydrogen** during the early phases of the Universe.
- Primordial nucleosynthesis is believed by most cosmologists to have taken place in the interval from roughly **10 seconds to 20 minutes after the Big Bang**.

- It is calculated to be **responsible for the formation of most of the universe's helium** in various isotopic forms along with **small amounts of the hydrogen isotope deuterium** and a very **small amount of the lithium isotope lithium-7**.

Game of Life

- The English mathematician **John Horton Conway**, 82, died of COVID-19. He invented "**Game of Life**", around 1970 and which continues to fascinate people, including many who are not mathematicians even after 50 years.
- **Game of Life** is a zero-player game, which means the game plays itself. Take an array of square cells, like a chessboard, but stretching infinitely in both the horizontal and vertical directions.
- A cell may be either living or dead at any given time (but not both simultaneously). The fate of a cell depends on its "neighbours" — the eight other cells that touch it horizontally, vertically or diagonally.
- The Game of Life opened up a new field of mathematical research, in "cellular automata".

Conversion of Surplus Rice to Ethanol

- The government recently allowed the conversion of surplus rice, available with the Food Corporation of India (FCI), to ethanol.
- Ethanol produced from this **will be used for utilisation in making alcohol-based hand sanitizers and blending in petrol**.
- The **National Policy on Biofuels, 2018**, states that during an agriculture crop year, when there is projected oversupply of food grains as anticipated by the Ministry of Agriculture and Farmers Welfare, the policy will allow conversion of these surplus quantities of food grains to ethanol.
- **Advantages**
 - Using surplus rice for ethanol will **address the concern of grain-based distillery capacities lying idle** (about 38%), due to lack of feedstock, to some extent.
 - Further, this would **absorb surplus rice lying with the FCI**, which is estimated to be almost 128% more than the buffer stock and strategic requirement norms.
- **Concerns**
 - Many poor people are unable to get the benefit of large stock of food due to loopholes in the PDS network. For example, in several states, a large chunk of ration card holders may not be eligible for the free grains, as they are not covered under the Food Security Act.
 - The National Food Security Act implemented in 2013 based on the Census of 2011, **had not factored in the population increase in over nine years**, leaving a large chunk of people out of the government sop.

National Policy on Biofuels, 2018

- The policy categorises biofuels as "Basic Biofuels" viz. First Generation (1G) bioethanol & biodiesel and "Advanced Biofuels" - Second Generation (2G) ethanol, Municipal Solid Waste (MSW) to drop-in fuels, Third Generation (3G) biofuels, bio-CNG etc. to enable extension of appropriate financial and fiscal incentives under each category.
- The policy expands the scope of raw material for ethanol production by allowing use of sugarcane juice, sugar containing materials like sugar beet, sweet sorghum, starch containing materials like

corn, cassava, damaged food grains like wheat, broken rice, rotten potatoes, unfit for human consumption for ethanol production.

- The policy also encourages setting up of supply chain mechanisms for biodiesel production from non-edible oilseeds, used cooking oil and short gestation crops.

Deep Fakes and Deep Nudes

- Deep nudes are **computer-generated nude images and videos of innocent persons using Artificial Intelligence (AI) algorithms**. Essentially, using AI algorithms a person's words, head movements and expressions are transferred onto another person in a seamless fashion that makes it difficult to tell that it is a deep fake, unless one closely observes the media file.
- Another problem is **catfish accounts** to deceive people. Catfishing refers to **practice of setting up fictitious online profiles**, most often for purpose of luring another into a fraudulent romantic relationship.
- **Concerns:**
 - Cybercriminals use AI software to create nude photographs and videos. These images are then used to blackmail victims, seek revenge or commit fraud on social networking and dating sites.
 - There are various **websites and applications that have AI built into them** and have made it much **easier for a lay user to create deep fakes and deep nudes**. As the technology improves, the quality of deepfakes is also expected to get better.
- **Possible Solutions:**
 - **"Right to be Forgotten"** allows a user to request companies such as Facebook and Google, that have collected his/her data to take it down.
 - **Using privacy settings** on social media profiles.
 - Using freely available **reverse image search tools** to find images that are similar to concerned users, if the image is used without permission.

Artificial Neural Networks based global Ionospheric Model (ANNIM)

- Researchers from **Indian Institute of Geomagnetism (IIG)** have developed a new Artificial Neural Networks based global Ionospheric Model (ANNIM) using long-term ionospheric observations to predict the *ionospheric electron density* and the peak parameters.
- Tracking the variability of the **ionosphere** is important for **communication and navigation**.
- Artificial Neural Networks replicate the processes in the **human brain (or biological neurons)** to solve problems such as pattern recognition, classification, clustering, generalization, linear and nonlinear data fitting, and time series prediction.
- The researchers developed a **neural network-based global ionospheric model** by using an extensive database consisting of nearly two decades of **global Digisonde** (an instrument that measures real-time on-site electron density of the ionosphere by sending the radiofrequency pulses), **Global Navigation Satellite System (GNSS)** radio occultation and topside sounders observations.

Indian Institute of Geomagnetism (IIG)

- It was established in 1971 at **Navi Mumbai (Maharashtra)** and **an autonomous institute** of the **Department of Science & Technology, Govt. of India**.

- The facility is engaged in **basic and applied research in geomagnetism**, as well as **allied areas of geophysics, atmospheric physics and space physics**, as well as **plasma physics**.

Earth's magnetic field

- Earth's magnetic field, also known as the **geomagnetic field**, is the magnetic field that extends from the **Earth's interior out into space**, where it **interacts** with the **solar wind, a stream of charged particles emanating from the Sun**.

Plasma (Physics)

- Plasma is **one of the four fundamental states of matter (Others solid, liquid, and gas)**, and was first described by chemist **Irving Langmuir** in the 1920s.
- It consists of a **gas of ions** – atoms which have some of their orbital electrons removed – and **free electrons**. It is a state of matter in which an ionized gaseous substance becomes highly electrically conductive.
- It is an electrically neutral medium of unbound positive and negative particles (i.e. the overall charge of a plasma is roughly zero).

Indian Initiative on Earth BioGenome Sequencing (IIEBS)

- **The** Jawaharlal Nehru Tropical Botanic Garden and Research Institute (**JNTBGRI**) has been selected as one of the **Biological Knowledge and Resource Centres** of the Indian Initiative on Earth BioGenome Sequencing (IIEBS).
- **IIEBS** is a **nationwide project to decode the genetic information of all known species** of plants and animals in the country.
- **The National Institute of Plant Genome Research, New Delhi** is the coordinating centre for the nationwide project involving a total of 24 institutes.

Jawaharlal Nehru Tropical Botanic Garden and Research Institute

- It is an autonomous Institute established and functions under the Government of **Kerala**.
- It was established in 1979 and situated at Thiruvananthapuram, Kerala.

National Institute of Plant Genome Research

- It is an autonomous institution aided by the Department of Biotechnology, Government of India.
- The Institute's establishment coincides with the **50th anniversary of India's independence** as well as the **birth anniversary of Prof. (Dr.) J. C. Bose**. The formal announcement was made on **November 30th 1997**.

Merger Of Two Black Holes with Unequal Masses Detected

- For the first time since it started functioning, the gravitational wave observatories at LIGO scientific collaboration have detected a merger of two unequal-mass black holes.
- The merging entities were about 30 and 8 times the Sun's mass respectively and the actual merger took place at a distance of 2.5 billion light years away.
- The asymmetry in the masses made the feeble higher harmonic component better 'heard', leading to its unambiguous detection. The **existence of higher harmonics was itself a prediction of Einstein's General Relativity**.

- A second Indian team consisting of researchers from ICTS-TIFR, Bengaluru, verified the consistency of the signal with the prediction of General Relativity.
- **Difference between binary black holes with equal masses and those with different masses:**
 - **Dominant emission of gravitational waves happens at twice the orbital frequency of the binary.** In this case, for the first time, emission at a frequency that is three times the orbital frequency was found. **This emission is negligible when binaries contain equal masses and when the orbit is face-on.**
 - Also, in the case of the merger of unequal black holes, the spin of the more massive black hole can be determined from the extra features in the signal waveform.

Laser Interferometer Gravitational Wave Observatory (LIGO)

- LIGO is a large-scale physics experiment and observatory **to detect cosmic gravitational waves predicted by Einstein's General Theory of Relativity.**
- It is a multi-kilometer-scale gravitational wave detectors **to measure the minute ripples in space-time caused by passing gravitational waves** from cataclysmic cosmic events such as colliding neutron stars or black holes, or by supernovae.
- **LIGO-India Project:**
 - This project will be a mega science project to be **jointly funded by the Department of Atomic Energy (DAE) and the Department of Science & Technology (DST).**
 - It is envisaged as a collaborative project between a consortium of Indian research institutions and the LIGO Laboratory in USA, along with its international partners.
 - LIGO-India received the Indian Government's **in-principle approval in February 2016 and would be operational by the year 2023.**
 - The observatory will have technical capability of measuring displacements which are a billion times smaller than the size of an atom. This will help develop national capabilities in technological areas such as control systems, lasers and optics and vacuum technology well beyond the currently available expertise in the country.

Hydrogen Fuel Cell Based Bus and Car Project

- National Thermal Power Corporation Ltd has invited Global Expression of Interest (EoI) to provide **10 Hydrogen Fuel Cell (HFC) based electric buses and an equal number of Hydrogen Fuel Cell based electric cars in Leh and Delhi.**
- The initiative, **undertaken with support of the Ministry of New and Renewable Energy**, will also harness renewable energy for generation of hydrogen and develop its storage and dispensation facilities as part of pilot projects at Leh and Delhi.
- The move to procure Hydrogen Fuel Cell based vehicles is the **first of its kind project in the country**, wherein a complete solution from green energy to the fuel cell vehicle would be developed. It aims at **decarbonizing the mobility segment.**
- NTPC has already commissioned 90 public charging stations in various cities and battery charging and swapping stations at Faridabad for e-3-wheelers. Similarly, **e-Bus solution for Andaman & Nicobar Administration** is under implementation.

Apollo 13

- NASA celebrated the **50th anniversary of Apollo 13**, a manned lunar mission which was launched in April 1970.
- NASA's third lunar mission, Apollo 13, **attempted to land near the Fra Mauro** which is one of the most challenging landing spots on the moon. The Fra Mauro formation is a formation on the near side of Earth's Moon.
- The craft was **launched from Kennedy Space Center in April, 1970**, but the lunar landing was aborted after an oxygen tank failed. The crew instead **looped around the Moon, and brought its photographs to the Earth.**
- It is named after the 80-kilometer-diameter crater **Fra Mauro**, located within it. Fra Mauro is thought to have been **formed from ejecta, or debris, from the impact which formed Mare Imbrium basin.**

Second Earth

- Re-analyzed data from **NASA's Kepler Space Telescope**, which had been retired by NASA in 2018, has led to the discovery of an earth-size exoplanet: **Kepler-1649c.**
- A computer algorithm, **named Robovetter**, was used by the space agency to sort through the data collected by the Kepler telescope, which looked at stars and searched for planets **by observing the dips in their brightness** as planets passed in front of them.
- The exoplanet has been found orbiting in the habitable zone of its star. **Habitable zone** is that area around a star where a rocky planet can support liquid water.
- The exoplanet is about **300 light years away from the Earth** and is the most similar to Earth in size (**only 1.06 times the size of Earth**). Moreover, the amount of light the exoplanet **receives from its star is about 75% of the amount of light Earth** receives from the Sun, indicating a temperature similar to it.
- The exoplanet **orbits a red dwarf**, unlike the Earth. This type of star has never been observed in Earth's system, but the red dwarf star has stellar flare ups which can pose a challenge for any potential life on a planet.
- There is still a lot about the planet which remains to be known, including its atmosphere, which could impact the temperature prevalent on it.

Unified Geological Map of Moon

- The **first ever digital, unified, global, geological map of the moon** was released virtually by the **United States Geological Survey (USGS), NASA** and the **Lunar Planetary Institute.**
- Called the '**Unified Geologic Map of the Moon**', it is a 'seamless, globally consistent, **1:5,000,000-scale geologic map**'. The researchers built on the original digital renovation of the six 1:5,000,000-scale lunar geologic maps comprising the near, central far, east, west, north and south sides that was released in 2013.
- The final map consists of 43 geologic units across the entire lunar surface, broken down into groups based on characteristics like materials of craters, basins, terra, plains and volcanic units.
- It will **serve as a blueprint for future human lunar missions** like **Chandrayaan 2 and Artemis** and a source of research and analysis for the educators. It also provides **vital information for new scientific studies** by connecting the exploration of specific sites on the moon with the rest of the lunar surface.

- The ISRO's **Chandrayaan 2** is an active mission that **targets the Lunar South Pole** for exploration. This is a unique mission which aims at studying not just one area of the Moon but all the areas combining the exosphere, the surface as well as the sub-surface of the moon in a single mission.
- **Artemis is a crewed exploration programme of NASA which plans to send humans to the Lunar South Pole by 2024** and in due course of time, establish a permanent presence on the moon.
- The moon's South Pole is especially interesting because the area is much larger than the North Pole and there could be possibility of presence of water in these permanently shadowed areas. Further, the South Pole region also contains the fossil record of the early Solar System.

Alzheimer Inhibitor Ber-D

- Scientists from **Jawaharlal Nehru Centre For Advanced Scientific Research (JNCASR)** have modified the **structure of Berberine**, a natural and cheap product similar to **curcumin**, available commercially, **into Ber-D** to use as a **Alzheimer's inhibitor**.
- Scientists led the quest to **discover natural product based therapeutic candidates for Alzheimer's disease**, and selected **isoquinoline natural product berberine** found in India and China and used in traditional medicine and other applications.
- However, **berberine is poorly soluble and toxic to cells**. So they **modified berberine to Ber-D**, which is a **soluble (aqueous), antioxidant**. They found it to be a multifunctional inhibitor of multifaceted **amyloid toxicity of Alzheimer's disease**.

Jawaharlal Nehru Centre For Advanced Scientific Research (JNCASR)

- It is an **autonomous and multidisciplinary research institute** under the Department of Science & Technology (DST), Govt. of India.
- It was established in 1989 at **Bangalore** to mark the **birth centenary of Pandit Jawaharlal Nehru**, the first prime minister of independent India.

Alzheimer's Disease

- A **progressive disease** that destroys **memory** and other important **mental functions**.
- **Brain cell** connections and the cells themselves **degenerate and die**, eventually destroying memory and other important mental functions.
- Memory loss and confusion are the main symptoms.
- It is most prevalent **neurodegenerative disorder** & accounts for more than **70% of all dementia**.
- No cure exists, but medication and management strategies may temporarily improve symptoms.

Dementia

Dementia is an **overall term for diseases and conditions** characterized by a decline in memory, language, problem-solving and other thinking skills that affect a person's ability to perform everyday activities. Memory loss is an example.

TriboE masks and Triboelectricity

- A team of researchers at the **Centre for Nano and Soft Matter Sciences (CeNS)**, Bangalore, an **autonomous institute of the Department of Science and Technology (DST)**, have come up with **TriboE Masks** that can hold electric charges to restrict the entry of infections but interestingly, without any external power.

- The innovation relies on **triboelectricity**. When two non-conducting layers are rubbed against each other, the layers develop positive and negative charges instantly and continue to hold the charges for some time. This electric field was used, which was quite strong at proximity, to deactivate or possibly even kill the germs.
- At this stage, the mask is, however, not recommended to healthcare professionals and patients.

Smog Towers And Anti-Smog Gun

- Anti-smog guns have been installed at 14 of 47 large projects in Delhi.
- Recently the Supreme Court had said that anti-smog guns should be **mandatory in projects that require environmental clearance** from the State or Centre, and have a built-up area of over 20,000 square metres.

Anti-smog Gun

- The anti-smog gun is a cannon shaped device that **sprays nebulized water droplet into the air**, up to a height of 50 metres, **creating artificial mist, which stick to air-borne pollutants** and bring them down to the ground.
- The gun is attached to a water tank built on a movable vehicle, which can be taken to various parts of the city.

Concerns

- The **range of such devices are very limited**. It affects the air volume of the immediate surroundings of where the spraying is done. The **effect diminishes after the spraying is stopped**
- Water spraying from the device costs around **Rs 20 lakh per unit**.
- It requires a water tanker attached to it all the time and a **thousand-litre tanker is utilised completely in two hours** of a continuous run.

About Smog

- Smog is a kind of air pollution, originally named for the **mixture of smoke and fog** in the air. Classic smog results from large amounts of coal burning in an area and is caused by a mixture of smoke and sulfur dioxide.
- In the 1950s a new type of smog, known as **Photochemical Smog**, was first described. Photochemical smog is produced when **sunlight reacts with nitrogen oxides and at least one volatile organic compound (VOC) in the atmosphere**. Nitrogen oxides come from car exhaust, coal power plants, and factory emissions. VOCs are released from gasoline, paints, and many cleaning solvents. When sunlight hits these chemicals, they form airborne particles and ground-level ozone—or smog.

Fly Ash

Two people died as a result of a breach in the fly ash dyke of Reliance's Sasan Ultra Mega Power Project in Singrauli, Madhya Pradesh.

About Fly Ash

- Flyash, the *after-burnt tiny coal dust*, is a **by-product from the thermal power plants** and is a alumino-silicate non-reactive inert particle which may remain suspended in the air from few seconds to several months.

- **Applications:** It is a proven resource material for many applications of construction industries and currently is being utilized in Manufacture of Portland Pozzolana Cement (PPC), fly ash bricks/blocks/tiles manufacturing, road embankment construction & low-lying area development, in agriculture as soil conditioner etc.

Problems Of Fly ash

- According to a recent study by the Centre for Science and Environment (CSE), an NGO working on environmental issues, **fly ash disposal remains a major problem** with only about 50-60% of the total fly ash generated by the power sector being utilised.
- **Transportation of flyash** is difficult since the lightweight particles tend to fly causing air pollution. Long inhalation causes serious respiratory problems.
- Disposal in sea, river or ponds **damage the aquatic life** and also flyash causes **siltation problems**
- Long and continuous use of flyash as fertilizer makes hardpan underground.
- **Fly ash disposal in mine voids is not environmentally safe**, the environment ministry's expert panel noted that, "the interface between the water and fly ash at the bottom of fly ash filled void results in **leaching of heavy metals into groundwater system** as evident by high levels of trace elements particularly heavy metals in ground water samples collected from sites located close to the ash filled voids"
- Ash-filled voids **cannot support tree species** because of poor root system development which in turn results in uprooting of trees even by low velocity winds.

Government efforts to make optimum utilization of fly ash as an environmentally sustainable and economically viable product:

- **GST rates** on fly ash and its products have been reduced to 5%.
- **Ash Track-** linking fly ash users and power plants for better ash utilisation. A Web based monitoring System and a Fly Ash mobile application named ASH TRACK. These platforms will enable better management of the ash produced by thermal power plants by providing an interface between fly ash producers (Thermal Power Plants) and potential ash users such as – road contractors, cement plants etc..
- **Ash-park** has been developed and awareness programme for utilisation of fly ash and its products have been conducted

By 2021-22, the thermal power sector is estimated to produce 300 million tonnes of fly ash a year and with that, utilisation of all the fly ash being generated is going to become even tougher.

Fall Army Worm (FAW)

Officials of the Directorate of Agriculture said farmers in Dhemaji district, Assam reported armyworm attack on the standing crops.

What is FAW?

- FAW is a **native of the tropical and sub-tropical regions of the Americas**. It was first detected in Nigeria in 2016. Since then, it has spread to other countries such as China, Thailand, Malaysia and Sri Lanka.
- Its scientific name, **Spodoptera frugiperda**, derived from a latin word 'frugiperda' which means lost fruit, is named so because of the species' ability to destroy crops.



- It was **reported in India for the first time in 2018**, when it **affected crops in Karnataka**. Within a span of only 6 months, almost 50% of the country, including Mizoram, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh etc has reported FAW infestations.

Why It Is Dangerous

- What makes FAW dangerous is the **polyphagous** (ability to feed on different kinds of food -nearly **80 different crops** ranging from maize to sugarcane) nature of the caterpillar and the ability of the adult moth to **fly more than 100 km per night**.
- In its **45-day-long lifecycle**, the female moth of this pest **lays around 1,500-2,000 eggs on the top of leaves**. The 30-day larval stage is the most dangerous part of the lifecycle as the caterpillar **feeds on leaves, whorls, stalks and flowers of crop plants**.
- Once this stage is completed, the growing moth pupates in the soil — for 8-9 days in summer and 20-30 days in cold weather. The nocturnal egg-laying adults live for about 10 days, during which they **migrate long distances**.
- Till date, India has reported FAW infestation on maize, sorghum (jowar) and sugarcane crops and **maize has been the worst affected**. FAW infestation and drought has led to a **shortfall of nearly 5 lakh tonnes** in output prompting the central government to allow import of maize under concessional duty.

Way Forward

- It can be controlled with insecticides (like lambda-cyhalothrin), through natural predators (such as coccinellid beetles which feed on FAW) or by inter-cropping.
- Entomologists have suggested the **Integrated Pest Management system** to control the pest. This would involve *constant surveillance of the pest* during its vegetative growth phase and taking measures like *mechanically destroying the egg masses* and using *pheromone traps* to catch the insects. Pheromone traps are devices which can be used to attract male insects by luring them with female pheromones.
- **Farmers should be discouraged from taking up staggered sowing**, as this would allow the pest to have multiple reservations for growth.
- **Dissemination of information** is another most potent tools to control the spread of the pest.

Amendment to Environment Impact Assessment (EIA) Notification 2006

- The Government has amended EIA Notification 2006 to **ramp up availability/production of bulk drugs within short span of time**.
- All projects or activities in respect of bulk drugs and intermediates, manufactured for addressing various ailments, have been **re-categorized from the existing Category 'A' to 'B2' category**. Projects falling under Category B2 are **exempted** from requirement of collection of Base line data, EIA Studies and public consultation.
- The re-categorization of such proposals has been done to **facilitate decentralization of appraisal to State Level** so as to fast track the process. This step of the Govt is with a view to help in increasing the availability of the important medicines/ drugs in the country within short span of time.

Environmental Impact Assessment In India

- EIA is a process of evaluating the likely **environmental impacts of a proposed project or development**, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.

- The Ministry of Environment and Forests (MoEF) uses Environmental Impact Assessment Notification 2006 as a major tool for minimizing the adverse impact of rapid industrialization on environment
- Since EIA 2006, the various developmental projects have been re-categorised into category 'A' and category 'B' depending on their threshold capacity and likely pollution potential, **requiring prior Environmental Clearance (EC)** respectively from MoEF or the concerned State Environmental Impact Assessment Authorities (SEIAAs).
- The notification provides for **Screening** (determining whether or not the project or activity requires further environmental studies for preparation of EIA), **Scoping** (determining the detailed and comprehensive Terms of Reference (TOR), addressing all relevant environmental concerns /questions for the preparation of an EIA Report), **Public Consultation** (ascertaining concerns of affected persons) and **Appraisal of project proposals** (based on the public consultations and final EIA report).
- Environmental clearance is required for **all new projects or activities** listed in the Schedule to the 2006 notification and their **expansion and modernization**, including any change in product –mix.
- The amendments to EIA Notification of December 2009 **exempts** environmental clearance process for the **biomass based power plants up to 15 MW, power plants based on non hazardous municipal solid waste and power plants based on waste heat recovery boilers without using auxiliary fuel.**

Ozone Hole

European Union's Copernicus Atmosphere Monitoring Service (CAMS) announced that a **hole in the Arctic ozone layer, believed to be the biggest reported, has closed.**

Why This Year's Arctic Ozone Hole Was Massive

- This year the **ozone depletion over the Arctic was much larger.** Scientists believe that unusual atmospheric conditions were responsible. As per a European Space Agency report, **cold temperatures (below -80°C), sunlight, wind fields and substances such as chlorofluorocarbons (CFCs)** were responsible for the degradation of the Arctic ozone layer.
- Although Arctic temperatures do not usually fall as low as in Antarctica, this year, powerful winds flowing around the North Pole trapped cold air within what is known as the **polar vortex— a circling whirlpool of stratospheric winds** – causing the massive hole to form. However, its size was still small compared to what can usually be observed in the southern hemisphere
- Scientists believe that the closing of the hole is because of the same polar vortex and not because of the lower pollution levels during the coronavirus lockdown

Ozone Recovery

- As per the Scientific Assessment of Ozone Depletion data of 2018, the ozone layer in parts of the stratosphere has **recovered at a rate of 1-3 % per decade since 2000.**
- Earlier this month, the rare hole covered an area about three times the size of Greenland. They expected it to heal as temperatures increased, **breaking down the Arctic polar vortex and allowing ozone-depleted air to mix with ozone-rich warm air from lower latitudes.**
- At these projected rates, the Northern Hemisphere and mid-latitude ozone is **predicted to recover by around 2030**, followed by the Southern Hemisphere around 2050, and polar regions by 2060.

Ozone Holes

- Ozone hole refers to a **region in the stratosphere where the concentration of ozone becomes extremely low** in certain months. It is not really a hole.
- The 'ozone holes' most commonly talked about are **depletions over Antarctica**, forming each year in the months of Sept', Oct' and Nov', **due to a set of special meteorological and chemical conditions** that arise at the South Pole, and can reach sizes of around 20 to 25 million km².
- Such holes are **also spotted over the North Pole**, but owing to warmer temperatures than the South Pole, the depletions here are much smaller in size. Before this year, the last sizable **Arctic ozone hole was reported in 2011**.

Devanahalli Pomelo

Bangalore International Airport Limited (BIAL), as part of the 50th anniversary of World Earth Day, decided to conserve the endangered **Devanahalli chakota** by cultivating it within the airport campus.

About Devanahalli Chakota

- The Devanahalli pomelo or chakota is the **largest citrus fruit in the world and belongs to the Rutaceae family**. It has a unique, sweet taste, unlike other varieties.
- It is exclusively grown in the region around Devanahalli taluk, Bangalore Rural District, as an **exotic crop variety**.
- **It is protected under the Geographical Indications of Goods (Registration & Protection) Act (GI Act) 1999**
- It is almost on the **brink of extinction** owing to urbanisation and change in landscape, and the number of farmers growing the fruit has come down over the years, currently, there are less than 100 cultivators in the area.
- Once Mahatma Gandiji visited 'Nandi Hills', a hill station, near Devanahalli. He was offered fruits of devanahalli pomelo. After feeling the taste of this special variety, Gandiji asked details of this variety and suggested to save this variety for future generation.



Trimeresurus Salazar

A new species of **green pit viper** found in Arunachal Pradesh.

About Trimeresurus Salazar

- Pit vipers are **venomous snakes** distinguished by their **heat-sensing pit organs** between the eye and the nostril.
- The new species, Trimeresurus Salazar, is the fifth variety of reptile to have been discovered in Arunachal Pradesh. The name was inspired by Salazar Slytherin, the co-founder of J.K. Rowlings' fictional Hogwarts School of Witchcraft and Wizardry.
- Salazar's pit viper belongs to the genus Trimeresurus Lacépède comprising "**charismatic venomous serpents with morphologically as well as ecologically diverse species**". At least 48 species are known to be distributed across east and southeast Asia, of which at least **15 occur in India**.
- Of the species recorded from India, seven had been found in the northeast before the Salazar's pit viper, collected from the **Pakke Tiger Reserve**, and was identified as a separate species.

Petersberg Climate Dialogue

- Union Environment Minister represented India in the first virtual Climate Dialogue which is the **11th session of Petersberg Climate Dialogue**.
- It has been **hosted by Germany since 2010** to provide a forum for informal high-level political discussions, focusing both on **international climate negotiations** and the advancement of climate action.
- The virtual XI Petersberg Climate Dialogue was **co-chaired by Germany and United Kingdom**, the incoming Presidency of 26th Conference of Parties (COP 26) to United Nations Framework Convention on Climate Change (UNFCCC).
- The dialogue saw participation from Ministers and representatives of about 30 countries.

India's View Points

- India, while stressing on the issue of **Climate finance**, advocated a plan for 1 trillion USD in grants to developing world immediately.
- The world must think of adopting **more sustainable consumption patterns** in line with requirement of sustainable lifestyles.
- India's Nationally Determined Contributions spanning a ten-year time frame are ambitious and are also compliant with the temperature goal of the Paris Agreement.
- India spoke about the opportunity world has today to **accelerate renewable energy** deployment and **creating new green jobs** in the renewable energy and energy efficiency sector.

Anthurium

The National Innovation Foundation-India (NIF) boosts new varieties of Anthurium, a flower with high market value.

About Anthurium

- Anthuriums are herbaceous epiphytes **native to tropical America**.
- Salient features of the Anthurium varieties are large beautiful flowers, different colors of spathe and spadix, long stalks, **better shelf life** and good market value.
- They **purify the surrounding air and remove harmful airborne chemicals** like formaldehyde, ammonia, toluene, xylene, and allergens. Due to its importance in removing toxic substances from the air, **NASA has placed it in the list of air purifier plants**.



World Earth Day

The year 2020 marks the **50th year of World Earth Day**. The theme for this year is **"Climate Action"**.

About World Earth Day

- Every year, Earth Day is celebrated on **April 22** all over the world. As a part of the day, several events are organized to demonstrate support for **environmental protection**.
- The first Earth Day is credited with launching the **modern environmental movement**, and is now recognized as the planet's largest civic event.

- The evolution of this day dates back to April 22, 1970, when millions of people took to the streets in **protest of the negative impacts of 150 years of industrial development.**
- Earth Day has the **participation of more than 193 countries** that are coordinated globally by the Earth Day Network.

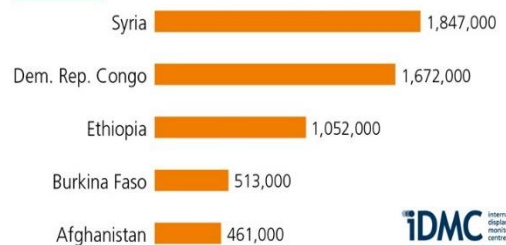
Global Report on Internal Displacement

The Global Report on Internal Displacement (**GRID 2020**) was recently released by the Internal Displacement Monitoring Centre (IDMC). The centre is a part of the Norwegian Refugee Council

Global Highlights

- As per the report, at the end of 2019, there were 50.8 million internal displacements across the world.
- At least 33.4 million **new displacements** took place across 140 countries and territories in 2019 alone, out of which 8.5 million were related to conflict and violence, while 24.9 million due to disasters.
- This is the highest figure recorded since 2012 and three times the number of displacements caused by conflict and violence.
- Nearly 1,900 disasters sparked the 24.9 million new displacements, out of which 23.9 were weather-related, and much of this displacement took place in the form of pre-emptive evacuations.
- All regions are affected by conflict displacement, but it is highly concentrated in a few countries. Of the global total at the end of the year, around 34.5 million, were in just 10 countries.
- Conflict continued unabated in countries such as Afghanistan, the Democratic Republic of the Congo (DRC) and Syria and violence increased sharply in Burkina Faso, Mali and Niger.
- Further, natural disasters in Nigeria, South Sudan and Yemen forced many people, already displaced by conflict, to flee for the second time.

Five countries with the most new displacements by conflict and violence in 2019



Highlights From India

- Nearly five million people were displaced in India in 2019 — the highest in the world so far. The displacements in India were prompted by increased hazard intensity, high population and social and economic vulnerability.
- 2019 was the seventh warmest year since 1901 in India; its monsoon was the wettest in 25 years and more than 2.6 million people suffered displacement due to the southwest monsoon.
- Eight tropical storms hit in the year, including cyclone Maha, which hit Kerala and the Lakshwadweep Islands. This was followed by Cyclone Bulbul, which struck Odisha and West Bengal, triggering 186,000 displacements.
- In addition to displacement due to natural disasters, over 19,000 conflicts and violence also prompted the phenomenon. Political and electoral violence, especially in Tripura and West Bengal, led to the displacement of more than 7,600 people.

Efforts To Contain Displacement

- Improvements in the quantity and quality of data available enabled better reporting and analysis, which in turn informed more effective responses and risk mitigation measures.

- Further, strengthened capacity across humanitarian and development sectors manifested in better coordination and increased investment.
- New national initiatives showed greater levels of political commitment, as countries such as Niger and Somalia improved their policy frameworks on internal displacement.
- Others, including Afghanistan, Iraq and the Philippines, incorporated displacement in their development plans, in their reporting on the Sustainable Development Goals, or when updating risk management strategies in line with the Sendai Framework for Disaster Risk Reduction.

Establishment of Diplomatic Relations between India and China

Context:

- India and China are commemorating the **70th anniversary of the establishment of diplomatic relations**.
- On April 1, 1950, **India became the first non-Communist country in Asia** to establish diplomatic relations with the People's Republic of China.

Key Highlights

- The **70 events were finalised** by Prime Minister Modi and Chinese President Jinping during their **2nd Informal Summit at Mamallapuram** on October 11-12, 2019.
- While the implementation of the 70 events to celebrate the occasion may have to wait until the return of the normalcy, the event was **formally commemorated with the exchange of letters between Presidents of the two countries**.
- The activities planned were aimed at demonstrating the **historic connection between the two civilisations** as well as their growing bilateral relationship over the years.
- Considering the ancient trade links between Tamil Nadu and China's Fujian province, the two sides also planned to engage in **cooperative projects in studying ancient maritime links between India and China through establishment of sister-state relations between Tamil Nadu and Fujian**.

How Is The Coronavirus Outbreak Affecting China's Relations With India

A. Chinese Actions: Raising India's Fear

- China has tried to woo India by saying that it “stands ready to **share its experience in epidemic prevention and control and diagnosis**.” So far, China has announced to donate more than **1,70,000 Personal Protective Equipment to India**.
- But **India is worried**, based on the kind of Chinese assistance provided to a number of countries including Italy, Czech Republic, and Spain, where even the **testing kits sent from China showed faulty results**.
- China's approach has fueled Delhi's **existing strategic and economic concerns**.
- These include **overdependence on China for industrial inputs** — India's pharmaceutical sector, for instance, sources a majority of its Advanced Pharmaceutical Ingredients (APIs) from China.
- Because of this crisis, the desire to boost domestic production or diversify India's options will likely intensify.
- Other concern is **Chinese entities' taking advantage of the crisis** for various objectives: (1) the acquisition of vulnerable Indian companies, (2) increasing its influence in India's neighborhood, and (3) portraying its system and global and regional leadership role as more effective than others

B. India's Response

- As of now, the Indian government has been **careful not to blame China** for the coronavirus or its propagation.
- This reflects Indi's need to procure medical supplies from China and its desire to keep the relationship stable.
- As far as sourcing APIs from China is concerned, India has desired to boost domestic production and diversify India's options in this regard.
- To stop Chinese entities from acquiring assets in Indian companies, Indian government has **announced restrictions on foreign direct investment from countries that share a land boundary with India** — a move clearly directed against China.

C. India's Global Outreach

- India has also been **proactive in its neighborhood with diplomatic outreach**, economic aid, technical assistance, and the provision of medical supplies.
- To boost its own image, India has **lifted or made exceptions to its export restrictions on certain drugs** (HCQ).
- India is **engaging with other countries in the Indo-Pacific**, bilaterally and through a Quad-plus mechanism. It will also likely work with others to blunt or balance China's future influence in institutions like the World Health Organization.

D. Conclusion

- It is likely that public perception in India is likely to blame China for the damages this has caused, once the pandemic itself is under control.
- However, **India is unlikely to officially blame China** as it will damage the broader China-India strategic or economic relationship.
- This can be seen from the fact that despite the cancellation of 70th anniversary events due to COVID, both sides have exchanged congratulatory messages.

Timeline: China - India Diplomatic Relations

- April 1, 1950 – Establishment of diplomatic relations
- April 1954 – Five Principles of Peaceful Co-existence signed
- April 1959 – 14th Dalai Lama flees China in the wake of a failed coup to resist the slave abolition reform
- October 1962 – Sino-India border conflict breaks out
- April 1976 – China and India resume ambassadorial level diplomatic relations
- December 1988 – Indian PM Rajiv Gandhi makes a 5-day icre-breaking visit to China (1st visit by Indian PM in 34 years)
- November 1996 – Chinese President Jiang Zemin pays a state visit to India (The two sides sign four agreements including one on CBM in the military field along the Line of Actual Control in China-India border areas.)
- June 2003 – Joint declaration on Principles for Relations and Comprehensive Cooperation, defining the goal and guiding principle of bilateral ties as well as two-way cooperation in all fields

- April 2005 – The two sides declare to establish the Strategic and Cooperative Partnership for Peace and Prosperity, and conclude the Agreement on the Political Parameters and Guiding Principles for the Settlement of the Boundary Question. China-India relations enter a new stage of comprehensive development.
- April 2010 – 60th anniversary of diplomatic ties. The two sides establish a mechanism for the regular exchange of high-level visits and open a telephone hotline.
- September 2014 – China and India sign a joint statement on building a closer development partnership.
- June 2017 – India gains membership of SCO
- April 2018 – First Informal Summit in Wuhan, China
- October 2019 – Second Informal Summit in Chennai, India.

[Also, refer the topic “**Visit of President of China to India**” from **October 2020** edition of CA magazine. For detailed discussion on India-China relation, please refer the Yellow Book on International Relation]

Pakistan Rushes Back to UNSC over Kashmir

- Pakistan has gone back to the United Nations Security Council over Jammu and Kashmir over the new set of domicile rules notified by the Indian home ministry.
- However, the council **foiled Pakistan’s attempt** to put the Kashmir issue on its meeting agenda.

Key Highlights

- In a letter to the UNSC, **Pakistan accused India** of taking advantage of global focus on coronavirus to **change Kashmir’s demographics**.
- Pakistan alleged that the Indian gov’t’s new domicile rules for Jammu and Kashmir were designed to change the “demographic structure” of J&K.

India’s Response

So far, India’s foreign ministry hasn’t responded to Pakistan’s effort. However, India had started working with each of the five permanent and 10 non-permanent members of the UN Security Council in an effort to checkmate Islamabad even before Pakistan taking the matter to UNSC.

Notification Of Indian Govt

- The Union home ministry had issued rules that **reserve all government jobs in J&K for domiciled residents of the union territory**.
- In this set of rules, the government had accepted demands from people who spent a lifetime in J&K that they should also be counted as residents.
- Accordingly, people who have lived in **UT for 15 years are being treated as domiciled residents**.

Non-permanent Members of UNSC & India

- The current non-permanent members of UNSC are Belgium, Côte d’Ivoire, Dominican Republic, Equatorial Guinea, Germany, Indonesia, Kuwait, Peru, Poland and South Africa. **Poland holds the rotating chair for UNSC**.
- Over past few years, **Indonesia**, as a member of OIC, has not favoured a strong position on Kashmir.
- South Africa appreciates India’s position in its struggle against apartheid. Equatorial Guinea is in the UNSC for the first time and India has assisted in its endeavour to be a member.

South Korea's Ruling Party Wins Election

- South Korea's ruling party has won a landslide victory **in national assembly elections**. This is being seen as an endorsement of **President Moon Jae-in's** response to the coronavirus pandemic.
- South Korea was **among the first countries** to hold a national election during the pandemic.
- Moon's Democratic Party and its allies won **180 seats in the 300-seat assembly** – the **biggest majority in the national assembly** by any party since South Korea's transition to democracy in 1987.
- Voter turnout was 66.2%, **higher than any parliamentary elections** held in South Korea since 1992.

Election Amidst Pandemic

- Millions of people, wearing masks and standing at least one metre apart, moved slowly between lines of duct tape at polling stations.
- Before casting their vote, they **underwent a temperature check**, sanitised their hands and put on disposable plastic gloves.
- Those who failed the temperature check or who were not wearing a mask were escorted to separate polling booths, sanitising the facilities after they had voted.
- About 13,000 people under self-quarantine due to the virus were **allowed to cast ballots** immediately after the polls closed, provided they had no symptoms.

Electoral Process in South Korea

- South Korea has a **unicameral National Assembly (Kukhoe) of 300 seats** with members **serving 4-year terms**.
- The president is **directly elected** by majority popular vote in a single-round system. The president is **elected to a single 5-year term**.
- The prime minister is appointed by the president with the approval of the National Assembly.
- In the National Assembly, **253 Members are elected by plurality vote** in single member constituencies and **47 members** are elected through a **closed-list proportional representation (PR) system**.
- In February 2019, an election reform bill was introduced which *changed the allocation of PR seats to a hybrid of the mixed-member proportional and mixed member majoritarian systems*.
- The voting age was also lowered from 19 to 18 years.

About Mixed Member Proportional (MMP) System:

- Under MMP systems, the *PR seats are awarded to compensate for any disproportionality produced by the district seat results*.
- For example, if one party wins 10 per cent of the vote nationally but no district seats, then it will be awarded enough seats from the PR lists to bring its representation up to 10 per cent of the seats in the legislature.
- **Voters may get two separate choices** (a party vote and an electorate vote) as in Germany and New Zealand.
- Alternatively, **voters may make only one choice**, with the party totals being derived from the totals for the individual district candidates.

Mixed Member Majoritarian (MMM) Systems:

- MMM combines first-past-the-post voting (FPTP) with party-list proportional representation (PR).

- In other words, MMM is described as a **mixture of two principles** of electoral system design: **majoritarian systems**, which usually have single-seat districts with plurality rule and tend to give greater representation to the two parties that receive the most votes; **and proportional systems**, which have multi-seat districts, usually with party lists, and typically produce parliamentary representation that largely mirrors the vote shares of multiple parties.
- MMM is distinct from MMP where a single election takes place, and the party vote determines what share of seats each party will receive in the legislature to "top up" its constituency seats.

UN Suspends Rotation, Deployments of Peacekeepers

- The United Nation has suspended the rotation and deployments of the peacekeepers **until June 30** to mitigate the risk of transmission of the novel coronavirus.
- However, a "few, limited exceptions" may be considered to continue to deliver on the mandate.
- The **Special Committee on Peacekeeping Operations** of the United Nations is known as the '**C34**'.
- India is among the largest troop contributing nations to the UN peacekeeping operations.

Saudi led Coalition Declared Ceasefire in Yemen

The Saudi-led coalition has extended a unilateral ceasefire in Yemen by one month. This decision has been taken to **support efforts to contain the coronavirus pandemic**.

What Forced The Coalition To Announce Unilateral Ceasefire

- **Threat posed by the coronavirus** in a country whose health system is barely functioning.
- So far, it has proved to be a costly military campaign in Yemen for Saudi Arabia.
- **Falling oil prices** are creating an additional pressure on the Kingdom. In September 2019, the Kingdom's vital oil facilities came under fire in a spectacular attack blamed on Iran.
- Since then, Saudi Arabia has shifted its gear. It has embarked on **secret talks with senior Houthi officials** to secure their border and try to pull them away from Iran.
- The coalition was under pressure from the international communities to **create a conducive environment for the UN envoy's peace efforts**.

Why Is There A War In Yemen

- Yemen has been mired in conflict since the **Houthi rebel group overthrew the government of President Abd-Rabbu Mansour Hadi** from the capital Sanaa in late 2014.
- Alarmed by the rise of a group they believed to be **backed militarily by Iran**, Saudi Arabia and eight other Arab states began a campaign aimed at restoring Mr Hadi's government.
- At the start of the war, Saudi officials forecast that it would last only a few weeks. But five years of military stalemate have followed.

Immunity Passports

The World Health Organization has warned against **issuing "immunity passports"** to people who have recovered from Covid-19. **Chile** is so far the only country to launch an **official immunity passport scheme**. The United Kingdom, Germany and Italy have been looking into the move.

What Is Immunity Passport

- Immunity passports are **some form of certificates** to people who have been sick with the virus and been recovered.
- This works on the assumption that these people would be **immune to reinfection** due to the **presence of antibodies**.

Why This Idea Is Being Promoted

- Backers of the idea say the people who qualify could receive digital certificates displayed like smartphone boarding passes, or on paper.
- It could help a lot more people” return to activity and thereby slowly bringing the economy back on the track.
- Also, there is a concern that if this **situation lasts six months or nine months**, or if **there is a second wave**, people will want to leave their homes. In this case, the immunity passport holders might get a chance to do so. This is more likely to help people comply with staying at home.

Why WHO Is Opposing It

- According to WHO, there is **no scientific evidence** to prove that people who have recovered from the **coronavirus develop immunity against** potential infection in the future.
- Also, it is unknown that **how long the antibodies formed against the COVID-19 lasts in human body**.
- The WHO also believes that the serological tests currently used to look for the presence of antibodies **need additional validation to determine** their accuracy and reliability.
- This move could **actually increase the transmission of the novel coronavirus** as people who have recovered may ignore advice about taking standard precautions against the virus.
- There have been reports, including from China and South Korea, of patients who appeared to have recovered from the disease **testing positive again**.
- Experts have also raised concerns that “**immunity passports**” **could exacerbate economic inequalities**, and increase transmission risks by encouraging people desperate for work to try to deliberately infect themselves.

USCIRF Releases 2020 Annual Report

Context

- The **United States Commission on International Religious Freedom (USCIRF)** has released its 2020 Annual Report.
- The report documented significant developments during 2019, including remarkable **progress in Sudan and a sharp downward turn in India**.
- It also made recommendations to enhance the **U.S. government’s promotion of freedom of religion or belief abroad in 2020**.

India Specific Observation

- India has been placed at the lowest ranking, “**countries of particular concern**” (CPC). This is the **first time since 2004** that India has been placed in this category.

CPC Designation

A nation guilty of particularly **severe violations of religious freedom** (i.e. systematic, ongoing, egregious violations) under the International Religious Freedom Act of 1998.

- India is placed alongside countries, including **China, North Korea, Saudi Arabia and Pakistan.**
- In last year's report, India was **categorised as a "Tier 2 country"** (means it is under watch by the commission).
- The **report suggested** the US Embassy to **meet people from "religiously persecuted" communities in India**, and went as far as to **recommend sanctioning of the Indian agencies and officials.**
- It also urged US to take stringent action against India under the "International Religious Freedom Act" (IRFA).
- However, the three members of the commission dissented with its recommendation against India.

Why USCIRF Downgraded India

Certain steps taken by the government and the associated violence has forced USCIRF to downgrade. These steps include:

- The Citizenship (Amendment) Act and the National Register of Citizens
- Cow Slaughter Laws
- Anti-Conversion Laws
- Religious Freedom in Jammu and Kashmir

India's Response

- Ministry of External Affairs rejected the report calling it biased and sarcastically labelling the USCIRF an "**organisation of particular concern**".

About USCIRF:

- USCIRF is a U.S. federal government commission created by International Religious Freedom Act of 1998.
- The commission has nine commissioners out of which three are appointed by US president, four by the opposition and two by the ruling party.
- Its **principal responsibilities** are to review the facts and circumstances of violations of religious freedom internationally and to make policy recommendations to the President, the Secretary of State and the Congress.

South Korea To Fete Indian Army Officer

- To mark the **70th anniversary of the Korean War** this year, the South Korean government will honour an Indian Army officer **Lt Colonel AG Rangaraj.**
- He will be facilitated as the '**Korean War Hero for the month of July 2020**' for his huge contribution during the period of the war.
- The Korean War took place from June 25, 1950 to July 27, 1953.
- Rangaraj commanded the **60 Para Field Ambulance** which was a medical unit of the Indian Army responsible for **providing medical treatment** to a large number of soldiers during the Korean War.
- During the time of the Korean War, the United Nations had asked for help from other countries.
- Following which India send a medical unit -60 Para Field Ambulance -of the Indian Army to South Korea.

Global Terrorism Index (GTI)

Context:

- **NITI Aayog has questioned** the authenticity of Australia based Institute for Economics and Peace (IEP) terror ranking of India in its Global Terrorism Index of 2019.

Issues Raised by NITI Aayog

- How can India be consistently ranked behind conflict ridden states such as DRC, South Sudan etc.?
- While the GTD claims to analyse more than two million open source media reports published each day, it **lacks any mechanism to engage with Governments** or to further classify and verify such open source media reports through Government databases.
- The **large diversity in definitions of terrorism** amongst countries, and the lack of a universally accepted definition of terrorism, including in the **Comprehensive Convention on International Terrorism** pending in the UN General Assembly since 2014, leads to a great deal of ambiguity in calculating and understanding GTI reports.

2019 GTI Report

- India's rank slides from 8th in 2017 and 2018 to 7th in 2019 reflecting a worsening of the overall security situation in the country on grounds of terrorism.
- India has **consistently ranked behind conflict ridden states** such as the Democratic Republic of Congo, South Sudan, Sudan, Burkina Faso, Palestine and Lebanon.
- The report also makes other startling conclusions such as stating that the ten countries with the highest impact of terrorism, including India, **are all engaged in at least one armed conflict**.

Why GTI Score is Important?

- GTI scores are directly used in the Global Peace Index, published by the IEP, the **Global Slavery Report** published by the Walk Free Foundation.
- It is indirectly used in **computing country scores** in the World Economic Forum's **Travel and Tourism Competitiveness and Global Competitiveness Indices**.
- The GTD is also used in computation of the Safe Cities Index by the Economist Intelligence Unit.

About Global Terrorism Index:

- **Published by** – the Australia based Institute for Economics and Peace (IEP)
- The report aims to comprehensively analyse the impact of terrorism on 163 countries, covering 99.7% of the world population.
- It Uses **four parameters** to calculate each country's annual score, namely **total number of terrorist incidents, fatalities and injuries caused by terrorists, and total property damage from terrorist incidents** in a given year.
- The GTI report is based primarily on the Global Terrorism Database (GTD) collated by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland, apart from other sources.

India to Host Asian Boxing Championship

- India will be hosting the **2020 Asian Boxing Championships** for men and women between November-December 2020.
- The announcement was made by the Boxing Federation of India.

- The host city will be decided once the national lockdown is lifted.
- The event is usually a biennial competition but was held in consecutive years in the past.
- India last hosted the **men's Asian meet back in 1980** in Mumbai, while it conducted the **women's event in 2003 in Hisar**.
- The tournament became a **combined event for men and women in 2019**.

Khongjom Day Celebrated

- Manipur celebrated Khongjom day on April 23.
- Every year, this day is celebrated to pay tribute to the **war heroes of Anglo-Manipuri War 1891** who had sacrificed their lives fighting against the British to protect freedom of Manipur.

Important Dates

- 10 April - World Homoeopathy Day. This day is observed to commemorate the birth anniversary of the founder of Homoeopathy, Christian Fredrich Samuel Hahnemann.
- April 12 - International Day of Human Space Flight (first observed in 2011, On April 12, 1961, the first human space flight was carried out by Yuri Gagarin)
- **April 21 - World Creativity and Innovation Day**
- April 22 – World Earth Day (Theme - Climate Action, Yr. 2020 marks 50 years of Earth Day)
- April 24 - International Day of Multilateralism and Diplomacy for Peace (first observed in 2019)
- **April 25 - World Malaria Day 2020** (Theme 'Zero malaria starts with me')
- April 26 - World Intellectual Property Day (Theme - Innovate for a Green Future).