

COVID- 19 NEWS**D614g**

Coronavirus is mutating. And, one particular strain of mutation called D614G in the Spike protein region of the SARS-CoV-2 virus is worrying experts.

About:

- As of May 2020, scientists across the world have identified over 200 genetic mutations in the SARS-CoV-2 that causes COVID-19. Mutations are essentially small genetic changes.
- Viruses mutate naturally, and mutations do not translate into a more dangerous or virulent form of the existing virus.
- A new study focussing on mutations in the "Spike" protein that gives the virus its distinctive "crown-like" shape, has identified 14 mutations in the Spike. The research was done using a database called the Global Initiative on Sharing All Influenza Data (GISAID).
- According to the researchers, one particular mutation—identified as D614G—is of "urgent concern". It began spreading in Europe in early February, and when introduced to new regions it rapidly becomes the dominant form.

NATIONAL SOCIAL ISSUES- WOMEN, POPULATION, URBANISATION, EMPOWERMENT ETC**Accelerating India's Covid-19 Social Protection Response Programme**

The Government of India and the World Bank signed an agreement for \$750 million of \$1 billion assistance proposed for Accelerating India's COVID-19 Social Protection Response Programme to support India's efforts at protecting vulnerable households impacted by the COVID-19 pandemic.

About:

- The programme will be implemented by the Ministry of Finance, Government of India.
- This takes the total commitment from the Bank towards emergency COVID-19 response in India to \$2 billion. A \$1 billion support was announced earlier in April 2020.
- This new support will be funded in two phases – an immediate allocation of \$750 million for fiscal year 2020 and a \$250 million second tranche that will be made available for fiscal year 2021.
- The first phase will be implemented countrywide through the Pradhan Mantri Garib Kalyan Yojana (PMGKY). It will immediately help scale-up cash transfers and food benefits using platforms of Public Distribution System (PDS) and Direct Benefit Transfers (DBT).
- In the second phase, additional cash and in-kind benefits based on local needs will be extended through state governments and portable social protection delivery systems.

National Migrant Information System (NMIS)

National Disaster Management Authority (NDMA) has developed 'National Migrant Information System (NMIS)', a central online repository on Migrant Workers to facilitate their seamless movement across States.

About:

- The online portal would maintain a central repository on migrant workers and help in speedy inter-State communication/co-ordination to facilitate their smooth movement to native places.
- It has additional advantages like contact tracing, which may be useful in overall COVID-19 response work.
- The key data pertaining to the persons migrating has been standardized for uploading such as name, age, mobile no., originating and destination district, date of travel etc., which States are already collecting.
- States will be able to visualize how many people are going out from where and how many are reaching destination States.

INDIAN HERITAGE AND CULTURE, HISTORY

75th Anniversary Of Ve Day

The 75th anniversary of the end of the 'World War II in Europe' was celebrated by United states, Europe and Russia.

About:

- Victory in Europe Day (abbreviated to VE Day) is the day celebrating the formal acceptance by the Allies of World War II of Nazi Germany's unconditional surrender of its armed forces on 8 May 1945, marking the end of World War II in Europe.
- Several countries observe public holidays on the day each year, variously called Victory Over Fascism Day, Liberation Day or simply Victory Day.
- Several former Soviet bloc countries like Russia, Belarus, and Serbia celebrate on 9 May as the end of all combat actions was specified at 23:01 Central European Time, which was already 9 May in the USSR.

Background:

- Adolf Hitler, the Nazi leader, had committed suicide on 30 April during the Battle of Berlin and Germany's surrender was authorised by his successor. The definitive German Instrument of Surrender, was signed on 8 May 1945 in Karlshorst, Berlin.
- The war against Japan had not yet been won which surrendered on August 15 after the atomic bombings of Hiroshima and Nagasaki.

GEOGRAPHY- PHYSICAL AND ECONOMIC

Baltic Travel Bubble

The Baltic countries of Estonia, Latvia and Lithuania have opened their borders to one another, creating a coronavirus "travel bubble".

About:

- Now, citizens and residents can move freely between the three EU nations. Anybody arriving from outside the zone however must self-isolate for 14 days.
- This is the first "travel bubble" in Europe since nations began shutting their borders earlier this year in response to the coronavirus outbreak.
- The sparsely populated Baltic states have not been as badly affected by the pandemic as some of their European neighbours. There are fewer than 150 recorded deaths between the three nations.
- Both Finland and Poland have also been approached to join the Baltic travel bubble.

Baltic Countries:

- The Baltic countries, or simply the Baltics, is a geopolitical term, used to group the three sovereign states in Northern Europe on the eastern coast of the Baltic Sea: Estonia, Latvia, and Lithuania.
- The region has been part of the European Union since 2004 and since 2007 has been a member of the European Schengen Free Travel Area.

CONSTITUTION AND POLITY

AZAN

The Allahabad High Court allowed azan in three districts of Uttar Pradesh — Ghazipur, Hathras and Farrukhabad — where it had been stopped by the district administration citing the Home Ministry's lockdown rules.

About:

- The adhan (also written as adhaan, azan, azaan or athan) is the Islamic call to prayer, recited by the muezzin at prescribed times of the day. Adhan is called out by a muezzin from the mosque five times a day, summoning Muslims for obligatory prayer.
- The high court ruled that “Azan can be recited by a muezzin from minarets of the mosques by human voice without using any amplifying device. Such recitation cannot be hindered under the pretext of violation of the guidelines issued by the state, to contain COVID-19.”
- The court held that azan may be an integral part of Islam but its recitation through loudspeakers/sound-amplifying devices cannot be said to be an integral part of religion, warranting protection of the fundamental right enshrined under Article 25 of the Constitution.

Related Info :

- Article 25 in The Constitution: Freedom of conscience and free profession, practice and propagation of religion
- Article 25 of the Constitution guarantees freedom of religion to all persons in India.
- It provides that all persons in India, subject to public order, morality, health, and other provisions:
 - Are equally entitled to freedom of conscience, and
 - Have the right to freely profess, practice and propagate religion.
- It further provides that this article shall not affect any existing law and shall not prevent the state from making any law relating to:
 - Regulation or restriction of any economic, financial, political, or any secular activity associated with religious practice.
 - Providing social welfare and reform.
 - Opening of Hindu religious institutions of public character for all the classes and sections of the Hindus.
- The Supreme Court in *Tilkayat Shri Govindlalji Maharaj V. State of Rajasthan* held that the test to determine the question in deciding what is an integral part of a religion is whether it is regarded as integral by the community following that religion or not.

SOCIO-ECONOMIC DEVELOPMENT

3rd Tranche Under Aatmanirbhar Bharat Abhiyaan

Union Finance Minister announced the 3rd Tranche of measures under Atmanirbhar Bharat to strengthen Agriculture, Fisheries and Food Processing Sectors.

Measures to strengthen Infrastructure Logistics and Capacity Building for Agriculture & Allied Sectors:

- Financing facility of Rs. One Lakh crore will be provided for funding Agriculture Infrastructure Projects at farm-gate & aggregation points. It will be financed and managed by the National Bank for Agriculture and Rural Development (NABARD).
- A Rs. 10,000 crore scheme will be launched for Formalisation of Micro Food Enterprises (MFE). It will help 2 lakh MFEs who need technical upgradation to attain FSSAI food standards, build brands and marketing.
- The Government will launch the Pradhan Mantri Matsya Sampada Yojana (PMMSY) with an outlay of Rs 20,000 crore for marine and inland fisheries.
- An Animal Husbandry Infrastructure Development Fund of Rs. 15,000 crore will be set up to support private investment in Dairy Processing, value addition and cattle feed infrastructure.
- The National Medicinal Plants Board (NMPB) will cover 10,00,000 hectare under Herbal cultivation in next two years with outlay of Rs. 4,000 crore.
- Beekeeping initiatives (worth Rs 500 crore): Government will implement a scheme for Infrastructure development related to Integrated Beekeeping Development Centres, Collection, Marketing and Storage Centres, Post-Harvest & value Addition facilities etc; and Implementation of standards & Developing traceability system.
- “Operation Greens” run by Ministry of Food Processing Industries (MOFPI) will be extended from Tomatoes, onion and potatoes (TOP) crops to ALL fruit and vegetables.

4th Tranche Announced Under Aatmanirbhar Bharat Abhiyaan

Union Finance Minister announced the 4th Tranche of measures for reforms in the eight sectors of Coal, Minerals, Defence production, Civil Aviation, Power Sector, Social Infrastructure, Space and Atomic energy under Aatma Nirbhar Bharat Abhiyaan.

Key Highlights:

- Space Sector: Private sector will be allowed to use ISRO facilities and other relevant assets to improve their capacities. Future projects for planetary exploration, outer space travel etc shall also be open for private sector.
- Atomic energy: Research reactor in PPP mode for production of medical isotopes shall be established. Facilities in PPP mode to use irradiation technology for food preservation shall also be established.
- Social Infrastructure: For boosting private sector investment, Government will enhance the quantum of Viability Gap Funding (VGF) upto 30% each of Total Project Cost as VGF by the Centre and State/Statutory Bodies.
- Civil Aviation Sector: Restrictions on utilisation of the Indian Air Space will be eased so that civilian flying becomes more efficient. India to become a global hub for Aircraft Maintenance, Repair and Overhaul (MRO).
- Mineral Sector: A Composite exploration-cum-mining-cum-production regime for minerals to be announced for enhancing Private Investments in the Mineral Sector.

The distinction between captive and non-captive mines to allow transfer of mining leases and sale of surplus unused minerals production shall be removed.

- Coal Sector: Commercial Mining in Coal Sector on revenue sharing basis instead of regime of fixed Rupee/tonne to be introduced. Coal Bed Methane (CBM) extraction rights will be auctioned from Coal India Limited's (CIL) coal mines.
- Defence Sector: FDI limit in the Defence manufacturing under automatic route will be raised from 49% to 74%. A list of weapons/platforms for ban on import will be notified. Corporatisation of Ordnance Factory Board to be implemented for improving autonomy and efficiency in Ordnance Supplies.
- Power Sector: Power Departments / Utilities in Union Territories will be privatised.

5th Tranche Announced Under Aatmanirbhar Bharat Abhiyaan

Union Finance Minister announced the 5th and last Tranche of measures towards Government Reforms and Enablers under Aatma Nirbhar Bharat Abhiyaan.

Measures announced:

- The Government will allocate an additional Rs 40,000 crore under MGNREGS to provide employment boost.
- There will be Decriminalisation of Companies Act violations involving minor technical and procedural defaults such as shortcomings in CSR reporting, delay in holding of AGM etc. to de-clog the criminal courts and NCLT.
- Public Expenditure on Health will be increased by investing in grass root health institutions and ramping up Health and Wellness Centres in rural and urban areas. Infectious Diseases Hospital Blocks to be setup in all districts.
- Government will announce a new Public Sector Enterprise Policy whereby List of strategic sectors requiring presence of PSEs in public interest will be notified. In strategic sectors, at least one enterprise will remain in the public sector but private sector will also be allowed. In other sectors, PSEs will be privatized.
- Centre has decided to increase borrowing limits of States from 3% to 5% for 2020-21 only. This will give States extra resources of Rs. 4.28 lakh crore.
- Technology Driven Education with Equity post-COVID:
 - PM eVIDYA, a programme for multi-mode access to digital/online education to be launched immediately.
 - Manodarpan, an initiative for psycho-social support for students, teachers and families for mental health and emotional well-being to be launched immediately as well.
 - National Foundational Literacy and Numeracy Mission for ensuring that every child attains Learning levels and outcomes in grade 5 by 2025 will be launched by December 2020.
- Further enhancement of Ease of Doing Business through IBC related measures:
 - Minimum threshold to initiate insolvency proceedings has been raised to Rs. 1 crore (from Rs. 1 lakh, which largely insulates MSMEs). Suspension of fresh initiation of insolvency proceedings up to one year, depending upon the pandemic situation.
 - Central Government to be empowered to exclude COVID 19 related debt from the definition of "default" under the Code for the purpose of triggering insolvency proceedings.

- Ease of Doing Business for Corporates: Key reforms include –
 - Direct listing of securities by Indian public companies in permissible foreign jurisdictions.
 - Private companies which list NCDs on stock exchanges not to be regarded as listed companies. Power to create additional/ specialized benches to be granted for NCLAT.

Rights Issue

The Ministry of Corporate Affairs (MCA) has announced that listed companies that come out with rights issues before July 31 would not be required to notify shareholders about the issue through postal services because of transport restrictions due to the Covid-19 outbreak.

About:

- A rights issue is an offering of shares made to existing shareholders in proportion to their existing shareholding.
- Companies often offer shares in a rights issue at a discount on the market price.
- Rights issues are used by companies seeking to raise capital without increasing debt.
- Shareholders are not obliged to purchase shares offered in a rights issue. However, not participating in a rights issue may dilute their overall stake in the company, as there would be a larger number of outstanding shares of the company post the issue.
- The recent clarification by MCA was issued under Section 62(2) of Companies Act, 2013.

SARFAESI Act

The Supreme Court (SC) has ruled that all co-operative banks in the country could make use of the SARFAESI Act to make recovery against defaulting persons.

Recent Ruling:

- The SC held that all such cooperative banks involved in the activities related to banking are covered within the meaning of ‘banking company’.
- The cooperative banks cannot carry on any activity without compliance of the provisions of the Banking Regulation Act, 1949 and any other legislation applicable to such banks relatable to banking,” the five-judge bench said.
- In the past, there have been calls to notify non-scheduled urban cooperative banks as ‘financial institutions’ so they could make use of the Insolvency and Bankruptcy Code, 2016 (IBC) to recover money.

Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002

- SARFAESI Act allows banks and other financial institution to auction residential or commercial properties (of Defaulter) to recover loans.
- The Act provides three alternative methods for recovery of non-performing assets, namely: (1) Securitisation, (2) Asset Reconstruction and (3) Enforcement of Security without the intervention of the Court.
- The first asset reconstruction company (ARC) of India, ARCIL, was set up under this act.

ENVIRONMENT- CONSERVATION, BIO-DIVERSITY AND ISSUES

Troglomyces Twitteri

A new species has just been discovered using a Twitter image and thus has been named as Troglomyces twitteri.

About:

- Troglomyces twitteri is a type of parasitic fungus.
- It belongs to an order called Laboulbeniales — tiny fungal parasites that attack insects and millipedes. These fungi live on the outside of host organisms; in this case, on the reproductive organs of millipedes.
- Laboulbeniales were first discovered in the middle of the 19th century.

SCIENCE AND TECHNOLOGY- EVERYDAY SCIENCE, SPACE, NUCLEAR, DEFENCE ETC

Biodegradable Metal Implants

Scientists at the International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), under the Department of Science & Technology (DST) has developed new generation Iron-Manganese based alloys for biodegradable metal implants for use in humans.

About:

- Iron-Manganese based alloy Fe-Mn (having Mn composition of more than 29% by weight) is a promising biodegradable metallic implant which exhibits single austenitic phase (non-magnetic form of iron) with MRI compatibility.
- The alloy also showed a degradation rate in the range of 0.14-0.026 mm per year in the simulated body fluid, which means that the Fe-Mn alloy exhibits mechanical integrity for 3-6 months and completely disappears from the body in 12-24 months.
- The newly developed Fe-Mn based alloys are suitable for biodegradable stent and orthopedic implant applications.

Significance:

- These Biodegradable materials (Fe, Mg, Zn, and polymer) can participate in the healing process and then degrade gradually by maintaining the mechanical integrity without leaving any implant residues in the human body.
- These are better alternatives to currently used metallic implants which remain permanently in the human body and can cause long-term side effects like systemic toxicity, chronic inflammation, and thrombosis.

DAILY ANSWER WRITING PRACTICE

Qns. Explain cloud seeding, along with its applications, challenges, and concerns.

Answer :

Cloud seeding is the process of spreading either dry ice, or more commonly, silver iodide aerosols, into the upper part of clouds to try to stimulate the precipitation process and form rain.

There are three cloud seeding methods-

- Hygroscopic cloud seeding disperses salts through flares or explosives in the lower portions of clouds. The salts grow in size as water joins with them.
- Static cloud seeding involves spreading a chemical like silver iodide into clouds. The silver iodide provides a crystal around which moisture can condense.

- Dynamic cloud seeding aims to boost vertical air currents, which encourages more water to pass through the clouds, translating into more rain.

Applications

- Agriculture: It creates rain, providing relief to drought-stricken areas. E.g.: ‘Project Varshadhari’ in Karnataka in 2017..
- Power Generation: Cloud seeding experiments have shown to augment production of hydroelectric during the last 40 years in Tasmania, Australia.
- Water Pollution Control: Cloud seeding can help to maintain minimum summer flows of the rivers and dilute the impact of treated waste water discharges from municipalities and industries.
- Fog Dispersal, Hail Suppression, and Cyclone Modification: “Project Sky Water” of U.S.A. in 1962 for weather modification through cloud seeding aimed at fog dispersal, hail suppression, and cyclone modification. During the winter the cloud seeding programme is used to increase the mountain snowpack so that additional runoff is received during the spring melt season. The seeding of cumulus clouds is to provide increased annual rainfall directly on the land.
- Tackle Air Pollution: Cloud seeding can potentially be used to settle down toxic air pollutants through the rain. E.g.: Recently, Central Pollution Control Board along with other researchers were mulling use of cloud seeding to tackle Delhi’s air pollution.
- Tourism: Cloud seeding can transform typically dry areas much more hospitable to enhance tourism.

Challenges

- Potential Side-effects: The chemicals used in cloud seeding might be potentially harmful. It does have the potential to harm plants, animals and people, or the environment as a whole.
- Abnormal Weather Patterns: it might ultimately change climatic patterns on the planet. Places that normally receive moisture might start experiencing drought due to the artificial process of adding chemicals to the atmosphere to stimulate rain.
- Costly: It involves processes such as delivering chemicals to the sky and releasing them into the air by flare shots or airplanes, which involves huge costs and logistic preparation.
- Pollution: As the artificial rain falls, seeding agents like silver iodide, dry ice or salt will also fall. Residual silver discovered in places near cloud-seeding projects are considered toxic. As for dry ice, it can also be a source of greenhouse gas that contributes to global warming, as it is basically carbon dioxide.

Way Forward

- Despite several concerns and challenges, cloud seeding as a process is still into early developmental stages and therefore more research and study needs to be done. In the context of global warming, extreme climatic events, agricultural distress, cloud seeding as a solution cannot be rejected.