

CURRENT AFFAIRS

WEEKLY

WEEK - 1
APRIL, 2020

MAINS

- Fiscal Responsibility and Budget Management (FRBM) Act

ECONOMY

- Massive plastic pollution footprint

ENVIRONMENT

- Fake News is the Biggest Challenge: SC

GOVERNANCE

- MLA disqualified under Anti-defection Law

POLITY

- Should one wear mask to prevent Coronavirus? The answer may be changing

SCIENCE & TECH.

- Pesticide Management Bill 2020

AGRICULTURE

- Kavutheendal ceremony of the Meena Bharani Festival

CULTURE

- Ways and Means Advances (WMA)

ECONOMY

- Hydrogen can cut global greenhouse gas emissions: Study

- SAFAR

- US Virgin Islands bans sunscreens harming coral reefs

ENVIRONMENT

- National Teleconsultation Centre (CoNTeC)

- The Invest India Business Immunity Platform

GOVERNANCE

- Aarogya Setu App

- Acute Encephalitis Syndrome (AES)

- Convalescent-plasma Therapy

- Hydroxychloroquine now a schedule H1 Drug

- NASA's Sunrise Mission

- NIDHI Program to fight Coronavirus

- Rapid Test

SCIENCE & TECH.

PRELIMS

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The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS ANALYST

WEEK- 1 (APRIL, 2020)

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SECTION: A
(MAINS)

CURRENT AFFAIRS

FISCAL RESPONSIBILITY AND BUDGET MANAGEMENT (FRBM) ACT

CONTEXT

- Kerala has announced an economic package of ₹20,000 crore to mitigate the impact on livelihoods and overall economic activity from the sweeping steps taken to battle the COVID-19 pandemic and also urged the centre to provide flexibility under the FRBM Act.

◎ BACKGROUND:

- The novel coronavirus COVID-19 has created havoc with Kerala's economy at a time when the state is limping back to normalcy after two consecutive state-wide floods in 2018 and 2019.
- A few months before the 2018 flood, there was first Okhi cyclone and then the Nipah virus outbreak in parts of the state.
- Despite these setbacks, the economy proved to be resilient because remittances from Non-Resident Keralites in Gulf (West Asia) did not decline.
- However, this year, the state's revenues can go sharply down due to coronavirus effect at global level.

◎ ANALYSIS:

What is the FRBM Act?

- Enacted in August 2003, the legislation is aimed at making the Central government responsible for ensuring "inter-generational equity in fiscal management and long-term macro-economic stability".
- In other words, the current generation of the country's administrators must ensure that their management of the country's finances, both in terms of expenditure and revenue, does not leave future generations saddled with the burden of having to service unsustainably high levels of inherited debt that would in turn affect their ability to provide a stable economic environment for contemporary society.
- To achieve this, the Act envisages the setting of limits on the Central government's debt and deficits as well as mandating greater transparency in fiscal operations of the Central government and the conduct of fiscal policy in a medium-term framework.
- The rules for implementing the Act were notified in July 2004 and since then every Budget of the Union government has included a Medium Term Fiscal Policy Statement that specifies the annual revenue and fiscal deficit goals over a three-year horizon.

- The government also uses the Budget to spell out the longer-term glide path to achieve the key objective of reducing the fiscal deficit to 3% of GDP within a specified time frame — one that has shifted from the initial goal of March 31, 2009, to March 31, 2021, when the rules were amended in 2018, and most recently to the setting of a target of 3.1% for March 2023.
- To ensure that the States too are financially prudent, the 12th Finance Commission's recommendations in 2004 linked debt relief to States with their enactment of similar laws.
- The States have since enacted their own respective Financial Responsibility Legislation, which sets the same 3% of Gross State Domestic Product (GSDP) cap on their annual budget deficits.

Why does the state want flexibility under the FRBM?

- During the financial year 2020-21, Kerala can borrow around Rs 25,000 crore.
- However, as the state proposes to raise a big amount of debt in the very first month of the new financial year, the state government is concerned that the stringent borrowing cap under the fiscal responsibility laws should not constrain its borrowing and spending ability over the remaining 11 months.
- In the upcoming months, the state needs fund to continue with COVID-19 mitigation measures.
- It would also have to meet other expenditures for routine affairs related to the running of the State's socio-economic programmes as well as the post pandemic recovery.

Can relaxation of the FRBM help?

- The FRBM Act contains an 'escape clause'.
- Under Section 4(2) of the Act, the Centre can exceed the annual fiscal deficit target citing grounds that include national security, war, national calamity, collapse of agriculture, structural reforms and decline in real output growth of a quarter by at least three percentage points below the average of the previous four quarters.

- Given that the ongoing pandemic could be considered as a national calamity — which in conjunction with the ongoing lockdown to combat it is in all likelihood going to cause a severe contraction in economic output as well — the current circumstances would be apt for suspending both the Centre's and States' fiscal deficit targets.
- This would allow both the Union government and States including Kerala to undertake the much-needed increases in expenditure to meet the extraordinary circumstances.

Learning from the past:

- There have been several instances of the FRBM goals being reset.
- Most recently, presenting the Budget for 2020-21 in February, Finance Minister Nirmala Sitharaman had cited the recent reductions in corporate tax as structural reforms that would trigger the escape clause enabling the government to recalibrate the fiscal deficit target for 2019-20 to 3.8%, from the budgeted 3.3%.
- The spillover impact of the reforms would also necessitate a reset for 2020-21: from the earlier deficit target of 3% to 3.5%.
- But the most significant FRBM deviation happened in 2008-09, in the wake of the global financial

crisis, when the Centre resorted to a focused fiscal stimulus: tax relief to boost demand and increased expenditure on public projects to create employment and public assets, to counter the fallout of the global slowdown.

- This led to the fiscal deficit climbing to 6.2%, from a budgeted goal of 2.7%.
- Simultaneously, the deficit goals for the States too were relaxed to 3.5% of GSDP for 2008-09 and 4% of GSDP for fiscal 2009-10.
- The precedents are there and given the unprecedented nature of the pandemic and its devastating impact on the global economy, another significant deviation from the FRBM norms is very likely in the current and next fiscal years.

◎ THE WAY FORWARD:

For any country, the costs of not adhering to fiscal deficit targets can be substantial. The years after global financial crisis, when India did not adhere to the envisaged path of fiscal consolidation, were associated with macroeconomic instability, pushing the economy to the brink during the 'taper tantrum' crisis of 2013. But when economic activity is going through a lean patch and there isn't enough demand, it may become necessary to use fiscal policy to engineer a revival.

MASSIVE PLASTIC POLLUTION FOOTPRINT

CONTEXT

- Four global drinks giants are responsible for more than half a million tonnes of plastic pollution in six developing countries each year, according to a report by NGO Tearfund.

◎ BACKGROUND:

- The NGO Tearfund has calculated the greenhouse gas (GHG) emissions from the open burning of plastic bottles, sachets and cartons produced by Coca-Cola, PepsiCo, Nestlé and Unilever in developing nations, where waste can be mismanaged because people do not have access to collections.
- Taking a sample of six developing countries, reflecting a spread across the globe, the NGO estimated the burning of plastic packaging put on to the market by the companies creates 4.6m tonnes of carbon dioxide equivalent – equivalent to the emissions from 2m cars.
- Tearfund analysed the plastic put on the market in China, India, the Philippines, Brazil, Mexico and Nigeria by the four companies to examine the impact of single use plastic in developing countries.
- The countries were chosen because they are large developing country markets, spread across three continents.

◎ ANALYSIS:

What is plastic?

- The word plastic comes from the Greek "Plastikos" meaning "capable of being shaped or molded". Chemically speaking, plastic is a polymer or a long, long chain of monomers.
- Monomer is derived from Greek word "Mono" meaning one and "Meros" meaning part. Polymer is derived from Greek word "Poly" meaning many.
- In nature, polymers exist everywhere. But it is also possible to create them from crude oil or petroleum.
- These are known as synthetic polymers and plastic is one of them. Synthetic polymers have extraordinary traits. They are lightweight, durable and can be given any colour and molded into almost any shape.
- Today, almost everything is at least partly made from plastic. The question is if plastic is that essential to our life then why the hue and cry about its use.

What makes plastic non-biodegradable?

- The atomic structure of plastic or the monomer is essentially made up of carbon and hydrogen that has a strong bond and is hard to break.
- Neither carbon nor hydrogen as elements individually causes problem, but it is the bond, making plastic non-biodegradable and causing plastic pollution.
- It is similar to how carbon and oxygen individually does not cause any problem, but when they come together to form carbon dioxide (CO₂), it causes a lot of problems.
- We know that plants have an extraordinary and unique ability to break down the bond between the carbon and oxygen atoms in carbon dioxide, the natural way to get rid of excess carbon dioxide in the air.
- But unfortunately, no plant/animal/bacteria exists has the ability to break down the bonds between carbon and hydrogen atoms of the monomer of plastic.
- This makes plastic not only non-biodegradable but virtually indestructible. Moreover, in exposure to ultra violet rays of sunlight, plastic breaks down into very small pieces known as micro plastics.
- Because of its miniscule size, in the coming days, micro plastics are going to be the biggest challenge for life on Earth.

Key-highlights of the Report:

- The study analysed the plastic put on the market in China, India, the Philippines, Brazil, Mexico and Nigeria by the four companies to examine the impact of single use plastic in developing countries.
- The countries were chosen because they are large developing country markets, spread across three continents.
- The sachets, bottles, and cartons sold in these countries often end up either being burned or dumped – creating a pollution problem equivalent to covering 83 football pitches with plastic to 10 centimetres deep each day.
- This massive plastic pollution footprint, while a crisis in and of itself, is also contributing to the climate crisis.

- The four companies make little or no mention of emissions from disposal of their products or packaging in their climate change commitments.
- These companies continue to sell billions of products in single-use bottles, sachets and packets in developing countries.
- The research found that emissions produced from the open burning of Coca-Cola, Nestlé, PepsiCo and Unilever's plastic packaging on street corners, open dumps and in backyards in developing countries was a major contribution to the climate emergency.
 - ▶ Coca-Cola creates the biggest plastic pollution footprint in the six countries. The drinks giant creates 200,000 tonnes of plastic waste – or about 8bn bottles – which is burned or dumped each year in the six countries: enough to cover 33 football pitches every day.
 - ▶ PepsiCo creates 137,000 tonnes of plastic pollution per year – equivalent to covering 22 football pitches a day.
 - ▶ Nestlé leaves a pollution footprint of 95,000 tonnes per year or covering 15 football pitches a day.
 - ▶ Unilever's pollution footprint amounts to 70,000 tonnes per year – covering more than 11 football pitches a day.

Why plastic is a threat?

- **Adding toxics to atmosphere:** The used plastic is unsuitable for recycling and is burnt, which further releases toxic chemicals into the atmosphere.
- **Contamination:** In case, the plastic is not burnt, it ends up in a landfill, potentially contaminating soil, land and water sources.
- **Adding threats to marine life:** Plastic bags threaten marine life such as fishes, turtles which

unknowingly consume plastic that is dumped into the water bodies. Ocean plastic is estimated to kill millions of marine animals every year.

- **Uncollected waste:** Since there is no adequate capacity of recycling of plastic waste, a huge quantity of plastic waste remains uncollected causing substantial damage to soil and water bodies.

What needs to be done?

Tearfund is calling on the companies to dramatically reduce the production and sale of single-use plastic packaging and switch to refillable and reusable models. The NGO is demanding the companies:

- Report the number of units of single-use plastic products they use and sell in each country by the end of this year.
- Reduce this amount by half, country by country, by 2025, and instead use environmentally sustainable delivery methods such as refillable or reusable containers.
- Recycle the single-use plastics they sell in developing countries, ensuring that by 2022 one is collected for every one sold.
- Restore dignity through working in partnership with waste pickers to create safe jobs.

CONCLUSION:

In the given situation, the government needs to focus on research programmes to quantify the link between climate change and the burning and dumping of plastic from multinational companies in developing countries. The companies need to understand their responsibility and should switch refillable and reusable alternatives instead of single-use plastic.

FAKE NEWS IS THE BIGGEST CHALLENGE: SC

CONTEXT

- The Supreme Court asked the Centre to set up a portal for dissemination of real time information on the coronavirus pandemic to counter the panic being spread through fake news.

◎ BACKGROUND:

- In a post-truth era, the contagion of fake news has gripped the world in equal parts. Right from the United States of America, to emerging economies like India, Brazil and others, no one seems to be spared.
- Deeply interlinked with technological developments, “**disinformation**” and “**misinformation**” have become pervasive in our news bubbles.
- As the world’s largest democracy with the second largest population, the issue of fake news poses a unique threat in India.

What is Fake News?

- **False information is news, stories or hoaxes created to deliberately misinform or deceive readers.**
- Usually, these stories are created to either influence people’s views, push a political agenda or cause confusion and can often be a profitable business for online publishers.
- False information can deceive people by looking like trusted websites or using similar names and web addresses to reputable news organisations.

The scale of fake news in India:

- Spread of fake news has hit a new high in 2019 with every major event, from the general elections and Pulwama attacks to scrapping of Article 370 and the ongoing protests against the Citizenship Amendment Act, triggering extensive distribution of misinformation across social media platforms.
- India has the largest number of social media users in the world across platforms such as Facebook, YouTube, Instagram, WhatsApp, ShareChat and TikTok.
- Fake stories, rumours and hate speech spread through social media have been connected to various incidents of mob attacks and lynching in the country.
- Under pressure from the government and regulators such as the Election Commission, social media platforms have introduced various restrictions on sharing of posts and blocked accounts of many users.

Supreme Court’s stand on fake news:

- The top court, which observed that panic will destroy more lives than the virus, asked the Centre to get trained counsellors and community leaders of all faiths to calm down the migrants, who are kept in shelter homes across the country.
- The court asked the Centre to ensure that migration is stopped and to take care of food, shelter, nourishment and medical needs of the people and also to follow up of cases of the virus, also called COVID-19.
- The Centre told the apex court that the suggestion to sprinkle water and chemicals on migrants to sanitise them does not work scientifically and is not the right way.
- The top court, which refused to restrain the High Courts from taking up the issue of migrants, said they may monitor the issue more closely.
- It however asked the Centre to tell the government lawyers to inform the high courts about the orders passed by the apex court.
- A bench of Chief Justice SA Bobde and L. Nageswara Rao, which took up two PILs on the issue of migration through video conference, asked the Centre to look into the letter petitions filed by Kerala MP from Kasaragod constituency Rajmohan Unnithan and one filed by a MP from West Bengal on the issues related to Coronavirus.
- The bench asked the Centre to ensure that duties of managing the shelter homes, where migrants are being kept, are entrusted to volunteers and not to the police and there should not be any use of force or intimidation.
- It asked the government that there must be adequate provisions of drinking water, food, beds and medicines in these shelters.

Constitutional provisions in India:

- There is no specific law in India to deal with fake news but there are statutory and self-regulatory bodies to act against dissemination of misinformation.
- 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.

- However, there are certain legal recourses available for people affected by fake news.
- **News Broadcasters Association (NBA):** Complaints can be lodged with the **News Broadcasters Association (NBA)** which represents the private television news and current affairs broadcasters. It is funded by its over 60 members.
 - ▶ The NBA is the credible voice of news broadcasters to the government.
 - ▶ It is self-regulatory in nature and probes complaints against news broadcasters in a fair manner.
- **Indian Broadcast Foundation (IBF):** There is another body called the Indian Broadcast Foundation (IBF) which was created in 1999 to look into the complaints against contents aired by 24x7 channels.
 - ▶ Over 650 news channels are in operation today in the country.
 - ▶ Complaint against any broadcaster can be filed in English or Hindi to IBF online or offline for promoting smoking, abuse or any violent action.
- **Broadcasting Content Complaint Council (BCCC):** A complaint relating to objectionable TV content or fake news can be filed to the Broadcasting Content Complaint Council if a broadcaster incites communal hatred, encourages violence against women or child abuse, airs

contents having gory scenes of violence, promotes superstition or consumption of drugs and other contraband substances.

- **Defamation:** Defamation suit is also a legal tool available in the case of fake news. 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.

The road ahead:

Fake news has become an online epidemic. During this time, the government needs to adopt a pronged strategy to deal with fake information. The way forward is the strict measures:

- To rethink the intermediary liability rules to ensure a greater degree of social responsibility and transparency from tech companies
- To pass a law that strictly defines fake news
- To ensure tech literacy through awareness drives, to inculcate the habit of verifying all content received.

Apart from the above, the journalism needs to become effective again. What is actually needed is 'media literacy'. Moreover, the citizens should become aware of how to consumer media, see news and how to play an active role in changing things for the better.

MLA DISQUALIFIED UNDER ANTI-DEFECTION LAW

CONTEXT

- Manipur Speaker Yumnam Khemchand disqualified Thounaojam Shyamkumar as a member of the Assembly for defection.

◎ BACKGROUND:

- Speaker Y. Khemchand Singh, in his 32-page order, disqualified state Forest and Environment Minister Thounaojam Shyamkumar as a member of the assembly with immediate effect till the expiry of the house's current term, which ends on March 28, 2022.
- Following a petition filed by Congress leaders and legislators, the Supreme Court had, earlier this month, invoked the Constitution's Article 142, to disqualify Shyamkumar as a member of the house. The Congress leaders and MLAs in their plea told the apex court that he had violated the provisions of 10th Schedule of the Constitution.
- Following the Supreme Court order, the Minister had submitted his resignation to the Speaker on March 26.
- After a thorough hearing of both the sides, the Speaker ordered Shyamkumar's disqualification.

- Shyamkumar was elected to the Assembly as a Congress candidate on March 12, 2017, from 7-Andro constituency.
- The Congress had won 28 seats and the BJP 21. However, the BJP allied with the National People's Party to form a government.
- Before he was sworn in as an MLA, Mr. Shyamkumar joined the BJP and became the Minister for Forest and Environment in the government led by N. Biren Singh on March 16, 2017.
- He was sworn in as a member of the Assembly on March 19.

◎ ANALYSIS:

What is Anti-defection Law?

- The anti-defection law is contained in the **10th Schedule** of the Constitution of India. It was enacted by Parliament in 1985. It came into effect on 1st March 1985.
- The anti-defection law sought to prevent such political defections which may be due to reward of office or other similar considerations.

- The Tenth Schedule lays down the process by which legislators may be disqualified on grounds of defection by the Presiding Officer of a legislature based on a petition by any other member of the House.
- A legislator is deemed to have defected if he either voluntarily gives up the membership of his party or disobeys the directives of the party leadership on a vote.
- This implies that a legislator defying (abstaining or voting against) the party whip on any issue can lose his membership of the House.
- **Applicability:** The law applies to both Parliament and state assemblies.

The origin of the Law:

- For a long time, the Indian political scene was besmirched by political defections by members of the legislature. This situation brought about greater instability in the political system.
- Aaya Ram Gaya Ram was a phrase that became popular in Indian politics after a Haryana MLA Gaya Lal changed his party thrice within the same day in 1967.
- Legislators used to change parties frequently, bringing about chaos in the legislatures as governments fell.
- In sum, they often brought about political instability. This caused serious concerns to the right thinking political leaders of the country.
- Several efforts were made to make some law to curb defections. Starting from private members' efforts, Bills were brought in by the government at different times. No Bill could be passed because of one reason or the other.
- However, the most important reason was that there was no consensus on the basic provisions of an anti-defection law.
- Finally, in 1985, the government brought a Bill to amend the Constitution and curb defection. The 10th Schedule of the Constitution, which contains the anti-defection law, was added to the Constitution through this amendment.

The amendment to the law:

- In 2003, there was an amendment to the law. When first enacted there was a provision which said if there occurs a split in the original political party and as a result of which one-third of the legislators of the party forms a separate group, they shall not be disqualified.
- This led to large scale defections and hence this provision was deleted.
- Provided in the 4th Paragraph of the 10th Schedule, the provision can now be invoked for protection from disqualification if there is a merger.

What are the grounds of disqualification?

- The Law aims to curb political defection by the legislators. For this, there are two grounds on which a member of a legislature can be disqualified.
 - **Voluntarily giving up of membership:** If the member voluntarily gives up the membership of the party, he shall be disqualified.
 - Voluntarily giving up the membership is not the same as resigning from a party.
 - Even without resigning, a legislator can be disqualified if by his conduct the Speaker/Chairman of the concerned House draws a reasonable inference that the member has voluntarily given up the membership of his party.
 - **Disqualification on the basis of legislature's actions:** If a legislator votes in the House against the direction of his party and his action is not condoned by his party, he can be disqualified. These are the two grounds on which a legislator can be disqualified from being a member of the House.

Exception to the law:

- However, there is an exception that was provided in the law to protect the legislators from disqualification.
- The 10th Schedule says that if there is a merger between two political parties and two-thirds of the members of a legislature party agree to the merger, they will not be disqualified.

How other countries deal with defections?

- Anti-defection law is not only practiced in India but it is prevalent in various other countries like Bangladesh, Kenya, South Africa and other countries. If India were to look at other democracies to see how they handle defections, it will find that most countries take it very seriously but don't have

such severe laws. In fact, India is the only major democracy where voicing an opinion against your party directive can result in such extreme action.

- **Kenya:** In Kenya, a member who resigns from his party has to vacate his seat. The decision is by the Speaker, and the member may appeal to the High Court.
- **United Kingdom:** In UK, defying a whip means you lose party membership and the Cabinet berth if you were a minister, but not your seat.
- **South Africa:** South African Constitution provides that a member loses membership of the Parliament if he ceases to be a member of the party that nominated him.
- **Australia:** In Australia too, defiance of a whip is a serious action but a member is not forced to resign, but is expected to. There also exists a concept of 'free vote' where members are allowed by their parties to vote according to their conscience and principles.

Does India's anti-defection law need any changes?

Over the years, the impact of the law has been to create monolithic parties in the legislature. It isn't so much the number of MPs that matters as the number of parties elected to the parliament.

- **Making members extra responsible:** While parties can defect from a ruling coalition to the opposition (and vice-versa), individual Members are bound by the party under whose ticket they were elected. Similarly, while parties in the ruling coalition can order their Members to vote against a government bill, no individual Members from the ruling coalition can rebel on their own.
- **Ineffective implementation and result:** The current form of the Anti-Defection Law has proven to be woefully ineffective in achieving its key objective – that of preventing quid-pro-quo deals and political instability. Consider Karnataka's political crisis in 2019, for instance.
- **Making Speaker's position questionable:** Apart from other loopholes, the law has evoked scrutiny time and again, and also a demand for reforms for resting 'quasi-judicial powers' in the hands of the Speaker (also a member of the ruling political party).
- **Forcing law:** The law strips the MPs and MLAs of their independent moral compass or decision making powers as they are forced to toe the party line.
- **Lack of discussion:** The law does not provide sufficient incentive for an MP or MLA to examine an issue in-depth and think through it to participate in the debate. Neither does it force the ministers to reach out to individual MPs and convince them to vote for a bill on the basis of its merit, which in turn brings down the level of discussions in the House.

- ◉ **Ineffective result:** The merits of the law are debatable as defections have not stopped altogether and governments are still toppled amid allegations of horse-trading.
 - It was meant to dissuade members from ditching parties, under whose banner they were elected, for petty gains such as cash or positions, promised by another party.
 - But the law is silent on similar negotiations between ideologically different post-poll allies where discussions often get down to each Cabinet berth and the distribution of plush portfolios and terms of power.

Recommendations of Dinesh Goswami Committee:

- The Dinesh Goswami Committee on electoral reforms, opined in 1990, that an amendment should be made to the anti-defection law to restrict disqualification only to those cases, where an elected member defies a whip only in respect

of motion of vote of confidence, which has the power to bring down one government or prop up another.

- The committee also recommended taking away powers of disqualifying a member from the Speaker or the Chairman of the concerned House, because they too are members of political parties and have been known to favour the Treasury benches on several occasions.

◎ CONCLUSION:

The law aims to bring down the political defections but due to ever increasing political dishonesty and corruption this law never evolved properly. Politicians found loopholes in this law and used it for their own benefit. It is high time to revisit the issue to combat the menace of corruption and defection which has eroded the values of democracy.

SHOULD ONE WEAR MASK TO PREVENT CORONAVIRUS? THE ANSWER MAY BE CHANGING

CONTEXT

- The World Health Organisation (WHO) indicated for the first time it might revise guidelines on wearing masks in public amid the novel coronavirus disease (COVID-19) pandemic. Soon after, United States' Centers for Disease Control and Prevention (CDC) recommended to use masks even for those not unwell or caregivers.

◎ BACKGROUND:

- WHO had maintained since the pandemic broke that only the sick, caregivers and frontline healthcare workers needed to put on masks to protect themselves against the SARS-CoV-2 virus
- Since the beginning of the global coronavirus pandemic, the Centers for Disease Control and Prevention have recommended not to wear masks unless one is feeling sick, caring for a sick person who is unable to wear one or working in health care.
- Lataer, there were big changes to that policy. CDC as well as Indian Council of Medical Research (ICMR) recommended to wear masks in public to prevent the spread of COVID-19.
- There's one big reason for the change: There is increasing evidence that the virus can be spread by presymptomatic and asymptomatic carriers.

◎ ANALYSIS:

What is Coronavirus?

- Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus.
 - Coronaviruses are a large family of viruses which may cause illness in animals or humans.
 - In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as **Middle East Respiratory Syndrome (MERS)** and **Severe Acute Respiratory Syndrome (SARS)**.
 - The most recently discovered coronavirus causes coronavirus disease COVID-19.
- This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019.
- Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment.

What are the symptoms?

- The most common symptoms of COVID-19 are fever, tiredness, and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat or diarrhea.
- These symptoms are usually mild and begin gradually. Some people become infected but don't develop any symptoms and don't feel unwell.
- Most people (about 80%) recover from the disease without needing special treatment.
- Around 1 out of every 6 people who gets COVID-19 becomes seriously ill and develops difficulty breathing.

Who are at risk?

Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.

How to prevent it?

- The best way to prevent and slow down transmission is be well informed about the COVID-19 virus, the disease it causes and how it spreads.
- Protect yourself and others from infection by washing your hands or using an alcohol based rub frequently and not touching your face.

How does the 'virus' spread?

The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow).

Are there any vaccines available?

- At this time, there are no specific vaccines or treatments for COVID-19.
- However, there are many ongoing clinical trials evaluating potential treatments.

Is Coronavirus the same as SARS?

- No. The virus that causes COVID-19 and the one that caused the outbreak of Severe Acute

Respiratory Syndrome (SARS) are related to each other genetically, but the diseases they cause are quite different.

- Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus called SARS-associated coronavirus (SARS-CoV).
- SARS was first reported in Asia in February 2003. The illness spread to more than two dozen countries in North America, South America, Europe, and Asia before the SARS global outbreak of 2003 was contained.
- SARS was more deadly but much less infectious than COVID-19. There have been no outbreaks of SARS anywhere in the world since 2003.

Why CDC is now recommending mask?

- Recent studies showed a significant number of asymptomatic or pre-symptomatic people could transmit the virus to others before showing symptoms. This can happen through speaking, coughing or sneezing.
- According to the US health protection agency's revised guidelines:
 - In light of this new evidence, CDC recommends wearing cloth face coverings in public settings where other social distancing measures are difficult to maintain (eg, grocery stores and pharmacies) especially in areas of significant community-based transmission.
- The public in general, however, did not need N95 masks or surgical masks.
- Common people, instead, should use cloth-based or homemade masks.
- Cloth face coverings made from household items or made at home from common materials at low cost can be used as additional measure.

Why earlier masks were not recommended?

- Masks are not recommended for the general public because:
 - they can be contaminated by other people's coughs and sneezes or when putting them on or removing them
 - frequent hand-washing and social distancing are more effective
 - they might offer a false sense of security
- Coronavirus is spread by droplets that can spray into the air when those infected talk, cough and sneeze. These can enter the body through the eyes, nose and mouth, either directly or after touching a contaminated object.
- However, experts at the WHO are now exploring whether the general public might benefit from wearing masks.

- The group will examine research on whether the virus can be projected further than previously thought.

What is the best type of mask?

- In hospitals, different types of mask offer different grades of protection.
- The most protective, an FFP3 or, alternatively, an N95 or an FFP2, has a fitted respirator that filters air.
- Experts do not recommend the public use these masks.
- They are for healthcare workers in close contact with coronavirus patients and at highest risk of encountering infected airborne droplets.
- Other NHS staff in lower-risk situations can wear a surgical mask, latest guidelines say.
- That means healthcare workers within one metre of a patient with possible or confirmed Covid-19, and it includes staff working in hospitals, primary care, ambulance trusts, community care settings and care homes.



◎ CONCLUSION:

Face masks have become a hotly debated topic in the time of the coronavirus pandemic. Fears over developing COVID-19, the respiratory illness the virus causes, led people to hoard masks earlier this year, leading to significant shortages for medical workers. The CDC new recommendation is voluntary and does not replace current social distancing and hygiene measures.

SECTION: B
(PRELIMS)

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PESTICIDE MANAGEMENT BILL 2020

- ◎ **CONTEXT:**
- The Pesticide Management Bill, 2020 to regulate business of pesticides and compensate farmers in case of losses from usage of spurious agro-chemical has been introduced in the Rajya Sabha.
- ◎ **ABOUT:**
- The Pesticide Management Bill, 2020 defines pesticides as substances that destroy or control the spread of pests in agricultural commodities and animal feeds.
 - By doing so, the PMB is seemingly narrowing down the scope of coverage of pesticides and may have overlooked their use for storage pests, vector control for human health and other non-agricultural purposes.
 - **Mechanism:** Mechanisms to regulate pesticides were, however, mentioned in the bill. These included manufacture, import, packaging, labelling, pricing, storage, advertisement, sale, transport, distribution, use and disposal in order to ensure availability of safe and effective pesticides.
 - **Objective:** The purpose of the bill is to minimise risk to human beings, animals, living organisms other than pests and the environment, with an endeavour to promote pesticides that are biological and based on traditional knowledge.
 - The Bill includes a provision to compensate farmers in case of losses due to the use of spurious or low-quality pesticides.
 - The punishment for cheating farmers has also been drastically enhanced so that it will act as a deterrent to wrong-doers.
 - Any person who wants to import, manufacture or export pesticides will have to register under the new Bill and provide all details regarding any claims, expected performance, efficacy, safety, usage instructions and infrastructure available to stock that pesticide.
 - The information will also include details on the pesticide's potential effects on the environment.
- ◎ **BACKGROUND:**
- The Pesticide Management Bill, 2020 will repeal the Insecticide Act, 1968 that currently regulates pesticide use in the country.
 - It was approved by the Union cabinet in February 2020.
- A draft Pesticide Management Bill, 2017 was earlier released for comments in February 2018. A similar bill was in discussion in 2008, without any break-through.

What was the need of such bill?

- The reason cited by the government for introducing this new bill was the inadequacy of the 50-year-old insecticide law to meet the needs of multi-dimensional management and administration of pesticides.
- This included a lack of sufficient deterrence against violation, no stricter penalty to safeguard farmer interests and no mechanism to regulate pricing and disposal in an environmentally sound manner.

Critical issues

- Some of the critical issues in focus in recent years due to the misuse or overuse of pesticides are:
 - residues in food items
 - pesticide-resistance among pests
 - emergence of new pests

- unintentional poisoning of workers and animals
- degradation of biodiversity
- In view of this, India's scientists and lawmakers have begun to discuss the shortcomings of the Insecticides Act, 1968, and focus on sustainable agriculture practices.

KAVUTHEENDAL CEREMONY OF THE MEENA BHARANI FESTIVAL

◎ CONTEXT:

- For the first time in history, the kavutheendal ceremony of the Meena Bharani festival at Sri Kurumba Bhagavathy Temple, Kodungalloor, was observed with just one person.

◎ ABOUT:

Sree Kurumba Bhagavathy Temple, popularly known as **Kodungalloor Bhagavathy Temple**, is one of the oldest temples in the State. The temple is famous for the annual festival usually falls in the Malayalam month of *Meenam* (March-April) every year. Kaavu theendal ('polluting' the temple) and Bharani paatu are the two significant rituals held as part of the Meena Bharani festival.

Kavutheendal:

- The kavutheendal (polluting the temple) ritual is considered the largest congregation of oracles in the world.
- It is a ritual based on the notions of purity/impurity inherent in Brahminical Hinduism.
- According to popular narratives, Sri Kurumba Bhagavathy is identified with Kannagi of Silappathikaram and also with the Kali-Darika story, part of Bhagavathy cult in Kerala.

Bharani festival:

- The Bharani festival celebrates the birth of Bhadrakali (Hindu Goddess) who as per legend was born from the third eye of Lord Shiva and was the one who went to finish off the demon Darika.
- This is an extremely important festival, especially in Northern Kerala.

The rituals:

- Oracles from across the state gather at the Kodungallur Sree Kurumba Devi Temple to take part in the ritual.
- The sword-wielding oracles clad in vermilion costumes with anklets on their legs and ringing the waist bells perform a mad run around the temple.
- They throw objects inside the temple mainly sticks which signifies the Kavutheendal.
- Exemplifying the intense devotion, they struck the swords on their forehead before the idol and split blood.
- Symbolically the festival is dedicated to the raw and untamed energy. It also provides an opportunity to the repressed sections in the society to vent their anger.
- The belief is that the goddess accepts all the frustrations and anger. It provides the oracles, most of them belonging to the lower strata of the society, a chance to vent out their anger.

About Sree Kurumba Bhagavathi temple:

- Sree Kurumba Bhagavathi temple at Kodungalloor is an ancient shrine which is dedicated to the Goddess in her Bhadrakali form.

- The deity is known as Sree Kurumba and fondly called Kodungallur Amma or the mother of Kodungallur by her devotees.
 - The deity here represents the fierce form of the goddess who has eight arms with various attributes in each hand.
 - In one hand, she holds the head of a demon Daruka, another a bell, another a sword, next an anklet, among others.
- The temple history dates back from the Chera period. It is believed to be erected by Cheran Chenguttuvan the famous Chera king.
- It is also one of the first temples in Kerala which removed the restrictions of caste and religion, and permitted devotees belonging to lower strata of the caste hierarchy, access for 27 days when other temples barred their entry round the year.
- This was long before even the Temple Entry legislation became effective in Kerala.

WAYS & MEANS ADVANCES (WMA)

◎ CONTEXT:

- The central bank has announced steps to help states cope with the fallout of the covid-19 pandemic, including allowing a higher borrowing limit.

◎ ABOUT:

- The Reserve Bank of India gives temporary loan facilities to the centre and state governments as a banker to government.
- This temporary loan facility is called Ways and Means Advances (WMA).
- The WMA scheme for the Central Government was introduced on April 1, 1997. Before that (for around 45 years), there was the ad-hoc treasury bills which was used to finance short term borrowings of the Central Government.
- The WMA scheme was designed to meet temporary mismatches in the receipts and payments of the government.
- This facility can be availed by the government if it needs immediate cash from the RBI. The WMA is a loan facility from the RBI for 90 days which implies that the government has to vacate the facility after 90 days.
- The limits for this credit facility, known as 'Ways and Means Advances', has been raised sharply to Rs 1.2 lakh crore for the first half of 2020-21, the central bank disclosed in a release on Tuesday. This limit is set in consultation with the government.
- Last year, the limit was set at Rs 75,000 crore set for the first half and Rs 35,000 crore set for the second half of FY20.

RBI's role:

- RBI, as banker to the central and state governments, provides financial accommodation to tide over temporary mismatches in the cash flow of their receipts and payments as WMA, which is intended to provide a cushion to the states to carry on their essential activities and normal financial operations.
- According to RBI rules, the normal WMA limits are based on a three-year average of the state's actual revenue and capital expenditure and withdrawing beyond the limit is considered an overdraft.
- Under the prudential rules, a state government account can be in overdraft for a maximum 14 consecutive working days with a limit of 36 days in a quarter.
- States pay interest linked to the repo rate on WMA withdrawals. The increase in WMA limits will obviate states' need to resort to overdrafts.

The measures:

- The Reserve Bank of India (RBI) has increased the borrowing limit of all states and Union territories under the ways and means advances (WMA) facility to help them overcome the mismatch between revenue and expenditure flows because of the unprecedented 21-day nationwide lockdown.
- Due to the pending submission of the final recommendations by an advisory committee, it has decided to increase WMA limit by 30% from the existing limit for all states and Union territories to allow them to tide over the current crisis.
- The revised limits, it said, will come into force from 1 April and will be valid till 30 September.
- The other measures announced by RBI include an extension of realization period for export proceeds and deferring implementation of countercyclical buffers.

Significance of the step:

- The increased limits are expected to help state governments spend on fighting the fallout of covid-19 outbreak. Maharashtra, Telangana and Kerala have already announced salary cuts for its employees as state revenues suffer.
- The increase in WMA limits will also allow states to not only meet targeted expenditure commitments in the absence of revenue flows but step in with emergency funding to meet the exigencies arising out of the pandemic.

HYDROGEN CAN CUT GLOBAL GREENHOUSE GAS EMISSIONS: STUDY

◎ CONTEXT:

- Widespread adoption of clean hydrogen can cut global greenhouse gas emissions by up to 34 percent in fossil fuel-dependent sectors by 2050 — and at a manageable cost — according to a new study by research firm BloombergNEF (BNEF).

◎ ABOUT:

- Hydrogen is an element; it exists naturally as a molecule. Each hydrogen molecule is made up of two hydrogen atoms.
- Hydrogen is one of the chemical elements that exist in nature. An element has one type of atom, and it cannot be broken down into other substances.
- Hydrogen exists naturally as a molecule, consisting of two hydrogen atoms. The chemical formula of hydrogen is H_2 .
- In petrol and diesel cars, the burning of fuel produces carbon dioxide and water. Extra carbon dioxide in the air promotes global warming.
- In hydrogen cars hydrogen reacts with oxygen in a fuel cell, making electricity to run the car. The only waste product of this process is water vapour.

Key-highlights of the Study:

- The findings were published in a report titled '**Hydrogen Economy Outlook**'.
- The report suggested that renewable hydrogen could be produced for \$0.8 to 1.6/kg in most parts of the world before 2050.
- This is equivalent to gas priced at \$6-12/MMBtu, making it competitive with current natural gas prices in Brazil, China, India, Germany and Scandinavia on an energy-equivalent basis.
- If the cost of storage and pipeline infrastructure is included, the delivered cost of renewable hydrogen in China, India and Western Europe could fall to around \$2/kg (\$15/MMBtu) in 2030 and \$1/kg (\$7.4/MMBtu) in 2050.

- The carbon price of \$50/tCO₂ would be enough to switch from coal to clean hydrogen in steel-making industry by 2050; \$60/tCO₂ to use hydrogen for heat in cement production; \$78/tCO₂ for making chemicals such as ammonia; and \$145/tCO₂ to power ships with clean fuel — if hydrogen costs reach \$1/kg.
- Hydrogen has the potential to power a clean economy. In the years ahead, it will be possible to produce it at low cost using wind and solar power, to store it underground for months, and then pipe it on demand to power everything from ships to steel mills.
- Heavy trucks could also be cheaper to run on hydrogen than diesel by 2031.
- Renewable hydrogen can be made by splitting water into hydrogen and oxygen using electricity generated by wind or solar power.
- The cost of the electrolyser technology to do this has fallen by 40 per cent in the last five years, and can continue to slide if deployment increases.
- It added that clean hydrogen can also be made using fossil fuels if carbon is captured and stored, but that is likely to be more expensive.

How Hydrogen can actually clean the environment?

- Hydrogen is a clean-burning molecule that can be used as a substitute for coal, oil and gas in a large variety of applications.
- But for its use to have net environmental benefits, it must be produced from clean sources, rather than from unabated fossil fuel processes – the usual method at present.
- Hydrogen could absolutely become the clean-burning, zero-carbon molecule to replace fossil fuels in hard-to-abate sectors of the economy.
- It has the potential to erase one-third of today's global emissions from fossil fuels and industry if it is deployed for steelmaking, while also providing dispatchable energy, producing ammonia, and powering trucks.

© CONCLUSION:

At present, right now, a hydrogen economy is still uncertain — there are not enough policies to support investment and scale up the industry. For hydrogen to gain use, policy is critical. The clean hydrogen industry is small and costs are high. There is a big potential for costs to fall, but the use of hydrogen needs to be scaled up and a network of supply infrastructure created. This needs policy coordination across government, frameworks for private investment and roll-out of around \$150 billion of subsidies over the next decade.

SAFAR

© CONTEXT:

- With a nationwide lockdown in place, over 90 cities, including Delhi, recorded minimal air pollution in the last few days, according to SAFAR.

© ABOUT:

- The System of Air Quality Forecasting and Research (SAFAR) envisages a research-based management system where strategies of air pollution mitigation go hand in hand with the nation's economic development to target a win-win scenario.
- It provides real-time air quality index 24×7, followed with the advance forecast of 72 hours.
- It measures the sun's UV-Index (UVI), Mercury and Black carbon in real time along with PM1 levels and weather parameters like PM10, PM2.5 and Sulfur Dioxide.
- It also monitors the existence of harmful pollutants like Toluene, Benzene and Xylene.
- The SAFAR system is developed by Indian Institute of Tropical Meteorology, Pune, along with ESSO partner institutions namely India Meteorological Department (IMD) and National Centre for Medium Range Weather Forecasting (NCMRWF).

Key-highlights:

- According to the Centre-run System of Air Quality and Weather Forecasting and Research (SAFAR), the impact of the measures taken due to the coronavirus outbreak has resulted in a drop in PM_{2.5} (fine particulate pollutant) by 30 percent in Delhi and by 15 percent in Ahmedabad and Pune.

Particulate Matter (PM):

- Particulate Matter (PM) is mainly a mixture of both organic and inorganic particles, such as smoke, dust, soot and others. These particles differ in size and composition.
 - PM 2.5:** PM_{2.5} is 2.5 micrometres in diameter or much more smaller. These particles are lighter and go much deeper into the human body than PM₁₀, which can cause greater damage to health.
 - PM 10:** PM₁₀ are less than 10 micrometres in diameter. It irritates human airways, especially among asthmatics and the elderly. They make your eyes burn and throat dry.

- The level of Nitrogen Oxide (NO_x) pollution, which can increase the risk of respiratory conditions, has also reduced.
- NO_x pollution is mainly caused due to a high motor vehicle traffic. In Pune, NO_x pollution has reduced by 43 per cent, in Mumbai, by 38 per cent and in Ahmedabad, by 50 per cent.
- In March, pollution is in the "moderate" category (Air Quality Index range: 100-200) while presently, it is in the "satisfactory" (AQI 50-100) or "good" (AQI 0-50) category.

Air quality index (AQI):

- AQI is a numerical scale used for reporting air quality with regard to human health and the environment on daily basis.
- The index is used to convey to the public an estimate of air pollution levels.
- An AQI is considered good between 0-50, considered 'satisfactory' between 51-100, 100-200 'moderate', 201-300 'poor', 301-400 'very poor' and 401-500 'severe'.

- Under the "good" category, pollution is considered to be at the lowest and the air is believed to be the healthiest to breathe.
- According to the data of the Central Pollution Control Board (CPCB), the air quality in the national capital is presently in the "good" category. In Kanpur, which has high pollution levels, it is in the "satisfactory" category.
- Moreover, 92 other cities with CPCB monitoring centres have recorded minimal air pollution, with the air quality in the range of "good" to "satisfactory".
- As many as 39 cities have recorded "good" air quality and 51 cities have recorded "satisfactory" air quality in the last few days, the CPCB data showed.
- An AQI between 0-50 is considered good, 51-100 satisfactory, 101-200 moderate, 201-300 poor, 301-400 very poor and 401-500 severe.
- Environmentalists believe that the reduced pollution levels should act as a wake-up call for the government.

These findings have been a wake-up call and now, the government should figure out a new normal. This situation has given us an opportunity, a chance to find a new sustainable life.

US VIRGIN ISLANDS BANS SUNSCREENS HARMING CORAL REEFS

◎ CONTEXT:

- The United States Virgin Islands (USVI) banned sunscreen products with chemicals known to be harmful to coral reefs and marine life, making USVI territory the first in the United States to implement it.

◎ ABOUT:

- **There are two types of sunscreen:**
 - **Chemical:** Chemical sunscreen agents such as oxybenzone (benzophenone-3) or avobenzone work by absorbing ultraviolet (UV) light, thereby reducing skin exposure
 - **Physical:** Physical sunscreens such as titanium dioxide, iron oxide, or zinc oxide, work by reflecting and scattering UV rays in addition to absorbing some of them.
 - ▶ Physical sunscreens can occasionally give an undesirable white cast when applied to the skin.
 - ▶ Formulators can reduce the chalky appearance by decreasing the particle size, resulting in some physical sunscreen's classification as nanoparticles, or compounds whose size is measured on the nanoscale (1 nanometer is one billionth of a meter).
 - ▶ Nanoparticles are another potential area of environmental concern in which more research needs to be done because they act differently than larger sized materials.

How Sunscreens can harm?

- **Sunscreens containing the 3 Os — oxybenzone, octocrylene and octinoxate — harm the coral reefs that protect the Virgin Islands' shoreline.**
- Sunscreens containing mineral alternatives such as zinc oxide and titanium dioxide have been exempted.
- The concentration of these chemicals is 40 times more than acceptable levels in some of our territorial waters.
- Other nations are likely to follow suit. The Hawaii government, for instance, stated that it has voted to ban the sale of sunscreens containing reef-damaging chemicals oxybenzone and octinoxate from 2021.
- Key West in Florida has banned stores from keeping sunscreen containing the toxin 3 O's from 2021. The Caribbean islands of Bonaire have unanimously voted to ban the sale of sunscreen by 2021.
- The archipelago nation of Palau is set to become the first country to enact a sunscreen ban, which will take effect in 2020.

How is sunscreen a problem?

- **When people swim with sunscreen on, chemicals such as oxybenzone can seep into the water, where they're absorbed by corals.**
- These substances contain nanoparticles that can disrupt coral's reproduction and growth cycles, ultimately leading to bleaching.
- Sunscreen enters aquatic environments by two primary routes:
 - indirectly from wastewater treatment plants after it has been washed off by consumers at home
 - directly washing off from recreational activities such as swimming.

- Because sunscreen agents are continually added to aquatic environments through these means, they can be considered a persistent pollutant.
- However, sunscreen concentration in water (either fresh or salt) can vary greatly. The rate at which sunscreen particles sediment or fall to the bottom of the body of water, rather than remaining in suspension, varies for each compound.
- Additionally, some compounds biodegrade faster than others (and some aren't biodegradable).
- The concentration of the amount of sunscreen in water also typically increases with increasing population.

Which reefs are at risk around the world?

- Coral reefs all over the world are threatened by pollution, and many of the most popular destinations have the most at-risk coral.
- Australia's Great Barrier Reef and the bays of Hawaii, the U.S. Virgin Islands, and Israel are especially vulnerable.

How the world is actually becoming responsible?

- **Hawaii:**
 - Humans might be responsible for this contamination, but we're also capable of helping heal these fragile underwater ecosystems.
 - In 2018, lawmakers in Hawaii passed a bill banning the sale of sunscreens containing oxybenzone and octinoxate, another harmful chemical.
 - Hawaii is the first state to pass such a measure, and it could go into effect as a law by January 1, 2021.
- **Palau:**
 - In 2018, the small island nation of Palau announced it too would ban selling or using sunscreens that contain chemicals harmful to coral reefs. Palau is a pristine archipelago known for having one of the largest marine reserves on the planet.
- **Florida:** Key West in Florida has banned stores from keeping sunscreen containing the toxin 3 O's from 2021.
- **Bonaire:** The Caribbean islands of Bonaire have unanimously voted to ban the sale of sunscreen by 2021.
- **Mexico:** Similarly, Mexico has requested public to not use sunscreen with harsh chemicals.

COVID -19 NATIONAL TELECONSULTATION CENTRE (CONTEC)

- ◎ **CONTEXT:**
 - The Union government has launched the COVID-19 National Teleconsultation Centre (CoNTeC).
- ◎ **ABOUT:**
 - The project CoNTeC, has been conceptualised by the Ministry of Health & Family Welfare and has been implemented by the All India Institute of Medical Sciences, New Delhi.
 - The CoNTeC is a Telemedicine Hub established by AIIMS, New Delhi, wherein expert doctors from various clinical domains will be available 24x7 to answer the multifaceted questions from specialists from all over the country.

- It is a multi-modal telecommunications hub through which 2 way audio-video and text communications can be undertaken from any part of the country as well as the world at large.
- The CoNTeC is also fully integrated with the National Medical College Network (NMCN) to conduct a full fledged Video Conference (VC) between the 50 Medical Colleges connected through the NMCN with its National Resource Centre located at SGPGI, Lucknow.

How to Contact the CoNTeC?

- A single mobile number (+91 9115444155) can be dialled from anywhere in the country/world by COVID-19 treating doctors to reach the CoNTeC which has six lines that can be used simultaneously at present. This number of lines can be increased in future if needed.
- The incoming calls will be picked up by the CoNTeC Managers, who will then handover the call to the appropriate expert doctors from the clinical domains as desired by the calling specialists managing the COVID-19 cases anywhere in the country.
- The Managers will guide the callers in establishing a two way video call using the WhatsApp, Skype or Google Duo as preferred by the caller.
- The callers from the NMCN network can connect anytime using the Telemedicine infrastructure at their end.

Benefits of the initiative:

- **Expertise:** It has been set up in the AIIMS so that the small states should also make use of the vast experience of the Doctors at AIIMS.
- **Connecting doctors:** The doctors world over are using different protocols to treat COVID-19 patients and the goal of the facility is to at least connect the doctors in the country together to discuss amongst themselves the protocols undertaken and provide the best treatment accordingly.
- **Benefit of consultation:** With the present facility, the poor would be able to get benefit of consultation from the topmost doctors of the country.

The road ahead:

To deal with such medical situations in future, all the medical colleges and AIIMS need to be connected together so that they can interact and help in the policy implementation for the country in the health sector. AIIMSs should become hub of activity for the district hospitals to connect with them for consultation, telemedicine, education, training, interaction and exchange of protocols between themselves.

THE INVEST INDIA BUSINESS IMMUNITY PLATFORM

◎ CONTEXT:

- Invest India, India's national Investment Promotion & Facilitation Agency, under the Ministry of Commerce and Industry has launched The Invest India Business Immunity Platform.

◎ ABOUT:

- **The Invest India Business Immunity Platform**, is a dynamic and constantly updating platform.
- It keeps a regular track on developments with respect to the virus, provides:
 - latest information on various central and state government initiatives
 - gives access to special provisions
 - answers and resolves queries through emails and on WhatsApp

- The Business Immunity Platform (BIP) is the active platform for business issue redressal, operating 24/7, with a team of dedicated sector experts and responding to queries at the earliest.
- The platform also includes frequently asked questions on important aspects like locations of COVID-19 testing, special permissions and other location-specific information.
- The portal also maps and highlights the response mechanism put in place by leading Indian companies such as sanitation of staff vehicles, placing orders in alternate markets, disabling biometric attendance systems, setting up of medical task force, requesting trainees to go home, business continuity plan, barring entry of visitors, suspension of air travel, usage of video-conferencing and tele-conferencing, developing online solutions and other unique initiatives.

Invest India:

- Invest India, set up in 2009, is a non-profit venture under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India.
- As the national investment promotion and facilitation agency, Invest India focuses on sector-specific investor targeting and development of new partnerships to enable sustainable investments in India.
- Invest India has also announced a partnership with SIDBI (Small Industries Development Bank of India) for responding and resolving queries for MSMEs.

Reason behind the launch:

- The platform, hosted on the Invest India website, is designed as a comprehensive resource to help businesses and investors get real-time updates on India's active response to COVID-19 (Coronavirus).
- While COVID-19 continues to disrupt normal life, the impact of this crisis on businesses across the country is being continuously assessed.
- The government, for its part, has issued timely guidelines for businesses. Business owners have been trying to grasp what these guidelines mean for their businesses.

Significance of the platform:

- **Information at doorstep:** This Business Immunity Platform aims to help people get access to all the information they require while staying in their comfort of their homes. With this platform, Invest India aims to bring facilitation at doorstep.
- **Creating a chain:** This platform also provides the ability to join the dots to find matching suppliers with required supplies and for innovators, startups and MSMEs to show case their solutions.
- **Experts' strategies:** It is also a platform to hear from the experts on business strategies to be adopted during such times.

AAROGYA SETU APP

◎ CONTEXT:

- The Indian government is stepping up its efforts to make credible information about the novel coronavirus accessible to the masses with the launch of a new tracking app, Aarogya Setu.

◎ ABOUT:

- The Aarogya Setu application is aimed at "augmenting" efforts to "proactively" inform the citizens about the "best practices and relevant advisories pertaining to the containment of COVID-19."
- Spotted by The Next Web first, the app determines if you are at risk by looking through a database of known cases across India.

- It was developed by the National Informatics Center which falls under the Ministry of Electronics and Information Technology (MeitY).
- The new app is available for both Android and iOS users and can be downloaded from the Play Store or Apple's App Store.
- Aarogya Setu essentially helps users in identifying whether they are at risk of being infected by the coronavirus by checking if they have knowingly or unknowingly come into contact with individuals that have been tested positive with COVID-19.
- Aarogya Setu uses a government database of infected people to function.

How will it work?

- Aarogya Setu supports up to 11 different Indian languages, including Hindi and English and requires Location and Bluetooth access to determine if you have recently come in contact with a COVID-19 positive patient.
- People will have to first register their mobile number before using the Aarogya Setu App.
- The app also asks users for their credentials, but that step is optional. The government also claims that the data stored on the app is "encrypted" and doesn't share any third-party vendors. The app will also tell you if you are in a safe location or not.
- Android users will also receive live tweets from the Ministry of Health.
- Both union and state governments have launched a host of coronavirus-related apps over the last few weeks to curb the spread of fake information about the pandemic in the country.
- Besides this, the app also has a dedicated chatbot that asks you a series of questions to determine if you have any symptoms of Covid-19 as well as inform you about the various facilities and updates from the health ministry along with a series of helpline numbers nationally and state-wise.

- © **CONCLUSION:** With the launch of this app, the governments seeks to limit the spread of the Covid-19 cases in India via technology and AI as well as, help create self awareness among the citizens with relevant information on the infection.

ACUTE ENCEPHALITIS SYNDROME (AES)

- © **CONTEXT:**
- A boy, who had symptoms akin to Acute Encephalitis Syndrome (AES), died in Bihar's Muzaffarpur district. This is the first reported AES case of 2020. In June 2019, more than 150 children died due to AES in Muzaffarpur.
- © **ABOUT:**
- **Acute Encephalitis Syndrome (AES)** is a serious public health problem in India.
 - It is characterized as acute-onset of fever and a change in mental status (mental confusion, disorientation, delirium, or coma) and/or new-onset of seizures in a person of any age at any time of the year.
 - The disease most commonly affects children and young adults and can lead to considerable morbidity and mortality.
 - **Symptoms:** AES complications may include memory loss, coma and even death. The signs and symptoms typically include:
 - High Fever
 - Headache
 - Vomiting
 - Confusion

- Seizures
- Sensitivity to light
- Stiff neck and back
- Memory loss
- Problems with speech or hearing
- Drowsiness
- In some severe cases, paralysis and coma
- **Who is affected?** It mostly affects people below 15 years.
- **Hotspot:** AES has its endemic zones covering the Gangetic plain like states of Bihar, Assam, east UP, West Bengal and some parts of Tamil Nadu.

Causative agents of AES:

Viruses are the main causative agents in AES cases, although other sources such as bacteria, fungus, parasites, spirochetes, chemicals, toxins and noninfectious agents have also been reported over the past few decades.

- Japanese encephalitis virus (JEV) is the major cause of AES in India (ranging from 5%-35%).
- Herpes simplex virus, Influenza A virus, West Nile virus, Chandipura virus, mumps, measles, dengue, Parvovirus B4, enteroviruses, Epstein-Barr virus and scrub typhus, S.pneumoniae are the other causes of AES in sporadic and outbreak form in India.
- Nipah virus, Zika virus are also found as causative agents for AES. The etiology in a large number of AES cases still remains unidentified.

Is Litchi a contributing factor to 'Litchi fever'?

- No. The fruit Litchi has nothing to do with the fever.
- However, the malnourished children do not have buffer stock of sugar in their liver, which might be a factor to more severe AES due to the presence of toxins (MCPG) in Litchi.

◎ BACKGROUND:

- AES due to JEV was clinically diagnosed in India for the first time in 1955 in the southern State of Madras, now Tamil Nadu.
- During 2018, 10485 AES cases and 632 deaths were reported from 17 states to the National Vector Borne Diseases Control Programme (NVBDCP) in India, with a case fatality rate around 6 per cent.
- In June 2019, the epidemic was reported in five north Bihar districts. More than 600 children suffering from AES were admitted in several hospitals.
- Locally known as Chamki Bukhar, it has claimed the lives of more than 500 children in the previous decade.
- The most affected areas comprised Muzaffarpur, Vaishali, Sitamarhi, Samastipur, Sheohar and East and West Champaran.

CONVALESCENT-PLASMA THERAPY

◎ CONTEXT:

- The United States' Food and Drug Administration is developing a new coronavirus drug derived from the blood plasma of people who have recovered from Covid-19. Its approach is based on the idea that antibodies developed by recovered patients might strengthen the immune system of new patients.

© **ABOUT:**

- The idea of using plasma from survivors, also known as convalescent-plasma therapy, dates back to the late 19th century.
- The treatment was first used in the 1890s and helped stem a number of outbreaks until antimicrobial therapy, which kills or halts the microorganism, was developed in the 1940s.
- In the early 20th century, convalescent plasma treatment was used during outbreaks of diseases such as measles, mumps and influenza.
- More recently, it was used during the H1N1 influenza pandemic, and again in 2013 during the Ebola outbreak in West Africa. In the case of the latter, two patients survived the disease after treatment.
- Following the Ebola outbreak, the World Health Organization issued guidance for its use in treating the disease, saying the small group it was used on showed “promising results.”
- Doctors have transfused the blood of recovered patients into those still sick with the 1918 flu, measles, polio, chickenpox and SARS —to varying degrees of success.

How is blood plasma turned into an infection-fighting drug?

- Patients who have recovered from a disease have permanent antibodies generated by the immune system floating in their blood plasma, the liquid component of blood.
- To turn that into a drug, the plasma is harvested, tested for safety, and purified to isolate those protective antibodies.
- When injected into a new patient, the “**plasma-derived therapy**” — also known as convalescent plasma — provides “**passive immunity**” until the patient’s immune system can generate its own antibodies.

Challenges:

- Despite the potential utility of passive antibody treatments, there have been few concerted efforts to use them as initial therapies against emerging and pandemic infectious threats.
- The absence of large trials certainly contributes to the hesitancy to employ this treatment.
- Also, the most effective formulations (convalescent plasma or hyperimmune globulin, H-Ig) are unknown.
- Convalescent plasma has the advantage that while its antibodies limit viral replication, other plasma components can also exert beneficial effects such as replenishing coagulation factors when given to patients with hemorrhagic fevers such as Ebola.
- On the other hand, individual convalescent plasma units demonstrate donor-dependent variability in antibody specificities and titers. H-Ig preparations, in contrast, contain standardized antibody doses, although fractionation removes IgM, which may be necessary against some viruses.
- Nonetheless, the construction of a strategic stockpile of frozen, pathogen-reduced plasma, collected from Ebola-convalescent patients with well-characterized viral neutralization activities, is one example of how to proceed despite existing unknowns.

© **CONCLUSION:**

Convalescent plasma is a “very important area to pursue” as a potential treatment for patients with Covid-19. This must be given at the right time because it mops up the virus in the system and gives the new patient’s immune system a vital push at the time it needs it.

HYDROXYCHLOROQUINE NOW A SCHEDULE H1 DRUG

◎ **CONTEXT:**

- Hydroxychloroquine is now a schedule H1 drug, and can be sold on prescription only. The drug has been deemed 'essential' to meet emergency requirements due to COVID-19.

◎ **ABOUT:**

- Hydroxychloroquine is a disease-modifying anti-rheumatic drug (DMARD). It regulates the activity of the immune system, which may be overactive in some conditions.
- The drug is used to treat malaria, lupus erythematosus, and rheumatoid arthritis.
- Hydroxychloroquine can modify the underlying disease process, rather than simply treating the symptoms.
- Hydroxychloroquine and a related drug, chloroquine, are currently under study as possible treatments for COVID-19.

Disease-modifying anti-rheumatic drugs (DMARDs):

- DMARDs act by altering the underlying disease rather than treating symptoms.
- They're not painkillers, but they'll reduce pain, swelling and stiffness over a period of weeks or months by slowing down the disease and its effects on the joints.
- There are two types:
 - conventional DMARDs
 - biological therapies

The notification:

- The sale of the drug from now on should be in accordance with the conditions for sale of drugs specified in Schedule H1 to the Drugs and Cosmetics Rules, 1945.
- The Central Government is satisfied that the drug 'Hydroxychloroquine' is essential to meet the requirements of emergency arising due to pandemic COVID-19.
- In the public interest, it is necessary and expedient to regulate and restrict the sale and distribution of the drug 'Hydroxychloroquine' and preparation based thereon for preventing their misuse.

What are Schedule H1 medicines?

- Schedule H1 medicines are those medicines which contain a very high alcoholic influence.
- The retailer needs to keep one prescription copy as the report needs to be submitted to the Drug Department.

How does it work?

- Hydroxychloroquine is an antimalarial drug. It treats malaria by killing the parasites that cause the disease.
- It isn't fully understood how this drug works to treat lupus erythematosus or rheumatoid arthritis. However, it's believed that this drug affects how your immune system works, which may be a benefit in lupus erythematosus and rheumatoid arthritis.

Why does it need regulation?

- Child danger warning:** Accidentally swallowing just a few tablets has been fatal in some children. Keep this drug in a child-resistant bottle out of reach of children.

- **Worsened skin conditions warning:** Tell your doctor if you have skin conditions, such as psoriasis or porphyria. This medication may make these conditions worse.
- **Eye damage:** It can damage your eyes, leading to vision problems that can be permanent. This damage is more likely when the drug is used in high doses.
- **Heart damage:** It can also cause heart disease. Although uncommon, some cases have been fatal.

NASA'S SUNRISE MISSION

◎ CONTEXT:

- NASA has announced new SunRISE mission to study giant solar particle storms.

◎ ABOUT:

- The **Sun Radio Interferometer Space Experiment (SunRISE)** will look into how Sun generates and releases the giant weather storms, known as the solar particle storms, into space.
- The SunRISE mission is to understand how such storms affect interplanetary space can help protect spacecraft and astronauts.
- NASA designed it to learn more about how the sun generates and throws off giant space weather storms, known as solar particle storms.
- SunRISE will gather information on how the solar system works. Knowing this could help NASA protect astronauts traveling to the Moon and Mars.

What are Solar Energetic Particles (SEPs)?

- Solar energetic particles (SEPs) emitted from the Sun are a major space weather hazard motivating the development of predictive capabilities.
- These events occur when particles (mostly protons) emitted by the Sun become accelerated either close to the Sun during a flare or in interplanetary space by coronal mass ejection shocks.

The mission layout:

- The mission layout depends on 6 solar-powered CubeSats– each regarding the size of a toaster oven– to concurrently observe radio photos of low-frequency emission from solar task and share them using NASA's Deep Space Network.
- SunRISE contains six CubeSats which will work together as a large radio telescope. Each of the CubeSats would run on solar power and would be of the size of a toaster oven.
 - 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.
 - This, in turn, will help determine what initiates and accelerates these giant radiation jets of radiation.
 - The spacecraft will also work together to map the magnetic field lines reaching from the sun out into interplanetary space.
- Together, these will observe radio images of low-frequency emission from solar activity and create 3D maps to locate the origin place of a solar particle storm on the Sun. The entire procedure of the storm evolution as it moves outward into the space will be studied too.
- This, consequently, will aid determine what initiates as well as increases these giant jets of radiation.
- The six individual spacecraft will also interact to map, for the very first time, the pattern of magnetic field lines reaching from the Sunlight out right into interplanetary space.

Background:

- NASA had in August 2017 shortlisted SunRISE, along with another Mission of Opportunity proposal, for an 11-month mission concept study. Following the study in 2019, the space agency approved an additional formulation study for another year.
- Missions of Opportunity are part of NASA's oldest continuous program called the Explorers Program.
- These aim at providing low-cost, efficient and frequent access to space for various missions.

Significance of the mission:

- The mission will help in greater understanding of the solar system. The findings would safeguard astronauts from solar storms while they travel to Mars or the Moon.
- Furthermore, it will help scientists understand the complex relationship between the sun's activity and a host of dangerous phenomena around Earth called space weather.

NIDHI PROGRAM TO FIGHT CORONAVIRUS

◎ CONTEXT:

- JClean Weather Technologies, an incubatee company in Pune's Scitech Park has developed a new technology under the Nidhi Prayas program to disinfect closed spaces and rooms.

◎ ABOUT:

- The technology, named Scitech Airon, was developed under the Nidhi Prayas program initiated by the Department of Science and Technology (DST).
- It reduces the viral load of a closed space by 99.7 percent within an hour, depending on the room size.
- The machine can be used to disinfect spaces which have been occupied by coronavirus patients ensuring that the doctors, nurses and other care staff in quarantine facilities do not catch the virus.
- The technology also increases the body's resistance to external factors for 20-30 days.
- It is capable of killing a range of viruses, bacteria and fungal infections and can disinfect a room from several allergens.
- It also decomposes pollutants like Carbon Monoxide, Nitrogen Dioxide and volatile gaseous organic compounds.
- The Scitech Airon ioniser machine generates negatively charged ions that chemically react with the proteins on the outer walls of these microorganisms and other allergens leaving them ineffective and harmless.

NIDHI-PRAYAS Program:

- NIDHI-PRAYAS is National Initiative for Developing and Harnessing Innovation PRomoting and Accelerating Young and ASpiring Innovators & startups.
- This program allows the innovators to try their ideas without fear of failure, hence allowing them to reach a stage where they have a ready product and are willing to approach incubators for commercialization.

How does it work?

- The device works by generating approximately a hundred million negative ions every eight seconds.

- The negative ions generated by the ionizer forms clusters around microparticles such as airborne mold, influenza viruses or coronaviruses, and render them inactive.
- The ions trigger a chemical reaction by creating highly reactive OH groups called hydroxyl radicals, which act like 'atmospheric detergents'.
- The same way in which soap and water help disintegrate the outer lipid layer of the coronavirus, these 'atmospheric detergents' help break down the outer protein of the allergens, viruses and bacteria.
- The device can also clean up the air and disinfect quarantine facilities, and help better protect medical staff against infection.

RAPID TEST

◎ CONTEXT:

- Kerala government has announced that the state would start conducting 'rapid antibody test' on suspected COVID-19 suspects.

◎ ABOUT:

- Essentially, a rapid test is conducted to determine whether there has been any kind of recent viral infection in a person's body.
- When a pathogen enters a human body, specific antibodies are released as a response to the virus.
- A rapid test can detect the presence of such antibodies in blood, serum or plasma samples quickly, indicating a viral infection.
- Rapid testing is conducted usually to check for community transmission of a virus during an epidemic.
- According to the health department, it is a simple test that can be done with a person's blood sample and will give out results within 10-30 minutes. It is also a low-cost test.

How antibody tests are done?

- Antibodies are proteins that the body's white blood cells produce to fight an infection. They bind to a virus, preventing it from infecting a cell, and can remain in blood long after the infection clears. Antibody tests are commonly used to test for exposure to other viruses.
- Antibody tests were particularly effective in finding out if a person who had never shown symptoms had been previously infected by the virus.
- However, these tests could also help in the diagnosis of active cases.
- When patient gets infected at first, he/she make an antibody called IgM. After a few weeks, it gets switched to an antibody called IgD.
- If the tests find IgM, it means the patient has recently got infected.

The story so far:

- So far, India has used the RT-PCR or reverse transcriptase polymerase chain reaction test on nasal or throat swab samples of suspected patients to test for Covid-19.
- The RT-PCR tests look for the presence of the virus in the DNA. They can take anywhere between 12-24 hours to show results.
- In comparison, the rapid antibody tests identify disease-fighting antibodies in blood samples and can deliver results in 45 minutes to two hours.
- However, since antibodies are usually detectable only after around 7-10 days of being infected by the virus, such tests could throw up false negatives – an infected person may appear normal in the blood test.

The rapid tests can be of real help for the state. With these tests, more than double the number of people could be tested for the virus on daily basis and that too on low costs. For sure, this will go a long way in preventing the community transmission of the virus.

MISCELLANEOUS

CURRENT AFFAIRS

ARR-RINAM

- A tribal lockdown ritual has staged a comeback in Arunachal Pradesh, the State geographically closest to China's Hubei province where the COVID-19 outbreak began.
- **Arr-Rinam is the Galo equivalent of lockdown imposed by consensus for 48 hours whenever an epidemic strikes.**
- The Galos, one of the 26 major tribes of Arunachal Pradesh, dominate West Siang district.

BEAR BILE

- After banning eating wild animals, China is now promoting injections containing 'Bear Bile' to treat COVID-19.
- Chinese government is recommending the use of 'Tan Re Qing', an injection that contains bear bile (fluid that aids digestion in bears), as part of multiple treatments for severe and critical COVID-19 cases.
- The Tan Re Qing injection has been used by traditional Chinese medicine practitioners to treat bronchitis and upper respiratory infections.
- It consists of bear bile, which is secreted by the animal's liver and stored in the gallbladder.
- For centuries, China has been extracting bile from various species of bears, including Asiatic black bears and brown bears, through excruciating methods such as inserting a catheter, syringe, or pipe into their gallbladder.
- The bile contains high levels of ursodeoxycholic acid, also known as ursodiol, which is clinically proven to help dissolve gallstones and treat liver disease.
- In fact, ursodeoxycholic acid has been used as a synthetic drug worldwide for decades.

FORCE MAJEURE(FM)

- Indian Railways has decided that the period from 22.03.2020 to 14.04.2020 shall be treated under "Force Majeure".
- A force majeure(FM) means extraordinary events or circumstance beyond human control such as an event described as an Act of God (like a **natural calamity**)
- During this period no demurrage, wharfage, stacking, stabling, detention and ground usage charge shall be leviable.

HIMALAYAN IBEX A DISTINCT SPECIES

- A recent study by scientists of the Zoological Survey of India (ZSI) has proved that **Himalayan Ibex**, distributed in the trans-Himalayan ranges of Jammu and Kashmir, Ladakh and Himachal Pradesh, is a distinct species from the **Siberian Ibex**.
- **What is Siberian Ibex?**
 - Siberian Ibex is a species of wild goat and is distributed in diverse habitats, ranging from cold deserts, rocky outcrops, steep terrain, high-land flats and mountain ridges to low mountains and foothills.
- **Distribution:** From Mongolia, its distribution extends towards Altai, Hangai, Gobi-Altai, the Hurekh mountain ranges as well as Sayan Mountains near Russia and scattered populations in the small mountains of Trans-Altai Gobi.
- In Asia, Ibex is distributed in the Montane habitats, ranging in elevations from 500 m to 6,700 m in countries like India, Kazakhstan, Tajikistan, Mongolia, Pakistan, Southern Siberia and China.

- In India, the Ibex is distributed mainly in the trans-Himalayan ranges of the Union Territories of Ladakh and Jammu and Kashmir and Himachal Pradesh up to the river Sutlej.
- The results of the genetic analysis surprisingly revealed that I-T clade (referred to as Siberian Ibex) was estimated to have diverged from Alpine Ibex during the Pleistocene epoch (2.4 million years ago) than the Siberian Ibex during the Miocene-Pliocene boundary (6.6 million years ago).

MO JIBAN

- Odhisha launched a new programme called "Mo Jiban", to urge people of the State to take a resolute vow to stay home and not to go outside during the lockdown period to remain safe from the novel coronavirus (COVID-19).

OPERATION NAMASTE

- Army Chief General Manoj Mukund Naravane launched initiative "Operation Namaste" to insulate the 1.3 million strong force from coronavirus infection and extend all possible assistance to the government in containing the pandemic.
- Under "Operation Namaste", the Army has issued series of directives to all its bases to insulate the force from the coronavirus.
- The Army headquarters issued a number of advisories in the last few weeks to deal with the situation.

PEARSON LAUNCHES "QUIKIK"- A FREE AI BASED MATH LEARNING APP FOR STUDENTS TO LEARN AT HOME

- To aid students with online self-study solutions during these testing times, **Pearson, the world's leading learning company, announced the launch of "Quikik", a new AI-based Math learning app which helps students reinforce their Math skills and feeds your 10-14 year old's appetite for snack-size learning in a fun & engaging manner.**
- In addition to this, the company also announced support for IIT-JEE students and institutes in the form of free access to its **MyInsights Online Mock Test Series to ensure seamless preparation time & resources** to the students in the form of personalized digital assessment tool.
- Quikik is the **innovative AI-assisted maths app** which identifies math challenges, gaps in learning and creates a quick route to math mastery.
- **Developed by Pearson professionals**, Quikik is speedy, engaging, thorough & stress-free and provides a series of simple bite sized videos which **will not only aid learners to strengthen their concepts in Math, but also help them use their time productively during social distancing.**

PM CARES FUND

- To combat the novel coronavirus pandemic, Prime Minister Narendra Modi announced the **Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PM-CARES)** and asked people to contribute to the PM Cares account.
- PM-CARES is a public charitable trust. It is a dedicated national fund with the primary objective of dealing with any kind of emergency or distress situation, like posed by the Coronavirus pandemic, and to provide relief to the affected.
- Prime Minister Modi is the chairman of the trust and its members include defence minister, home minister and finance minister.

- PM-CARES is different from the PM's Relief Fund that has been used by the Union government for years even till the recent Kerala floods and other crises.

Correct details:

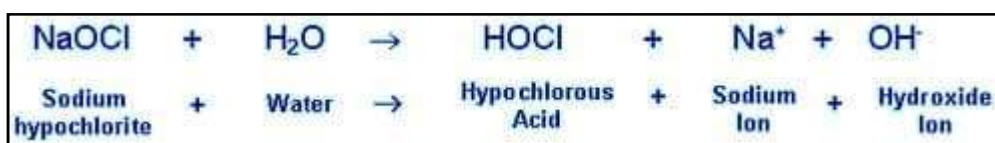
- Name of the Account:** PM CARES
- Account Number:** 2121PM20202
- IFSC Code:** SBIN0000691
- SWIFT Code:** SBININBB104
- Name of Bank and Branch:** State Bank of India, New Delhi Main Branch
- UPI ID:** pmcares@sbi

PRADHAN MANTRI GARIB KALYAN PACKAGE: INSURANCE SCHEME FOR HEALTH WORKERS FIGHTING COVID-19

- As per the announcement made **under the Pradhan Mantri Garib Kalyan Package**, the launch of 'Pradhan Mantri Garib Kalyan Package: Insurance Scheme for Health Workers Fighting COVID-19' has been approved with the following conditions:
- It will provide an **insurance cover of Rs. 50 lakh for ninety (90) days** to a total of around 22.12 lakh **public healthcare providers, including community health workers**, who may have to be in direct contact and care of COVID-19 patients and who may be at risk of being impacted by this.
- It will also include **accidental loss of life on account of contracting COVID-19**.
- These cases will also be covered **subject to numbers indicated by Ministry of Health & Family Welfare**.
- The insurance provided under this scheme would be **over and above any other insurance cover** being availed of by the beneficiary.

SODIUM HYPOCHLORITE

- To contain the spread of the Covid-19 infections, private societies have been opting for fumigation with 1% solution of sodium hypochlorite at open places including passages and staircases, which experts say can be more dangerous than beneficial.
- Chlorine bleach, sodium hypochlorite (NaOCl), is a very useful and inexpensive disinfectant. A disinfectant kills germs that can make people sick.
- Sodium hypochlorite is just one of the common chlorine disinfectants; chlorine gas (Cl₂) and solid calcium hypochlorite [Ca(OCl)₂] are two others.
- The Chemistry of Chlorination:**
 - How does sodium hypochlorite defeat germs? The answer is in this chemical reaction:



- HOCl, hypochlorous acid, formed when sodium hypochlorite is added to water, penetrates the normally resistant surfaces of microorganisms like Salmonella typhi, destroying them.

- Whether the acid remains in the form of HOCl or as the ions H⁺ and OCl⁻ depends on the acidity, or pH of the solution. (Ions were defined in October's Chlorine Compound of the Month article.)

VENESAT-1 SATELLITE INACTIVE SINCE MARCH 13, TO BE PUSHED INTO GRAVEYARD ORBITS

- The **first state-owned communication satellite of Venezuela** is reportedly out of service since March 13 when a series of maneuvers left it tumbling in an unusable orbit.
- According to Space News, Venezuela's satellite, VeneSat-1 satellite has been **stuck for 11 days in an elliptical orbit above the geostationary arc**. This has been observed two US companies that track satellites.
- VeneSat-1 satellite was **built by Venezuelan space agency ABAE in association with China Great Wall Industry Corp.** and launched in late 2008.
- The launch of VeneSat-1 satellite was intended to provide **television and broadband services** to Venezuela.
- The website further reported that **both Venezuela and China planned in January this year to develop a replacement satellite titled VeneSat-2**, which would continue service after VeneSat-1 retired. The first one was expected to remain in service till atleast 2024.



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