

## UPSC Daily Current Affairs | Prelim Bits 31-03-2020

### Sodium Hypochlorite

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

## **Traditional masks to tackle COVID-19**

- Gonds are one of the largest tribal groups in the world.
- They mostly live in Madhya Pradesh, Chhattisgarh, Maharashtra, Andhra Pradesh, Gujarat, Jharkhand, Karnataka, Telangana, Uttar Pradesh, West Bengal and Odisha.
- Gonds are subdivided into four tribes:
  1. Raj Gonds
  2. Madia Gonds
  3. Dhurve Gonds
  4. Khatulwar Gonds
- Their staple food is two kinds of millet: kodo and kutki.
- Rice is mostly consumed during festival feasts.
- Gonds believe that earth, water and air are ruled by Gods.
- They majorly speak Gondi which is an unwritten language of the Dravidian family.
- It has been notified as a Scheduled Tribe.
- Recently Gond tribal people living in Panna, Madhya Pradesh have devised their own way to make masks to fight coronavirus.
- Tribal people are making masks with medicinal leaves and following traditional ways to prevent the spread of the coronavirus.

## **Volatility Index (VIX)**

- VIX (Volatility index) is an index used to measure the near term volatility expectations of the markets.
- Volatility signifies the rate and magnitude of change in the stock price or index value.
- The movement in the VIX index reflects the overall market volatility expectations over the next 30 days.
- Given the nature of the index, it is also known as 'fear gauge' or 'fear index'.
- The VIX index was first created by the Chicago Board Options Exchange (CBOE) and introduced in 1993 based on the prices of S&P 500 index.
- The India VIX was launched by National Stock Exchange (NSE) in 2010 and is based on the computation methodology of CBOE though amended to align with the Indian markets.
- India VIX indicates the Indian market's volatility from the investor's perception.
- Volatility and the value of India VIX move parallel. i.e a spike in the VIX

value means the market is expecting higher volatility in the near future and vice versa.

- India VIX also has a strong negative correlation with Nifty. i.e every time India VIX falls, Nifty rises and when India VIX rises, Nifty falls.
- VIX value is among the important parameters that are taken into account for pricing of options contracts, which are one of the most popular derivative instruments.
- In the current calendar year, the India VIX index has jumped fivefold, from around 12 levels to the current 67 levels, which clearly hints that the market perceives that volatility will only increase in the coming days.
- Incidentally, the index is currently trading at record highs and on some days in the recent past, saw a surge of more than 20% in a single day.

### **National Stock Exchange of India Ltd. (NSE)**

- NSE is the leading stock exchange of India, located in Mumbai.
- The NSE was established in 1992 as the first dematerialized electronic exchange in the country.

### **Scitech Airon**

- An air purifying technology named Scitech Airon developed by Pune based startup could offer an effective solution to the country's fight against the coronavirus COVID-19 contagion by reducing the viral load of the infected areas.
- Department of Science and technology has planned to release funds to install 1,000 units of this new air purifier in various hospitals across Maharashtra.
- The technology has been developed under the 'Nidhi Prayas' programme initiated by the Department of Science and Technology (DST).
- The negative ion generator titled 'Scitech Airon' helps to control the virus, bacteria, and other fungal infections in a closed environment.
- The ionizer machine generates negatively charged ions at approximately hundred million per 8 seconds (10 ions per sec).
- The negative ions generated by the ionizer form clusters around microparticles such as airborne mould, corona or influenza viruses, bacteria among other pollutants and renders them inactive through a complex chemical reaction by creating highly reactive hydroxyl radicals and atmospheric detergents (hydroxyl groups are composed of one hydrogen atom bonded to one oxygen atom and denoted as -OH or HO-).
- The detergent property thus generated by the ion generator aids the

breakdown of the outer protein of the allergens, viruses and bacteria, thus checking airborne diseases and increasing the body's resistance to possible infections, the release said.

- Hence it could ensure the wellbeing of the staff, doctors, and nurses who are working round the clock in quarantine facilities by enhancing their disease-resistance power and ability to fight the virus.



## **CARES Fund**

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

## **Corporate Social Responsibility (CSR)**

- Under the Companies Act, 2013, companies with a minimum net worth of Rs 500 crore or turnover of Rs 1,000 crore, or net profit of Rs 5 crore are required to spend at least 2% of their average profit for the previous three years on CSR activities every year.
- The term "Corporate Social Responsibility" in general can be referred to as a corporate initiative to assess and take responsibility for the company's effects on the environment and impact on social welfare.
- India is the first country in the world to make corporate social responsibility (CSR) mandatory, following an amendment to the Companies Act, 2013 in April 2014.

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

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

**Source:** PIB, the Hindu, Indian Express