

April - 05

## TNPSC BITS

- ❖ Virologist Minal Dakhve Bhosale managed to provide India's first coronavirus testing kit for evaluation. She is the research and development chief of Mylab Discovery in Pune.
- ❖ North Macedonia officially became the 30th member of the NATO (North Atlantic Treaty Organization) military alliance. In June 2018, Macedonia and Greece agreed to rename Macedonia as Republic of North Macedonia.

## TAMIL NADU

### Disinfection tunnel at Thennampalayam

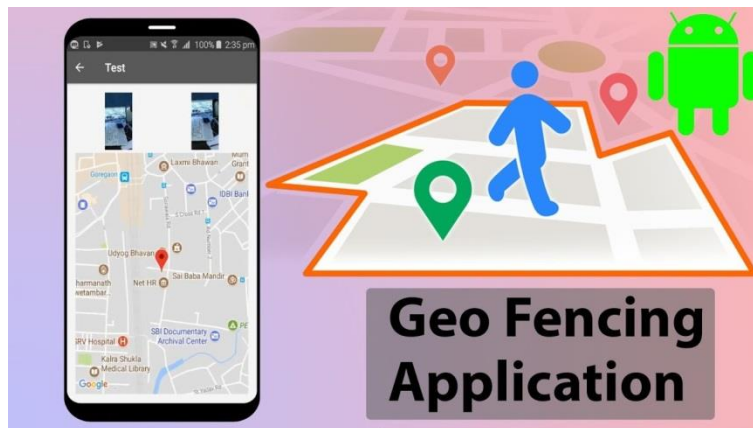
- ❖ In India, a first of its kind disinfection tunnel has been set up at the Thennampalayam market in Tirupur, Tamil Nadu.
- ❖ The system is a brainchild of D Venkatesh who owns a water treatment company in Tirupur.



## NATIONAL

### Geo-fencing

- ❖ It is a location-based service in which an app or other software uses GPS, RFID, Wi-Fi or cellular data.
- ❖ It works to trigger a pre-programmed action when a mobile device or RFID tag enters or exits a virtual boundary set up around a geographical location, known as a geofence.
- ❖ The “geo-fencing” is accurate by up to 300 meter.
- ❖ The States have been asked to seek the approval of their Home Secretaries under the provisions of the Indian Telegraph Act, 1885.
- ❖ It is for the specified mobile phone numbers to request the Department of Telecom to provide information by email or SMS in case of violation of “geo-fencing”.



### 5 research projects

- ❖ The Government of India launched 5 research projects in order to control the spread of COVID-19.
- ❖ The projects neither focus on vaccines nor on medicines.
- ❖ The projects are to be supervised by the Department of Science and Technology.
- ❖ The first project aims to search the metabolite biomarker signature for the virus.
- ❖ The second project is to develop viricidal coatings that shall be used in surgical mask.
- ❖ The third project is to develop antiviral surface coatings to help prevent the spread of infections.



- ❖ The fourth project is to develop a material which when applied over surfaces will remove viruses and bacteria.
- ❖ The fifth project is to develop antibody-based capture of COVID-19 and inactivate it using lipid based gel.

## **INTERNATIONAL**

### **UN resolution**

- ❖ On April 3, 2020, the United Nations approved the resolution that called upon international cooperation to fight against COVID-19.
- ❖ The resolution also calls for its member nations to adopt multilateralism.

### **Resolution in silence mode**

- ❖ There was no meeting held to pass the resolution.
- ❖ The resolution was adopted in silent mode.
- ❖ The UNGA has announced that the draft resolution is to stay open till April 2 for the member countries to object.
- ❖ If not objected, the organization will circulate a confirmation letter among its member countries.

## **ECONOMY**

### **Action COVID Team**

- ❖ The Action COVID Team was launched by top fund managers of private sector and blue-chip venture capital firm in India.
- ❖ It is the First of its kind in the world.
- ❖ The funds are being raised by the Team to promote the Indian companies and start-ups to work on COVID-19 based products and researches.
- ❖ The Team gained its popularity lately as Rs 1 crore was bagged by the Mylab from the fund set up by the team.
- ❖ Mylab is the first Indian firm to get permission to make and sell corona testing kit.
- ❖ India is currently using and promoting indigenously made kits.

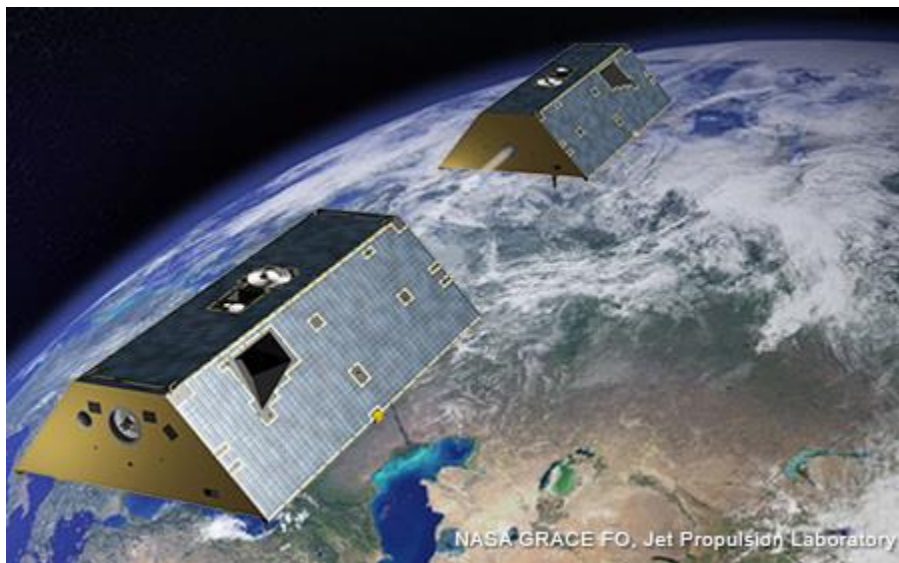
## **Arogya Sanjeevani Insurance Policy**

- ❖ The Insurance Regulatory and Development Authority of India (IRDAI) has provided guidelines for the health insurance providers to implement Arogya Sanjeevani Insurance Policy.
- ❖ It was basically launched to cover the hospitalisation expenses of the COVID-19 patients.
- ❖ The regulator had earlier made it mandatory for the insurance providers to frame a policy to provide basic coverage to at least 55% of Indian population.
- ❖ The cost of the premium shall cover between Rs 1000 and Rs 1 lakh.
- ❖ Interested customers shall opt for coverage up to Rs 5 lakhs.
- ❖ It is to be availed for citizens above the age of 18 years and up to the age of 65 years.

## **SCIENCE AND TECHNOLOGY**

### **GRACE-FO mission**

- ❖ New satellite-based, weekly global maps of soil moisture and groundwater wetness conditions were developed by US space agency National Aeronautics and Space Administration (NASA) and the University of Nebraska-Lincoln (UNL).
- ❖ The Gravity Recovery and Climate Experiment Follow-on (GRACE-FO) mission is a partnership between NASA and the German Research Centre for Geosciences (GFZ).
- ❖ It measures variations in gravity over Earth's surface, producing a new map of the gravity field every 30 days.



## Corona Kavach application

- ❖ The Government of India launched Corona Kavach application to map the location of a COVID-19 positive patient through GPS.
- ❖ It tracks the data of the user every hour.
- ❖ It then alerts him if he has crossed a Corona Positive patient.
- ❖ The application has been jointly developed by the Ministry of Electronics and Information technology and Ministry of Health and Family Welfare.
- ❖ The AYUSH ministry has also suggested “Kabasura Chooranam” as a preventive measure.



## Automated ventilators.

- ❖ The Department of Science and Technology tied up with the Wipro 3D to jointly build proto type of automated ventilators.
- ❖ The ventilators will help in meeting urgent requirement of Covid-19 crisis.
- ❖ The ventilators are called AMBU (Artificial Manual Breathing Unit).
- ❖ They are hand held devices that will provide automatic pressurized ventilation to the patients that are not breathing or facing extreme difficulties in breathing.



- ❖ The AMBU is portable and hence will be ideal to suit the temporary hospital beds set up in railway coaches.
- ❖ It has provisions to add PEEP (positive end expiratory pressure) as an extra component in order to maintain pressure.

### **Bio Suit**

- ❖ A Bio Suit has been developed by the Defence Research and Development Organization (DRDO) to keep the medical professionals working with COVID-19 safe.
- ❖ The suit exceeds the criteria set by the Ministry of Health and Family welfare for the body suits of protection against synthetic blood.
- ❖ Synthetic blood is artificially made blood that will keep a patient under trauma alive up to 48 hours.
- ❖ Synthetic blood is made from Perfluorocarbons.

### **Low-Cost Temperature Gun**

- ❖ The Mumbai Naval Dockyard has designed a low-cost IR based temperature sensor.
- ❖ The sensor is to be used to check the personnel entering at the gates of the yard.
- ❖ The instrument was manufactured at less than Rs 1000.

#### **Working mechanism**

- ❖ The accuracy of the temperature gun is 0.2 degree Celsius.
- ❖ The temperature gun has a LED display and an infrared sensor.
- ❖ The IR thermometer uses lens to focus infrared light.
- ❖ It works on a principle called Black body radiation.
- ❖ Any object at temperature above 0 degree Celsius has molecules moving around.
- ❖ The speed of the molecules increases with increase in temperature.
- ❖ As they move, these molecules emit IR rays.
- ❖ The IR thermometer has a detector that concentrates these IR rays from the hot body.
- ❖ If the rays are more, the detector generates higher current.
- ❖ Higher the current, higher is the temperature of the body.

## IMPORTANT DAYS

### **International Day for Mine Awareness and Assistance in Mine Action – April 4**

- ❖ In 2005, the United Nations General Assembly declared the observation of this Day.
- ❖ It was first observed on 4 April, 2006.
- ❖ In June 2014, over 1,000 state and non-governmental representatives of the international community gathered in Maputo, Mozambique, and set, through the “Maputo+15 Declaration,” a target of a landmine-free world by 2025.

