



# PLUTUS ACADEMY

Argasia Education PVT. Ltd. (GST NO-09AAPCA1478E1ZH)

Address: Basement C59 Noida, opposite to Priyagold Building gate, Sector 2, Pocket I, Noida, Uttar Pradesh 201301, CONTACT NO- 8448440231

## Current Affairs

[30th December 2020]

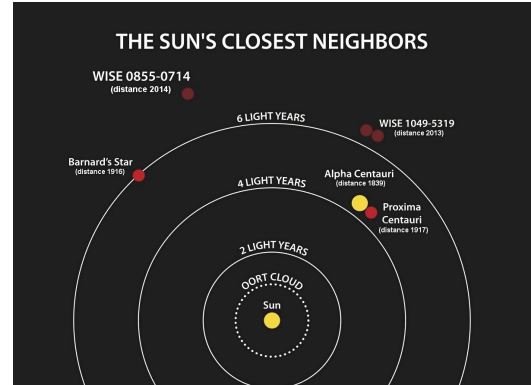
### Contents:

1. Proxima Centauri
2. Rule of 1% GST Liability
3. Pneumosil - India's first indigenous vaccine against pneumococcal disease
4. China Pakistan Economic Corridor
5. India's first driverless Metro
6. Meteorological (Met) Centre at Leh

# Topic-1: Proxima Centauri

## Context:

- Astronomers running the world's largest initiative to look for alien life have recently picked up an **“intriguing” radio wave emission from the direction of Proxima Centauri**, the closest star to our Sun.
- The news has sparked renewed interest in **Proxima Centauri, one of whose planets is believed to revolve in the star's habitable zone**, giving rise to the possibility that it could have, or does, sustain life.



## **What is Proxima Centauri?**

- Proxima Centauri is **4.2 light-years away from the Sun** – considered a close distance in cosmic terms. Its mass is about an eighth of the Sun's, and it is too dim to be seen with the naked eye from Earth.

## **What is Proxima b?**

- Proxima b, is one of the two planets that revolve around the star.
- Its size is 1.2 times larger than Earth.
- It orbits its star every 11 days.
- Proxima b lies in Proxima Centauri's “Goldilocks zone”.

## **What is Goldilocks Zone?**

- Goldilocks zone is an area around a star where it is not too hot and not too cold for liquid water to exist on the surface of surrounding planets. For example, the Earth is in the Sun's Goldilocks zone.

## Topic-2: Rule of 1% GST Liability

### Context:

- The **Central Board of Indirect Taxes and Customs (CBIC)** has made it obligatory for **businesses with a monthly turnover of more than Rs. 50 lakh to pay at least 1% of their Goods and Services Tax (GST) liability in cash** which will be effective from **1st January 2021**.

### Criticism of the rule:

- It is feared that the mandatory cash payment **will adversely affect small businesses, increase their working capital requirement and make GST a more complex indirect tax system.**

### How did the government defend the rule?

- The Department of Revenue has held that these fears are misplaced and “only risky or suspicious dealers and fly-by-night operators” will be affected by the move.
- Government has arrived at this rule after detailed deliberations in the GST Council’s Law Committee to identify and control only fraudsters involved in fake invoices and input tax credits.

#### Central Board of Indirect Taxes and Customs:

- It is a part of the **Department of Revenue** under the **Ministry of Finance**.

#### What CBIC does?

- It deals with the tasks of **formulation of policy** concerning levy and collection of customs, central excise duties, Central GST (CGST) and Integrated GST (IGST).

# Topic-3: Pneumosil - India's first indigenous vaccine against pneumococcal disease

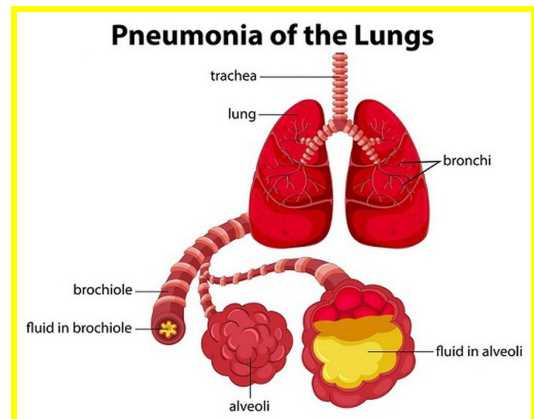
## Context:

- Pune-based Serum Institute of India (SII) unveiled India's first indigenously developed pneumococcal vaccine.



## What is Pneumococcal disease?

- It is a disease caused by the pneumococcal bacteria which causes pneumonia and other serious life-threatening diseases such as meningitis and sepsis, and is estimated to cause nearly four lakh deaths in children under five years of age each year worldwide.



## Pneumosil:

- The vaccine Pneumosil targets the pneumococcal bacteria, which causes pneumonia and other serious life-threatening diseases such as meningitis and sepsis, and is estimated to cause nearly four lakh deaths in children under five years of age each year worldwide.

- SII's pneumococcal vaccine, Pneumosil, was developed through a collaboration spanning over a decade with the health organisation PATH and the Bill and Melinda Gates Foundation.

### **Significance:**

- This is a significant milestone for the country's public healthcare which will ensure that children are protected better against pneumococcal disease with an effective vaccine.

#### **About Serum Institute of India (SII):**

- The Serum Institute's vaccines are used in 170 countries and every third child in the world is immunised with one of its vaccines.
- The world's largest vaccine manufacturer by doses, SII is also the maker of Covishield, the Indian version of the AstraZeneca-Oxford coronavirus vaccine.
- The vaccine also makes SII the world's third supplier of PCVs under the pneumococcal Advance Market Commitment, and the first developing country vaccine manufacturer to access the global PCV market.

### **What trials has the pneumosil gone through?**

- Pneumosil has been extensively evaluated in five randomised controlled clinical trials and has demonstrated comparable safety and immunogenicity against licensed pneumococcal vaccines across diverse populations of India and Africa, where Pneumosil was administered to adults, toddlers and infants using different vaccination schedules.
- Based on the trials, Pneumosil was licensed by the Drugs Controller General (India) in July 2020.

### **Is the vaccine affordable?**

- Serum's first indigenous PCV will be available in the market at an affordable price in single dose (vial and prefilled syringe) and multidose (vial) presentations.
- While PCVs have helped reduce pneumococcal deaths, they are difficult for many countries to afford.

### What has the World Health Organisation done in this regard?

- In view of its widespread fatality, the World Health Organization in 2018 recommended the inclusion of the pneumococcal conjugate vaccine (PCV) in routine childhood immunisation programmes in all countries.
- The unique feature of the WHO pre-qualified PCV is its composition which is specially tailored to the serotype of the bacterium, *S pneumoniae*, in India and other regions of the world.

## Topic-4: China Pakistan Economic Corridor

### Context:

- China denied that it was seeking additional guarantees from Pakistan before sanctioning a loan for a key project under the China Pakistan Economic Corridor (CPEC). Chinese media reported that CPEC projects were on track despite the pandemic.

### What is the China Pakistan Economic Corridor?

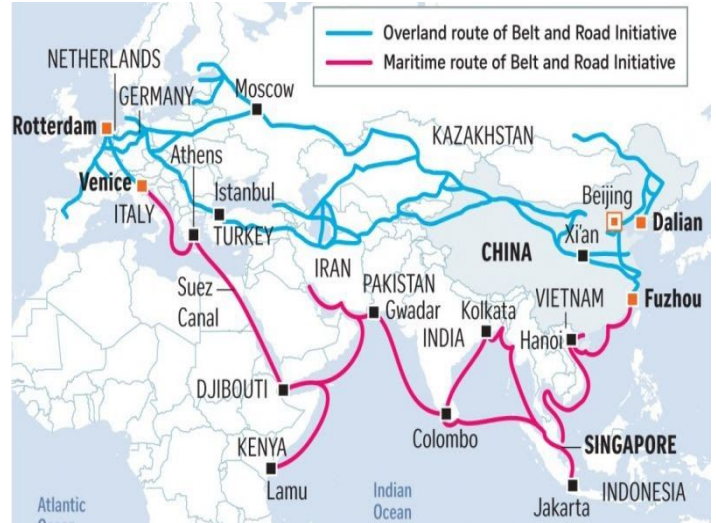
- China–Pakistan Economic Corridor (CPEC) is a collection of infrastructure projects that are under construction throughout Pakistan since 2013.



- CPEC is intended to rapidly upgrade Pakistan's required infrastructure and strengthen its economy by the construction of modern transportation networks, numerous energy projects., and special economic zones.
- A vast network of highways and railways are to be built under the aegis of CPEC that will span the length and breadth of Pakistan.
- Modern transportation networks built under CPEC will link seaports in Gwadar and Karachi with northern Pakistan, as well as points further north in western China and Central Asia.

### Belt & Road initiative-

- The Belt and Road Initiative (BRI) known in Chinese and formerly it is One Belt One Road or OBOR
- It is a global infrastructure development strategy adopted by the Chinese government in 2013 to invest in nearly 70 countries and international organizations.



- It is considered a centerpiece of Communist Party of China general secretary and President Xi Jinping's foreign policy.
- "Belt" is short for "Silk Road Economic Belt", referring to the proposed overland routes for road and rail transportation through the landlocked Central Asia along the famed historical trade routes of the Western Regions; whereas "road" is short for "21st Century Maritime Silk Road", referring to the Indo-Pacific sea routes through Southeast Asia to South Asia, Middle East and Africa.

- The CPEC is the flagship project of the multi-billion-dollar Belt and Road Initiative (BRI)

### **Impact on India-**

- The transport corridor between Pakistan and China traverses Jammu and Kashmir, the status of which has been a subject of contention between India and Pakistan since 1947.
- China is using Indian land area illegally occupied by Pakistan.
- India doesn't want to internationalise the Kashmir issue, but with Pakistan, China, and CPEC coming in, it happens.
- China, which has been neutral on Kashmir since 1963, can no longer be so now that its economic and security interests in these territories are growing.

## **Topic-5: India's first driverless Metro**

### **Context:**

- Prime Minister Narendra Modi flagged off India's first driverless metro. The train will be fully automated, eliminating the possibility of human error. The service will be available on Delhi Metro's 38-km long Magenta Line which connects Janakpuri West in West Delhi to Botanical Garden in Noida.

### **Background-**

- DMRC has had driverless technology since 2017, but the agency has been conducting rigorous trials before launch.
- The driverless trains will be fully automated, requiring minimum human intervention and eliminating the possibilities of human errors.
- Driverless train technology has set standards for automation called grades of automation (GoA).



- In GoA 1, trains are run by one driver and, in GoA 2 and GoA 3, the role of the driver is reduced to operating doors and for taking over in case of emergencies — the starting and halting of trains is automated.
- Finally, in the GoA 4, trains are on completely unattended operation mode.
- The driverless metro trains will switch to what is called the Driverless Train Operation (DTO) mode.
- In this mode, trains can be controlled entirely from the three command centres of the DMRC.

**Some facts-**

- The first line to be operated with Automatic Train Operation (ATO) was London Underground's Victoria line, which opened in 1967, although a driver is present in the cabin.
- The first fully automated driverless mass-transit rail network is the Port Island Line in Kobe, Japan.
- The second in the world is the Lille Metro in northern France.
- Kuala Lumpur's RapidKL network has the world's 2nd longest automated metro length.
- Singapore has the longest automated metro system in the world with all of its Mass Rapid Transit lines having 4th grade automation (GoA4).

## Topic-6: Meteorological (Met) Centre at Leh

### Context:

The Meteorological (Met) Centre at Leh(Ladakh) has been inaugurated by the Union Minister of Earth Sciences, Science & Technology and Health & Family Welfare Dr Harsh Vardhan.



### **About:**

- The Government of India (GOI) felt the need to establish a Meteorological (Met) Center at Leh to strengthen the weather related early warning system in Ladakh in order to help the administration and the people of Ladakh.
- India Meteorological Department (IMD) will collect data from this centre.
- Initially, India Meteorological Department (IMD) established a surface observatory at Leh for reporting daily meteorological parameters like pressure, humidity, temperature, snowfall, etc.
- Located at a height of 3500m, it is the highest meteorological centre in India.
- It will be a world class facility for high altitude meteorology.

- It will provide forecasts for important tourist places like Nubra, Changthang, Pangong Lake, Zaskar, Kargil, Drass, Dha-Baima (Aryan valley), Khalsi among others.
- Some of the important services are Highway Forecast, Forecast for Mountaineering, Trekking, agriculture, flash flood warning, low and high temperatures.
- IMD will provide a range of weather forecast services, ranging from short (3 days) and medium (12 days) to extended (1 month) period to all the stakeholders on a daily basis for both the districts (Leh and Kargil).

#### **Indian Meteorological Department:**

- The India Meteorological Department (IMD) is an agency of the Ministry of Earth Sciences of the Government of India. It is the principal agency responsible for meteorological observations, weather forecasting and seismology.
- IMD is headquartered in Delhi and operates hundreds of observation stations across India and Antarctica. Regional offices are at Chennai, Mumbai, Kolkata, Nagpur, Guwahati and New Delhi.
- IMD is also one of the six Regional Specialised meteorological centres of the World Meteorological Organisation. It has the responsibility for forecasting, naming and distribution of warnings for tropical cyclones, in the Northern Indian Ocean region, including the Malacca Straits, the Bay of Bengal, the Arabian sea and the Persian Gulf.
- It is among the best on many fronts such as early Tsunami Warning and accurate weather forecast.
- Weather forecast through text message is provided to over 40 million farmers, helping them in planning their farming activities

#### **Way forward:**

- There is an importance of localised weather information and there is a need to create a Weather App for all stakeholders.