

January - 24

## TNPSC BITS

- ❖ Renowned author K Venu was awarded the Federal Bank Literary Award 2022 for his autobiography 'Oarnavashanthinte Katha'.

## TAMIL NADU

### Wealthiest STEM innovation and learning center

- ❖ The American India Foundation (AIF) inaugurated India's first STEM Innovation and Learning Center (SILC) under the scheme of Vanavil Mandram in Chennai.
- ❖ This centre is to be a one-stop solution for STEM among students and teachers, according to a press release.
- ❖ The centre will introduce students to a transdisciplinary learning approach through robotics, AI, Space technology, and the STEM incubation workstation.



## NATIONAL

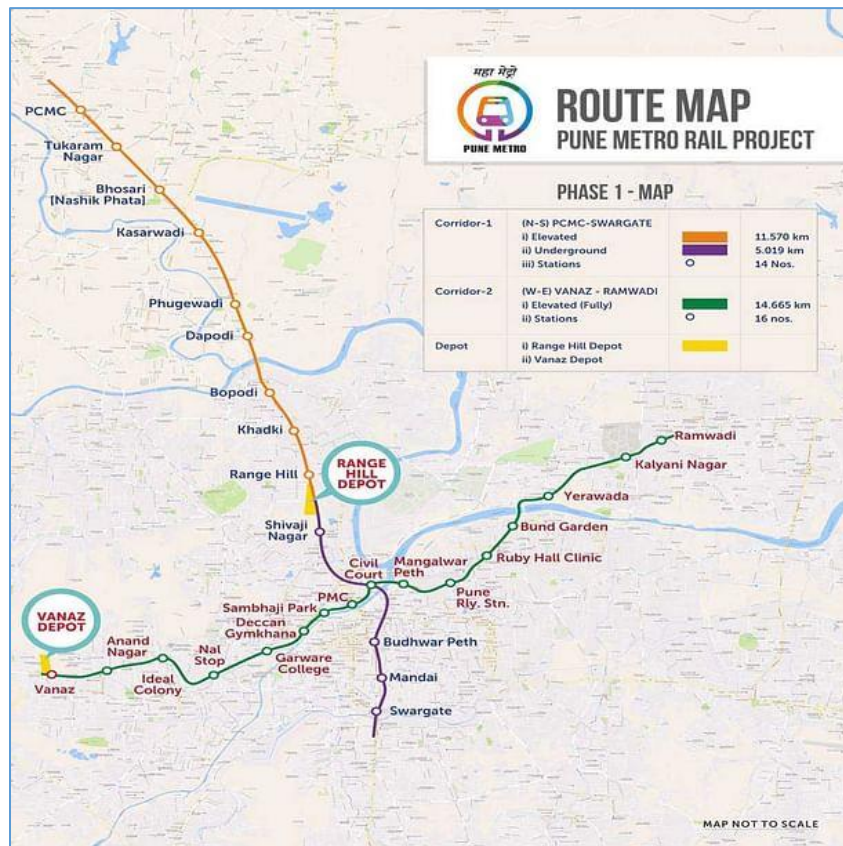
### Covovax as booster dose

- ❖ The Drug Controller General of India (DCGI) has approved the use of Serum Institute of India's (SII) Covovax as a heterologous booster dose.

- ❖ This can be used for those who have previously taken two doses of Covaxin or Covishield.
- ❖ A heterologous booster is when the third dose is different from the earlier doses.
- ❖ Covovax is manufactured through technology transfer from Novavax.



## India's deepest Metro station

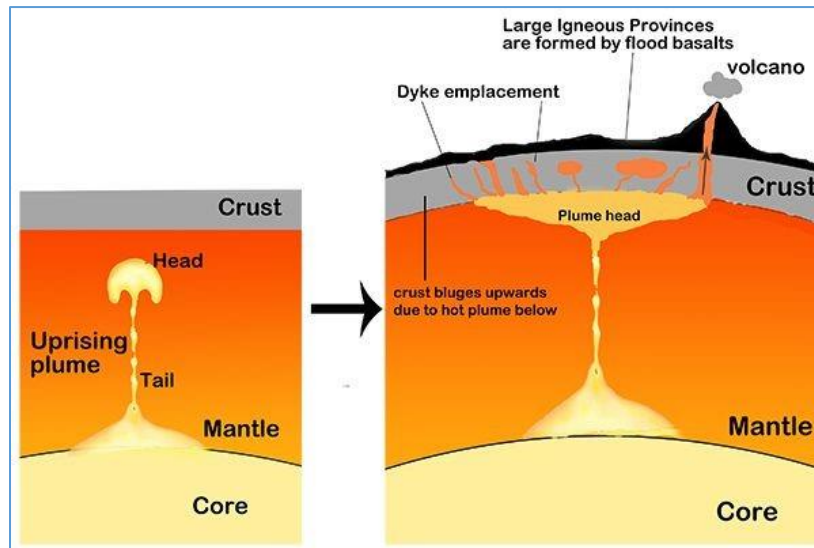


- ❖ India's deepest underground station is to come up at Pune's civil court.
- ❖ It has been constructed at a depth of 33.1 metres.

## SCIENCE AND TECHNOLOGY

### Mantle plume found on Mars

- ❖ Researchers have discovered an enormous mantle plume pushing the surface of Mars upward and driving intense volcanic and seismic activity.
- ❖ The mantle plume is situated underneath a low-lying area called Elysium Planitia that lies north to the equator.
- ❖ We have strong evidence for mantle plumes being active on Earth and Venus.
- ❖ Mantle plumes are large blobs of molten rock that rise towards the surface from the interiors of a planet.
- ❖ They push through the intermediate or mantle layers and accumulate at the base of the crust.
- ❖ This geological phenomenon can be witnessed on Earth in Hawaii where the warm materials from the plume ooze out of fissures to create great volcanic plains.



### Solitary waves around Mars

- ❖ A team of astronomers from the Indian Institute of Geomagnetism (IIG) have found the first evidence of the presence of solitary waves or distinct electric field fluctuations on Mars.



- ❖ The study of these waves is crucial as they directly control particle energization, plasma loss, transport etc through wave particle interactions".
- ❖ Earth has a magnetosphere around it which is basically a shield around a planet made of magnetic field.
- ❖ Mars only has a weak magnetic field from its crustal magnetic sources.
- ❖ This allows the solar winds to interact with the Martian atmosphere and create solitary flows.
- ❖ Solitary waves are distinct electric field fluctuations (bipolar or monopolar) that follow constant amplitude-phase relations.



### **Hemo-halt bandage**



- ❖ The scientists have prepared a biopolymer-based gel formulation and dressing in the form of 'Hemohalt'.

- ❖ It is as an effective and safe dressing for hemorrhage control is crucial.
- ❖ Heavy bleeding can be stopped in a matter of three minutes when wrap up the wounds with 'Hemohalt'.
- ❖ It can reduce blood loss before treatment, save lives, and reduce disabilities on the battlefield.
- ❖ This bandage is developed by MACS-Agharkar Research Institute, an autonomous institute under DST.

## ENVIRONMENT

### Four dinosaur species



- ❖ Scientists have found the remains of four species of dinosaurs, including a megaraptor.
- ❖ The fossils were found in Cerro Guido, in southern Chile's Las Chinas valley near the border with Argentina.
- ❖ They belong to dinosaurs that have not previously been identified in the area.
- ❖ Megaraptor was a large theropod of the Cretaceous Period.
- ❖ These carnivorous dinosaurs had raptor claws, small teeth for tearing, and large upper limbs.
- ❖ They inhabited between 66 and 75 million years ago, at the end of the Cretaceous period.
- ❖ The Cretaceous Period, in geologic time, is the last of the three periods of the Mesozoic Era.
- ❖ The Cretaceous began 145.0 million years ago and ended 66 million years ago.

- ❖ Theropod group includes all the known carnivorous dinosaurs as well as the birds.

### Europe's Largest Deposit of Rare Earths




























- ❖ Swedish government reported the largest deposit of rare earth metals ever discovered in Europe, more than a million tonnes of rare earth oxides.
- ❖ There is currently zero rare earth mining in Europe.
- ❖ China has produces some 61% of the world's rare earth supply.
- ❖ The world's largest known rare earths deposit is the Bayan Obo deposit in Inner Mongolia, northern China.
- ❖ It has been in production since 1957 and contains some 40 million tonnes of reserves.
- ❖ There are 17 rare earth elements, prized for their outstanding magnetic and conductive qualities.
- ❖ The most important at the moment is neodymium, which is alloyed with boron and iron to form the world's strongest permanent magnets.
- ❖ They can be found in mobiles, hard drives, and trains.

## REPORTS AND INDICES

### Brand Guardianship Index 2023

- ❖ Mukesh Ambani has been ranked No. 2 globally and No. 1 among Indians in Brand Guardianship Index 2023.
- ❖ Nvidia CEO, Jensen Huang, has become the highest ranked CEO globally.
- ❖ Microsoft's Satya Nadella ranked 3rd place.

- ❖ He is followed by Adobe’s Shantanu Narayen and Google’s Sundar Pichai.
- ❖ This index is compiled by Brand Finance.
- ❖ This Index celebrates the CEOs who balance the needs of commercial success, long-term brand building and personal reputation management.

#1 Jensen Huang  NVIDIA.	#2 Mukesh Ambani  Reliance	#3 Satya Nadella  Microsoft	#4 Shantanu Narayen  Adobe	#5 Sundar Pichai  Google
#6 Punit Renjen  Deloitte.	#7 Fabrizio Freda  ESTÉE LAUDER COMPANIES	#8 Natarajan Chandrasekaran  TATA	#9 Piyush Gupta  DBS	#10 Huateng Ma  Tencent 腾讯
#11 Leena Nair  CHANEL	#12 Akio Toyoda  TOYOTA	#13 Minfang Lu  蒙牛	#14 Lei Ding  NetEase	#15 Julie Sweet  accenture
#16 Henry Fernandez  MSCI	#17 Reed Hastings  NETFLIX	#18 Lei Jun  MI	#19 Wei Wang  SF EXPRESS 顺丰速运	#20 Dr. Sultan Ahmed Al Jaber  ADNOC
#21 Bob Moritz  pwc	#22 Hatem Dowidar  e&	#23 Anand Mahindra  Mahindra	#24 Congqin Zeng  五粮液 WULIANGYE	#25 Miao Liu  LUZHOULIANGYAO

Brand Finance Brand Guardianship Index 100 2023  
brandirectory.com/brand-guardianship 15  
© Brand Finance Plc 2023

## STATES

### States Foundation Day



- ❖ The Statehood Day of Manipur, Meghalaya and Tripura is celebrated on January 21.



- ❖ This year marks the 51<sup>st</sup> foundation year for the three states.
- ❖ Manipur and Tripura were princely states which were absorbed into India in October 1949.
- ❖ Meghalaya was part of Assam after Independence.
- ❖ The states came into being in 1972 after the North-Eastern Areas (Reorganisation) Act, of 1971, was enacted.

### Basic documents to all tribal



- ❖ Wayanad in Kerala becomes the first district in the country to provide basic documents and facilities to all tribal.
- ❖ This includes Aadhaar cards, ration cards, birth/death certificates, election ID cards, bank accounts and health insurance to all tribespeople.
- ❖ The Wayanad district administration has attained the meritorious achievement by the Akshaya Big Campaign for Document Digitisation (ABCD) campaign.

