

December - 19

## TNPSC BITS

- ❖ Barracuda, India's fastest solar-electric boat, was launched in Alappuzha, Kerala.
- ❖ Leander Paes and broadcaster and promoter Vijay Amritraj of India have become the first Asian men to be inducted into the International Tennis Hall of Fame.
  - Besides the duo, renowned journalist and writer Richard Evans have also been elected in the Ultimate Honour in Tennis.
- ❖ International Finance Corporation (IFC) has recognised Federal Bank as the top performer of the 2023 Climate Assessment for Financial Institutions (CAFI) Awards for Climate Reporting.
- ❖ The Directorate General of Civil Aviation granted an aerodrome licence for the Ayodhya's Maryada Purshottam Shri Ram International Airport.
- ❖ India's Antim Panghal was named the women's Rising Star of the Year 2023 by United World Wrestling (UWW).
- ❖ Shah Rukh Khan tops UK's Top 50 Asian Celebrities in the World list for 2023 followed by Alia Bhatt and Priyanka Chopra.

## NATIONAL

### Trending Decline in Female Unemployment Rate

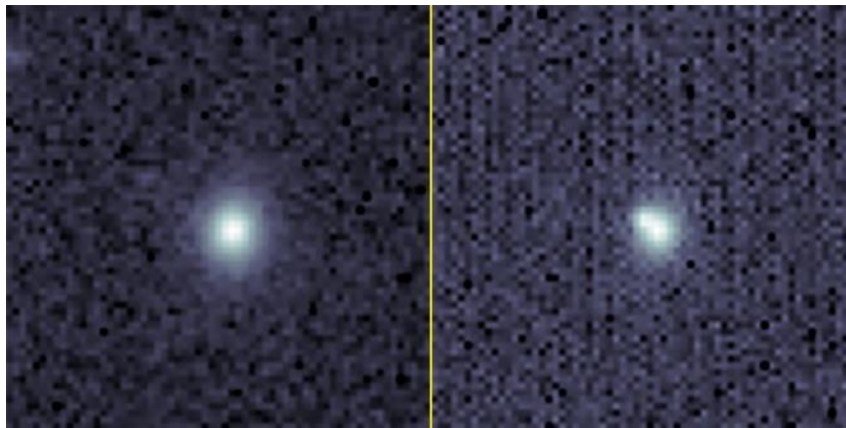


- ❖ The female labour force participation rate is rising to 24% compared with 23.2% in the previous quarter and 21.7% in Q2FY23.
- ❖ The unemployment rate, although higher than men, declined below the 9% mark in Q2FY24 for the first time in over three years.

- ❖ Female urban unemployment fell to 8.6% in Q2FY24 compared with 9.1% in the previous quarter.
- ❖ Net New Women EPFO subscribers surge to 28.69 Lakh in FY23
- ❖ The overall unemployment rate remained unchanged from the previous quarter at 6.6%.
- ❖ The male unemployment rate rose to 6% from 5.9% in the previous quarter.

## SCIENCE AND TECHNOLOGY

### Bright Transient Survey Bot (BTSbot)

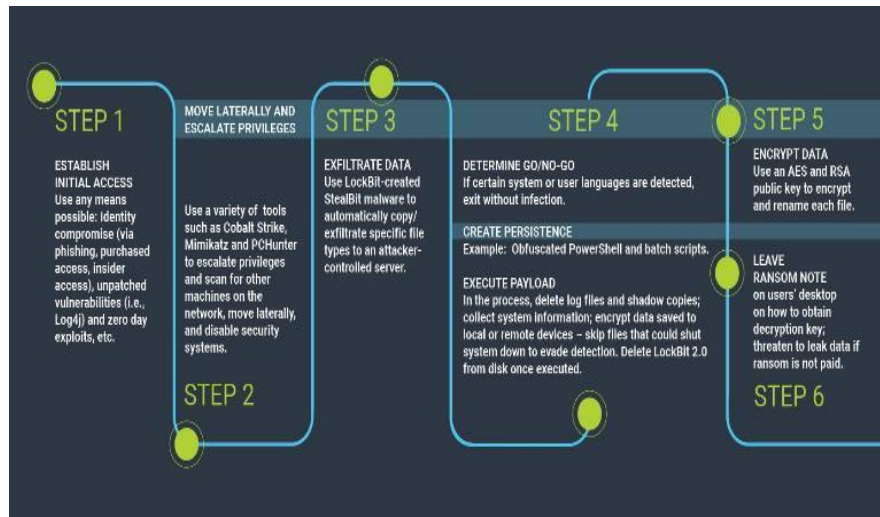


- ❖ A new artificial intelligence (AI) tool and a fully automated process have successfully detected, identified, and classified its first supernova.
- ❖ It detected the newly discovered supernova named SN2023tyk
- ❖ The AI tool is called BTSbot - Bright Transient Survey Bot.
- ❖ It was trained on more than 1.4 million historical images from 16,000 astronomical sources.

### Lockbit 3.0

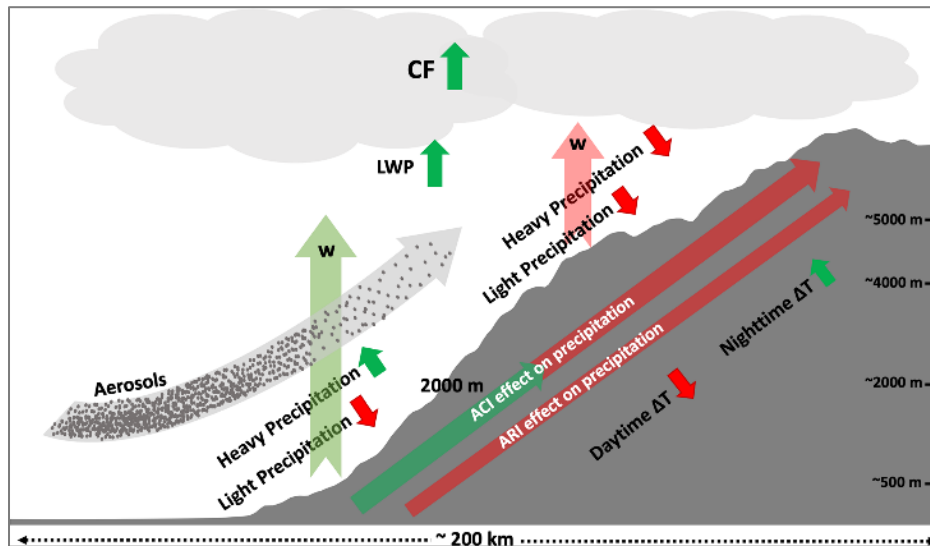
- ❖ The US division of China's biggest lender the Industrial and Commercial Bank of China was recently hit by a ransomware attack.
- ❖ Ransomware named Lockbit 3.0 was behind the attack.
- ❖ LockBit 3.0 was created by Lockbit, a group which effectively sells its malware on the dark web.
- ❖ Lockbit 3.0 is the most popular strain of ransomware, accounting for around 28 per cent of all known attacks from July 2022 to June 2023.

- ❖ Ransomware is a type of malicious software, that either blocks access to, or threatens to publish sensitive data until the victim pays a ransom fee to the attacker.



## ENVIRONMENT

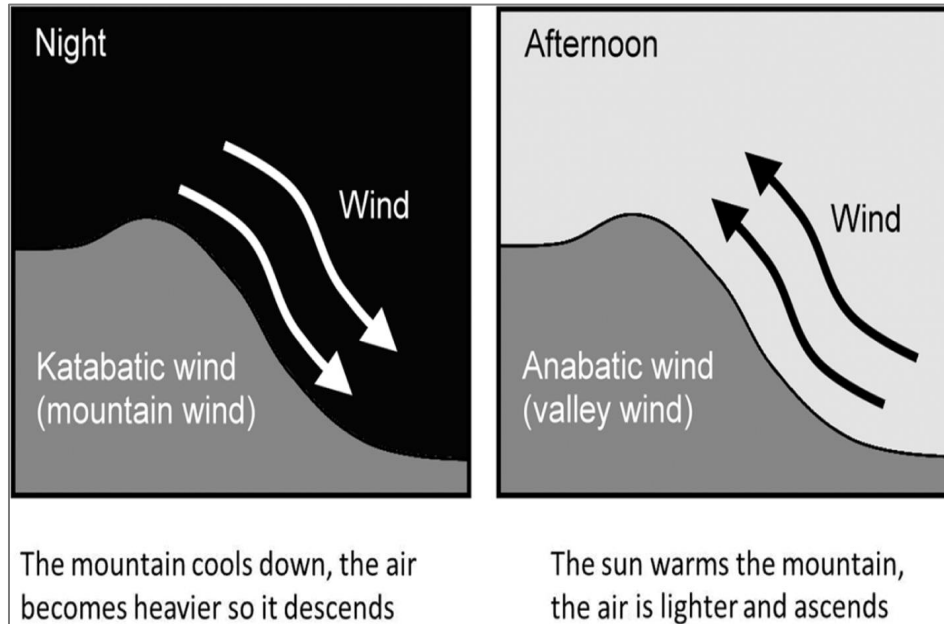
### Aerosol Impact on Climate in the Himalayan Region



- ❖ ISRO's Ahmedabad-based Physical Research Laboratory (PRL) has found that the aerosols are heating up the Himalayas.
- ❖ It will remain a key factor driving climate change over the Hindu Kush–Himalaya–Tibetan Plateau (HKHTP) region".
- ❖ Aerosols alone account for over 50% of the total warming (aerosols + greenhouse gases) of the lower atmosphere.

- ❖ This is a first-time analysis of its kind that includes ground-based observations, satellite data and model simulations.

### **Himalayan Katabatic Winds**



- ❖ Scientists have noted that when high temperatures hit high-altitude ice masses, 'katabatic' winds are triggered that blow cold air to lower-altitude areas.
- ❖ A temperature gap is created between the air flowing above the mountains and the cooler air directly in contact with ice masses.
- ❖ This leads to an increase in turbulent heat exchange at the glacier's surface and stronger cooling of the surface air mass.
- ❖ As the warm air gets cooler and denser, it sinks, triggering the katabatic winds in neighbouring areas down the slope.
- ❖ While this phenomenon may slow down the effects of global warming in some areas, its sustainability is not guaranteed over the coming decades.

### **Wakayama soryu**

- ❖ 72 million years ago, the Pacific seas were terrorised by a giant monster, called the "blue dragon".
- ❖ Researchers have named the monster Wakayama Soryu, which means Blue Dragon.
- ❖ The apex predator was a mosasaur, an extinct, large marine reptile from the Late Cretaceous period.

- ❖ It has been named after Japan's Wakayama Prefecture where its fossil was found.



## REPORTS AND INDICES

### Mercer's Quality of Living Index 2023

Ranking 2023	City	Location
1	VIENNA	AUSTRIA
2	ZURICH	SWITZERLAND
3	AUCKLAND	NEW ZEALAND
4	COPENHAGEN	DENMARK
5	GENEVA	SWITZERLAND

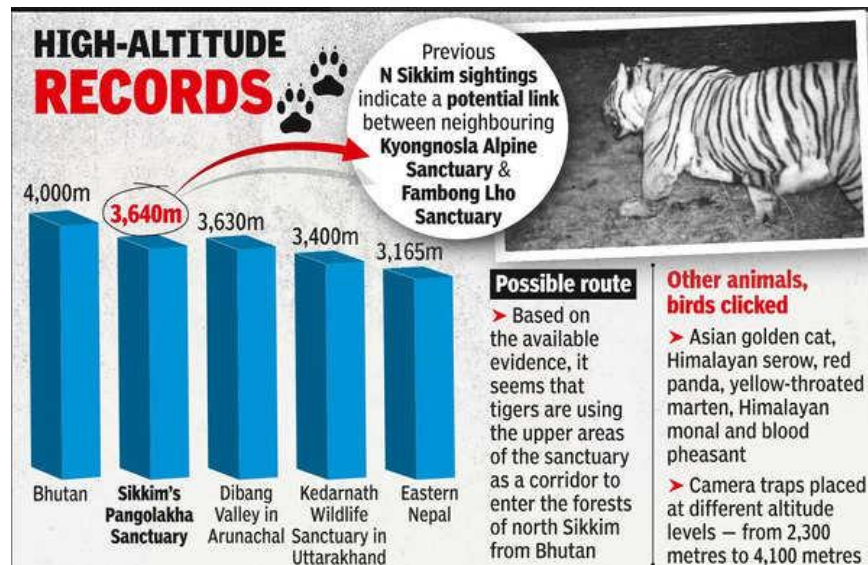
- ❖ Vienna (Austria), Zurich (Switzerland) and Vancouver (Canada) are the top three cities in that order.
- ❖ Hyderabad ranked 153rd and Bengaluru attained the 156th spot.

- ❖ Pune (154) has the second best 'quality of life' in India after Hyderabad.
- ❖ The last of these rankings were published in 2019 where Pune and Hyderabad both shared the 143rd position.

## STATES

### Tiger in Pangolakha Wildlife Sanctuary

- ❖ Pangolakha Wildlife reserve of Sikkim have captured a tiger at an elevation of 3640 metres.
- ❖ This is the highest elevation in India where tigers have been spotted
- ❖ Before this, the highest altitude where tigers have been spotted in India was in Arunachal Pradesh at a height of 3,630m.
- ❖ In Bhutan, tigers have been found at an elevation of more than 4,000m.



## PERSONALITIES, AWARDS, AND EVENTS

### Indira Gandhi Peace Prize 2023

- ❖ The Indira Gandhi Prize for Peace, Disarmament and Development for 2023 has been jointly awarded to Daniel Barenboim and Ali Abu Awwad.
- ❖ This is awarded for their efforts in bringing together the youth and peoples of Israel and the Arab World for a non-violent resolution of the Israel-Palestine conflict.

- ❖ Barenboim conferred several awards, including the Great Cross of Merit of the Federal Republic of Germany, Prince of Asturias Awards, and the Commander of the Legion of Honour.
- ❖ In 2014, Mr. Awwad co-founded a local Palestinian-Israeli initiative called Roots, promoting understanding, non-violence and transformation.



### **Governing Council Of UNIDROIT**



- ❖ India's Uma Sekhar was elected to the governing council of the Rome-based International Institute for the Unification of Private Law (UNIDROIT).
- ❖ It is an independent intergovernmental organisation headquartered in Rome, Italy.

- ❖ It is dealing with various legal issues including studying needs and methods for modernising commercial and private laws.
- ❖ The Governing Council consists of 25 positions which are held by distinguished legal experts.

## MISCELLANEOUS

### India's first Sodium ION battery technology

- ❖ KPIT Technologies unveiled its Sodium (Na)- battery technology.
- ❖ The technology is set to lower the cost of an electric vehicle battery by 25-30% compared to the current lithium-ion batteries.
- ❖ It is promising 80% capacity retention for 3000-6000 cycles and faster charging.
- ❖ The sodium-ion batteries will enable faster charging in comparison to lithium-ion batteries.
- ❖ This sodium-ion battery technology is completely reliant on Earth's abundant raw materials.



### Mobile phone usage and sperm count

- ❖ A recent study has explored the potential connection between mobile phone usage and a decrease in male sperm count.
- ❖ Over the past 50 years, global sperm counts have declined by more than 50 per cent.
- ❖ Those who used their mobile phones more than 20 times a day had a 21 percent higher risk of having a low overall sperm count.



- ❖ Mobile phone's low-level radiofrequency electromagnetic fields (RF-EMF) raises the questions about potential health implications.

