

June - 03

TNPSC BITS

- ❖ Guidance Tamil Nadu, the State government's investment promotion agency, signed a MOU with Omron Healthcare, the Japanese medical equipment maker, for establishing a manufacturing unit in the State.
- ❖ Canada has now approved TOEFL (Test of English as a Foreign Language) as an acceptable score for use in Canada's Student Direct Stream.
 - Till now, IELTS was the only English-language testing option which was authorised for the SDS route.

NATIONAL

Periodic Labour Force 2023

Srl. No.	Description of the Indicator	Estimate of Indicator (in per cent)					
		Jan, 2021 – Dec, 2021			Jan, 2022 – Dec, 2022		
		Rural	Urban	Rural + Urban	Rural	Urban	Rural + Urban
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Ratio of female workers to male workers working as Legislators, Senior officials and Managers (age group: 15 years and above)	22.5	17.6	20.0	19.5	18.6	19.0
2	Ratio of female workers to male workers working as Professionals and Technical Workers (age group: 15 years and above)	49.9	45.4	47.3	49.7	44.4	46.5
3	Percentage of female employed with advanced degree among total employed (age group: 25 years and above)	1.3	5.9	2.5	1.2	6.4	2.6

- ❖ The National Statistical Office (NSO) released the data of Periodic Labour Force Survey.
- ❖ The unemployment rate for both males and females aged 15 years and above declined to 6.8% in Q4FY23.
- ❖ This is below 8.2% during a similar period last year.
- ❖ Unemployment rate had peaked at 20.8% in Q1 FY20.
- ❖ The decline in male unemployment was much higher than female unemployment.
- ❖ Even as female labour force participation improved to 22.7% in Q4 from 22.3% in the previous quarter.
- ❖ The unemployment rate remained higher than 9%.
- ❖ Among the major states Chhattisgarh had the highest female labour force participation rate at 31.5%.

- ❖ It is followed by Andhra Pradesh and Tamil Nadu at 30.5% and 27.4%, respectively.
- ❖ Uttar Pradesh was her worst performer with a FLFPR of 13.3%.
- ❖ Overall, unemployment rate was the highest in Chhattisgarh at 12.5% rising from 10.6% in the previous quarter.
- ❖ It is followed by Rajasthan at 11.9%.
- ❖ It was lowest for Delhi at 3.1%, followed by West Bengal at 4.2% and Karnataka at 5.1%.

INTERNATIONAL

Polio Eradication Efforts in West and Central Africa



- ❖ Three countries - Cameroon, Chad and Niger - has kicked off Africa's largest polio vaccination campaign since 2020.
- ❖ The three West and Central African countries intend to immunise 21 million children under the age of five.
- ❖ The vaccination drive started in response to 19 detections of type-2 Polioviruses.
- ❖ Two cases in Niger, 10 in Chad, four in the Central African Republic and three in Cameroon were reported recently.
- ❖ All polio cases in West and Central Africa are due to circulating vaccine-derived poliovirus.

Shenzhou-16 mission

- ❖ China launched a spacecraft carrying three astronauts, including its first civilian, to Tiangong space station.

- ❖ This is the country's fifth manned mission to a fully functional space station since 2021.
- ❖ Jing Haipeng is the leading commander on the mission.
- ❖ The other two are, Zhu Yangzhu and Gui Haichao, the first Chinese civilian to travel to space.

Venturing beyond: Highlights of Shenzhou-16 mission

Spaceship launch time
9:31 a.m. May 30 (BJT)

Duration in space
About five months

Main tasks

- In-orbit crew handover from the Shenzhou-15 crew
- Installation of electric propulsion cylinders
- Lifting of extravehicular cameras
- Installation of large extravehicular application facilities
- Large-scale in-orbit tests
- "Tiangong classroom" teaching activities

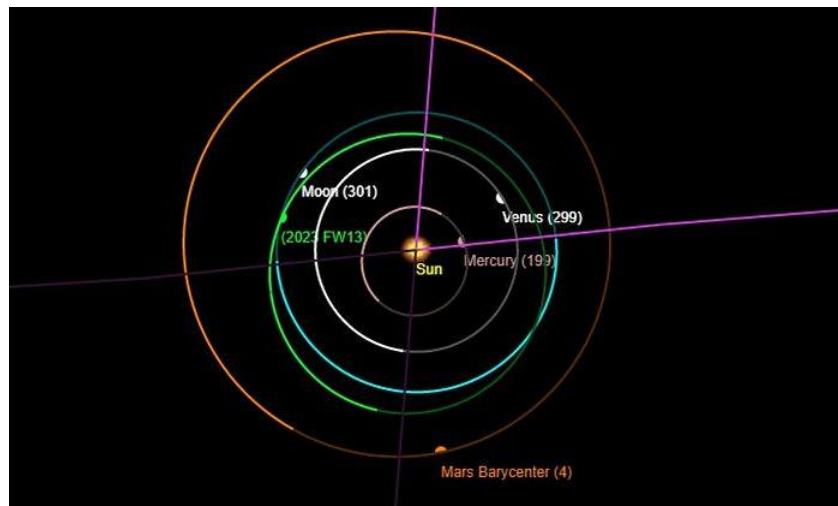
Shenzhou-16 is the first manned mission since China's space station entered the application and development stage.

CREW MEMBERS

- Gui Haichao**
36, payload expert, his first space trip
- Jing Haipeng**
56, mission commander, visiting space for the fourth time
- Zhu Yangzhu**
36, spaceflight engineer, his first space trip

SCIENCE AND TECHNOLOGY

2023 FW13



- ❖ Scientists have discovered a new asteroid along Earth recently.

- ❖ The asteroid, dubbed 2023 FW13, is considered a "quasi-moon" or "quasi-satellite".
- ❖ The new celestial object orbits the sun in a similar time frame as Earth does.
- ❖ The quasi-moon is estimated to be 50 feet (15 metres).
- ❖ While orbiting the Sun, the quasi-moon also circles the Earth.
- ❖ It is coming within nine million miles (14 million kilometres) from Earth.
- ❖ This is not Earth's only quasi-companion.
- ❖ Another quasi-satellite, known as Kamo'oalewa, was discovered in 2016.

Israel-1 Supercomputer

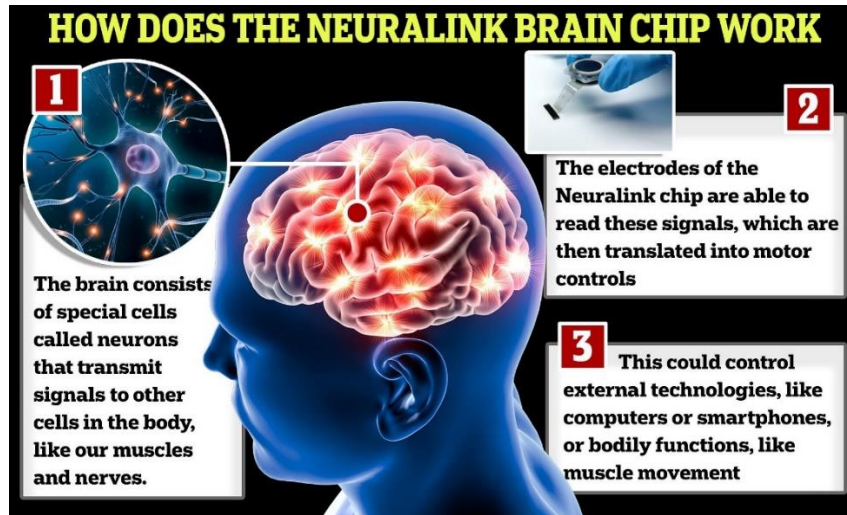


- ❖ Nvidia Corporation will build Israel-1, one of the world's most powerful AI supercomputers.
- ❖ Israel-1 is expected to deliver up to 8 exaflops of peak AI performance.
- ❖ An exaflop is a measure of performance for a supercomputer.
- ❖ It can calculate at least one quintillion (10^{18}) floating-point operations per second.

Neuralink Chip

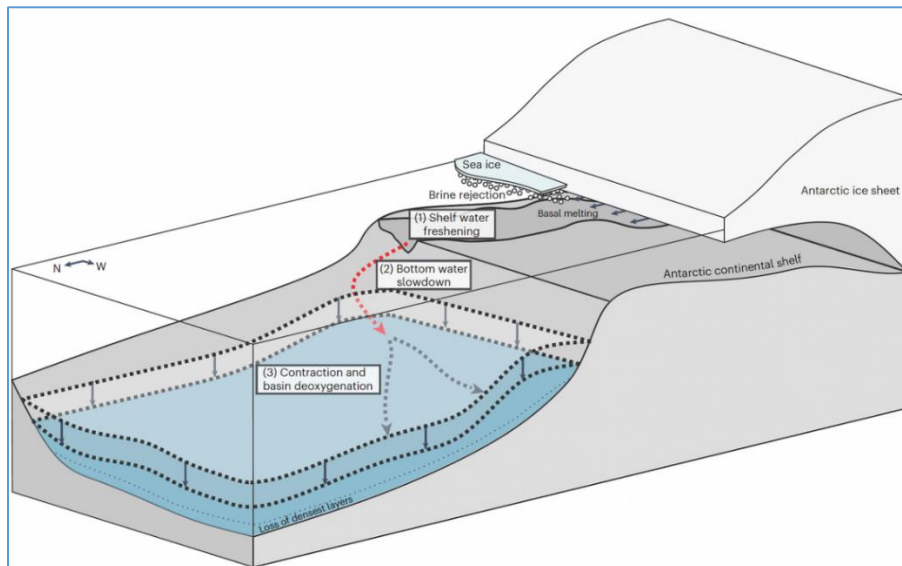
- ❖ Elon Musk founded a neurotechnology company Neuralink in 2016.
- ❖ Neuralink is now making a Class III medical device known as a brain-computer interface (BCI).
- ❖ The device connects the brain to an external computer via a Bluetooth signal, enabling continuous communication back and forth.
- ❖ The device itself is a coin-sized unit called a Link.
- ❖ It's implanted within a small disk-shaped cut out in the skull using a precision surgical robot.

- ❖ The robot splices a thousand tiny threads from the Link to certain neurons in the brain.



ENVIRONMENT

Deep ocean currents in Antarctica



- ❖ Antarctica drives a global network of ocean currents called the “overturning circulation” that redistributes heat, carbon and nutrients around the globe.
- ❖ The overturning is crucial to keeping the earth’s climate stable.
- ❖ It’s also the main way oxygen reaches the deep ocean.
- ❖ Recent measurements show the overturning circulation has slowed by almost a third (30%) and deep ocean oxygen levels are declining.

- ❖ This is happening even earlier than climate models predicted.
- ❖ As the flow of bottom water slows, the supply of oxygen to the deep ocean declines.
- ❖ The shrinking oxygen-rich bottom water layer is then replaced by warmer waters that are lower in oxygen, further reducing oxygen levels.
- ❖ Ocean animals, large and small, respond to even small changes in oxygen.
- ❖ Deep-ocean animals are adapted to low oxygen conditions but still have to breathe.
- ❖ Losses of oxygen may cause them to seek refuge in other regions or adapt their behaviour.

Borealis Mud Volcano

- ❖ Scientists have discovered an ancient, methane-spewing volcano at the bottom of the Barents Sea.
- ❖ The volcano named 'Borealis Mud Volcano' lies approximately 70 nautical miles south of Bear Island at 400m depth.
- ❖ The volcano is the second-ever mud volcano found within Norwegian waters.
- ❖ The volcano is situated inside a crater that is nearly 300 meters wide and 25 meters deep.

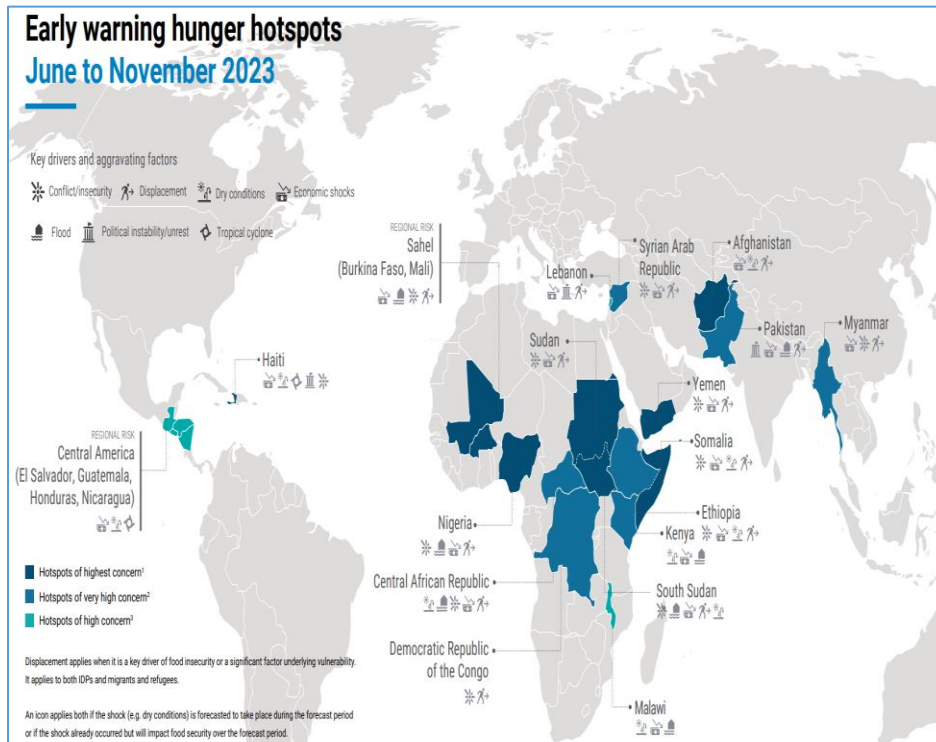


REPORTS AND INDICES

Hunger Hotspots – FAO/WFP

- ❖ The report named 'Hunger Hotspots – FAO/WFP early warnings on acute food insecurity' was released recently.

- ❖ Pakistan, the Central African Republic, Ethiopia, Kenya, the Democratic Republic of the Congo and the Syrian Arab Republic are hotspots with very high concern.
- ❖ The warning is also extended to Myanmar.
- ❖ Acute food insecurity can potentially increase in magnitude and severity for 18 areas in 22 countries.
- ❖ Afghanistan, Nigeria, Somalia, South Sudan and Yemen remain at the highest concern level.
- ❖ Haiti, the Sahel (Burkina Faso and Mali) and Sudan have been elevated to the highest concern levels.



MISCELLANEOUS

Lipizzan Horses

- ❖ Lipizzan horses have recently achieved the recognition on UNESCO's Intangible Cultural Heritage list.
- ❖ The noble Lipizzans, also known as Lipizzaners, are descendants of long stallion lines crossing Spanish, Arabic and Berber horses.
- ❖ They were first bred by the Habsburg court in the 16th century.



- ❖ Eight countries jointly applied for recognition of their shared breeding heritage of Lipizzan horses.

