

May - 09

TNPSC BITS

- ❖ The Hindu's explainer page has won three awards at the 6th International Newspaper Design Competition organised by newspaperdesign.in.
- ❖ The Pension Department has launched an online portal called Bhavishya for tracking pension payments and sanctions for government retirees. The
- ❖ A series of COVID-19 variants within the Omicron JN.1 lineage, known as FLiRT, including the KP.2 and KP 1.1 variants, is rapidly spreading in the United States.
- ❖ The European Union has recently pledged \$1 billion in aid to Lebanon.
- ❖ World Laughter Day is celebrated annually on the first Sunday of May (May 05) to promote the joy of laughter and its many health benefits.

TAMIL NADU

TN 12th results 2024

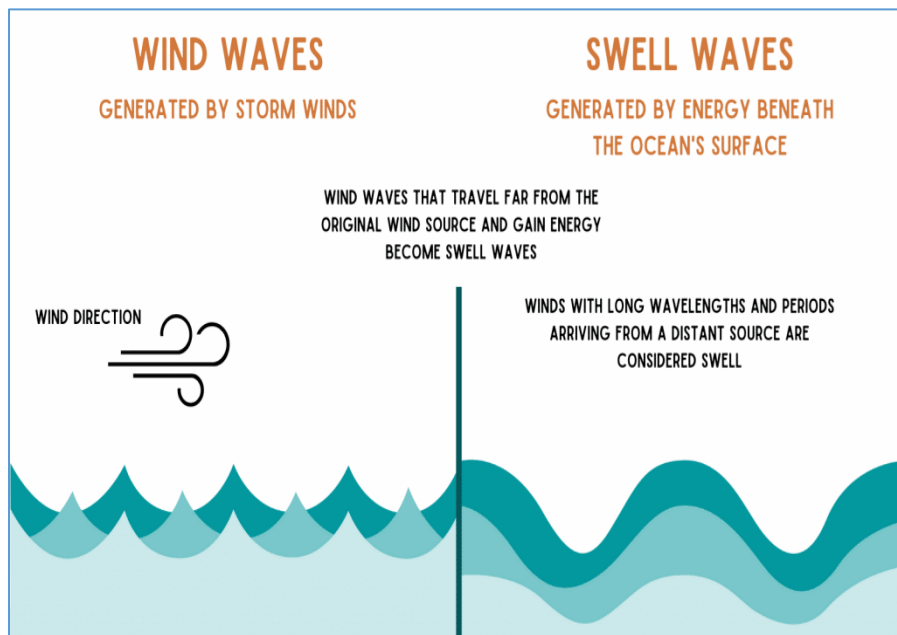
HR. SEC. SECOND YEAR EXAMINATION MARCH - 2024 - GROUP WISE PERFORMANCE												
GROUP	APPEARED				PASSED				PERCENTAGE			
	BOYS	GIRLS	T.G	TOTAL	BOYS	GIRLS	T.G	TOTAL	BOYS	GIRLS	T.G	TOTAL
SCIENCE	216359	270601	1	486961	205662	263514	1	469177	95.06	97.38	100.00	96.35
COMMERCE	110590	118214	0	228804	99127	112418	0	211545	89.63	95.10	0.00	92.46
ART	4906	6679	0	11585	3909	6016	0	9925	79.68	90.07	0.00	85.67
VOCATIONAL	20310	12946	0	33256	16607	11942	0	28549	81.77	92.24	0.00	85.85
TOTAL	352165	408440	1	760606	325305	393890	1	719196	92.37	96.44	100.00	94.56

- ❖ This year, the TNDGE conducted the HSE plus 2 exams from March 1 to March 22 in pen and paper mode for over eight lakh candidates.
- ❖ There has been a substantial drop in the number of students appearing the TN +2 exams.
- ❖ There were 8,42,512 students in 2019, 7,79,931 students in 2020, 8,16,473 in 2021, 8,06,277 in 2022.

- ❖ Finally, in 2023, the number of students taking the exam declined to 8,03,385.
- ❖ A total of 2478 schools have achieved 100 per cent result.
- ❖ Of these, 397 are government schools.
- ❖ Science stream has the highest pass percentage of students this year (96.35%).
- ❖ A total of 26,352 students scored 100 marks in any subject
- ❖ Male candidates passed: 3,25,305 (92.37%).
- ❖ Female candidates passed: 3,93,890 (96.44%).
- ❖ Total Pass percentage: 94.56 per cent
- ❖ Tirupur district has scored highest pass percentage of 97.45%.

NATIONAL

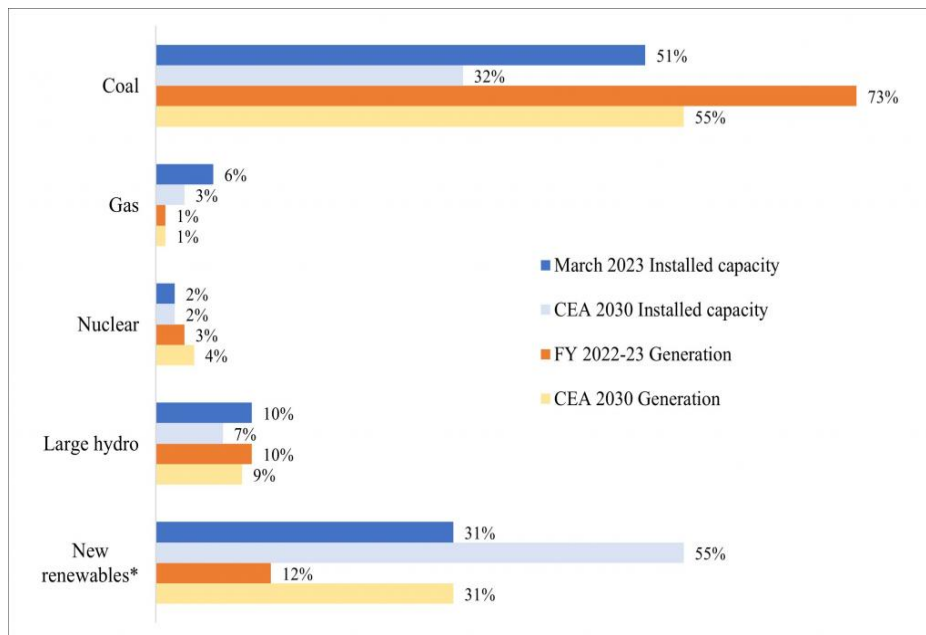
Swell Waves in coasts of India



- ❖ INCOIS forecasted that high sea waves, also known as swell waves, might hit the coastal states.
- ❖ In March, swell waves led to flooding in several areas of Kerala — the worst affected were Alappuzha, Kollam, and Thiruvananthapuram districts.
- ❖ Such flooding events are called Kallakkadal in Kerala.
- ❖ During such storms, huge energy transfer takes place from the air into the water, leading to the formation of very high waves.

- ❖ Such waves can travel thousands of kilometres from the storm centre until they strike shore.
- ❖ Usually, states like Kerala witness swell waves as a result of strong winds in the southern part of the Indian Ocean, where an ocean swell is generated.
- ❖ The waves then travel north to reach the coast in two or three days.
- ❖ Tsunamis are around 10 times faster than swell waves.

Coal's share in electricity



- ❖ Renewable energy (RE) sources contributed to 71 per cent of the total 26 GW of all new power generation capacity.
- ❖ The share of the polluting fossil fuel — coal/lignite — in India's total installed capacity has also dropped below 50 per cent (217.6 GW) for the first time.
- ❖ It now accounts for 49.2 per cent of total installed capacity.

SCIENCE AND TECHNOLOGY

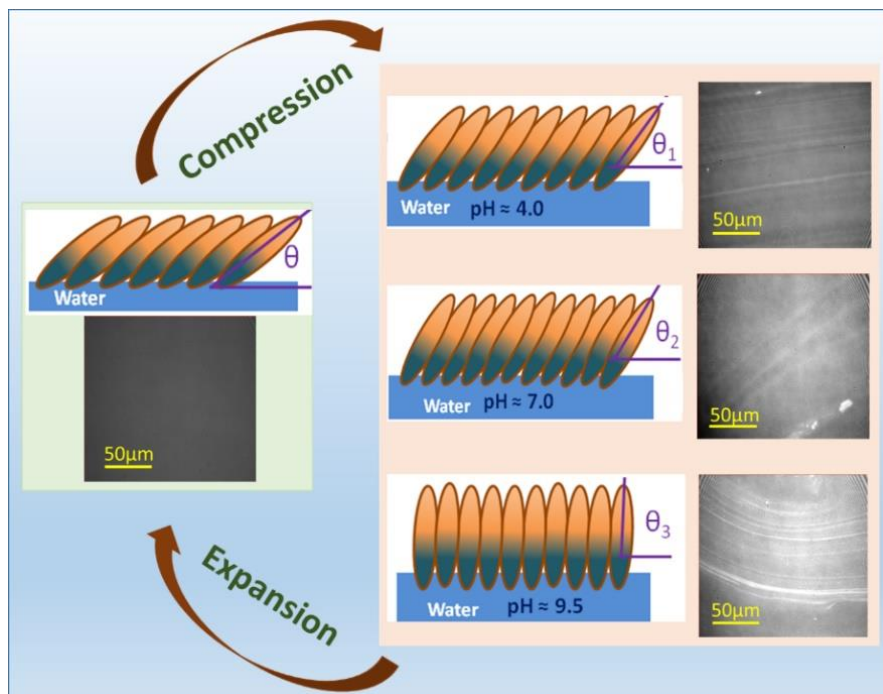
First Indigenous Bomber UAV

- ❖ Flying Wedge Defence and Aerospace Technologies unveiled the FWD-200B.
- ❖ It is the country's first indigenous bomber unmanned aerial vehicle (UAV).
- ❖ The FWD-200B is a medium-altitude, long-endurance (MALE) unmanned combat aerial vehicle.

- ❖ With a payload capacity of 100kg, it can carry optical surveillance payloads as well as precision air-strike weapons.



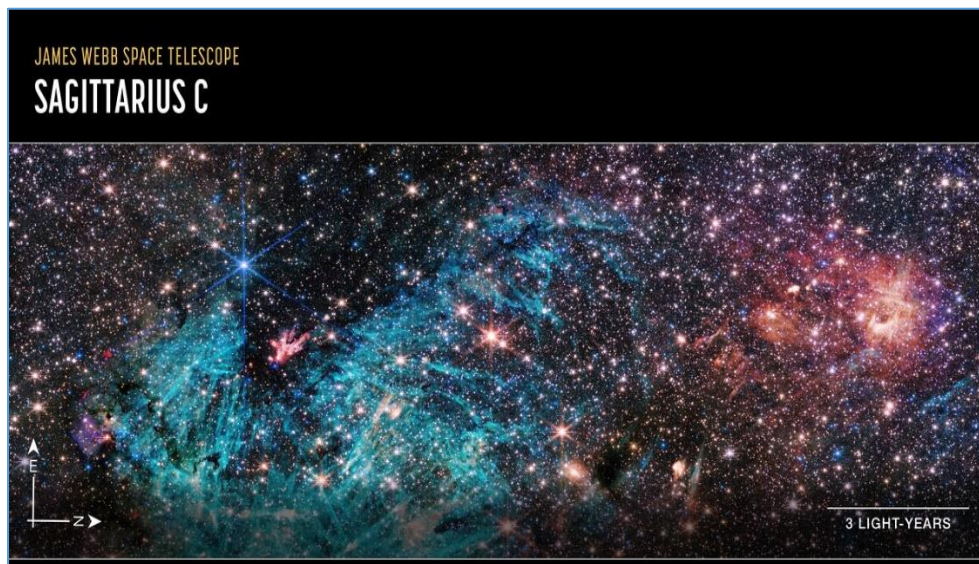
2D Protein Monolayer



- ❖ Scientists have successfully fabricated a 2D protein monolayer using lysozyme molecules.
- ❖ It serves as a model protein for understanding diseases like Amyloidosis.
- ❖ This research not only paves the way for a more profound comprehension of Amyloidosis but also establishes a versatile platform for probing disease mechanisms.

- ❖ Lysozyme is a naturally occurring enzyme found in various bodily secretions like tears, saliva, mucus.
- ❖ It plays a crucial role in the body's defence system against bacteria.
- ❖ Amyloidosis is a rare condition characterized by the accumulation of a protein called amyloid in various organs.
- ❖ This buildup can adversely affect the functioning of vital organs such as the heart, kidneys, liver, spleen, nervous system, and digestive tract, ultimately leading to multi-organ dysfunction.

JWST's Cosmic revelation

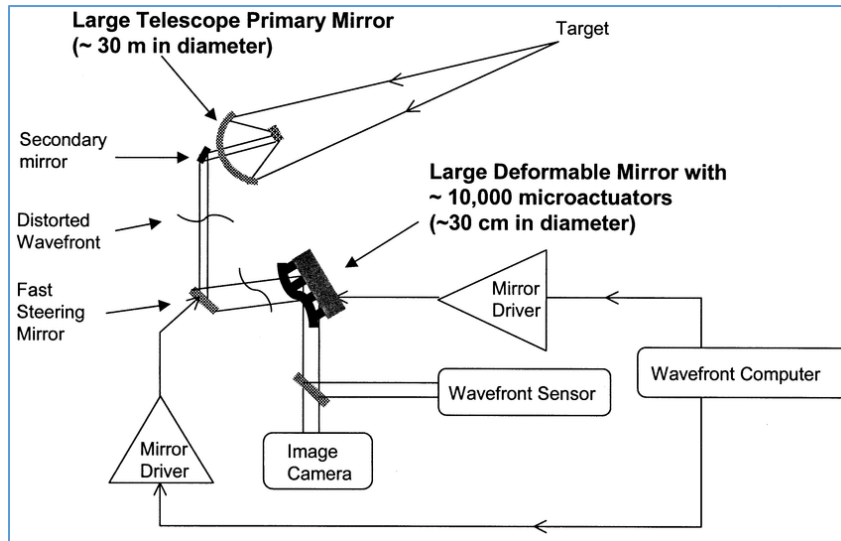


- ❖ NASA's James Webb Space Telescope has treated us to an enchanting image of a vast cluster of 500,000 stars within Sagittarius C.
- ❖ It is a star-forming region approximately 300 light-years away from the centre of the Milky Way.
- ❖ Sagittarius C is situated around 25,000 light years away from Earth.
- ❖ This will provide into the intricacies of star birth.

Deformable Mirrors in Space Telescopes

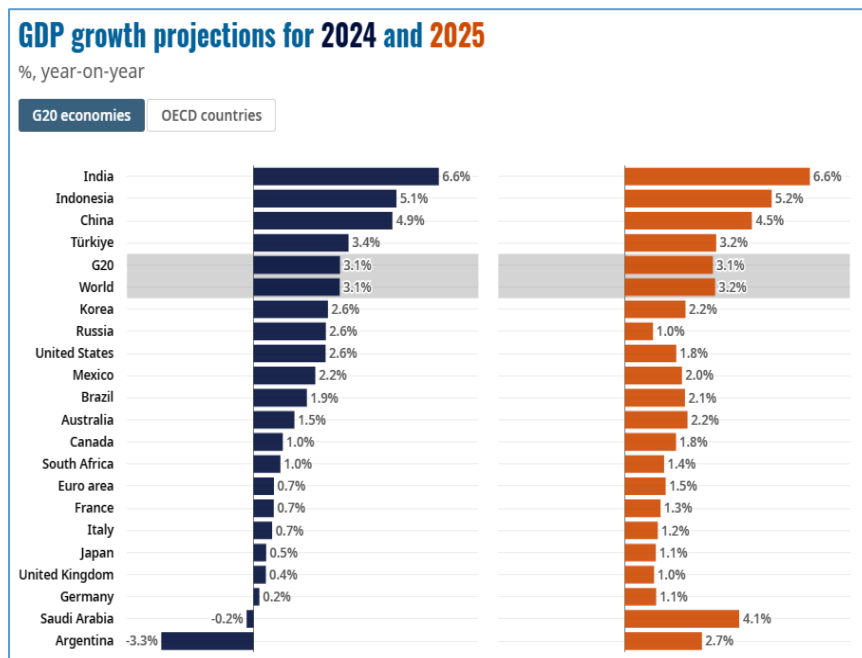
- ❖ As per NASA reports, these mirrors may enable direct imaging of exoplanets by correcting imperfections or shape changes in a space telescope down to subatomic scales.
- ❖ Notably, deformable mirrors are used in conjunction with wavefront sensors and real-time control systems in adaptive optics.

- ❖ Deformable mirrors (DM) are the mirrors whose surfaces can be bent to achieve wavefront control and optical aberration correction.
- ❖ Also, their shape can be controlled with speed.



REPORTS AND INDICES

OECD's Economic Outlook



- ❖ Headline inflation in the OECD countries is expected to fall to 5% in 2024, from 6.9% in 2023, and decline further to 3.4% in 2025.

- ❖ By the end of 2025, inflation in the OECD is projected to be close to most central bank targets of 2%.
- ❖ The G20 and other developed nations' growth are likely to lag significantly behind developing nations.
- ❖ The United Kingdom estimated to see a growth of only 0.4% in 2024, rising to 1% in 2025.
- ❖ The Euro area is estimated to see a growth of 0.7% in 2024 and 1.5% in 2025.
- ❖ France is also likely to see a 0.7% this year, but could possibly lag the Euro area with a 1.3% growth in 2025.
- ❖ Similarly, Italy is also expected to grow 0.7% this year, jumping to 1.2% in 2025.
- ❖ Germany, long considered the “sick man” of Europe, is expected a very modest 0.2% growth.
- ❖ India is expected to grow at a steady rate of 6.6% for both 2024 and 2025, while Indonesia could see a 5.1% rise in 2024, moving to 5.2% in 2025.
- ❖ However, China expected to increase 4.9% this year, but only 4.5% next year.

IMPORTANT DAYS

International Leopard Day - May 03

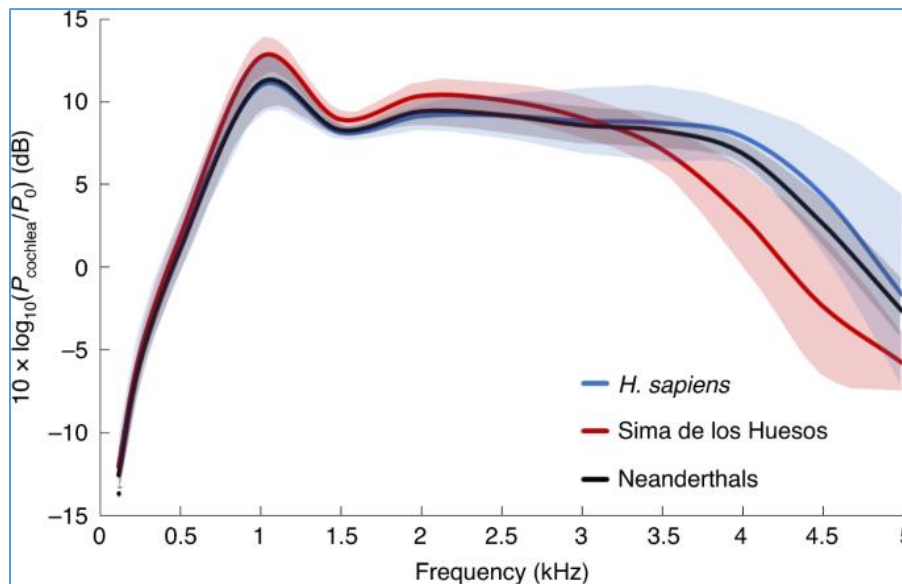


- ❖ It aims to raise the awareness about the leopards and their protection and its conservation.
- ❖ The leopard (*Panthera pardus*) is the smallest of the Big Cat family.
- ❖ IUCN Red List status of leopard is Vulnerable.
- ❖ India's leopard population rose by 8% from 12,852 in 2018 to 13,874 in 2022.

- ❖ About 65% of the leopard population is present outside protected areas in the Shivalik landscape.
- ❖ Madhya Pradesh has the highest number of leopards (3,907), followed by Maharashtra, Karnataka, and Tamil Nadu.

MISCELLANEOUS

Neanderthals' Speech Capacities



- ❖ Researchers unveiled evidence that Neanderthals possessed the capacity both to hear and produce speech sounds akin to modern humans.
- ❖ They had optimized hearing in the 4 to 5 kilohertz range, similar to modern humans, suggesting a need for vocal communication.
- ❖ The ear structures of Neanderthals and a Sima hominin ancestor, a fossil dating back approximately 430,000 years was analysed for this.

