

EVERYDAY CURRENT AFFAIRS-APRIL 23, 2023

TAMIL NADU

- **On April 21, the Tamil Nadu government - notified the 'Tamil Nadu Online Gaming Authority and Regulation of Online Games Rules'**
- ✓ With this, the Tamil Nadu Prohibition of Online Gambling and Regulation of Online Games Act has come into force in the state
- ✓ It mandated every online game provider to apply in a month to get a certificate of registration from the gaming authority.
- ✓ As per the rules, every person, who intends to provide any service for the conduct of any online game shall make an application within 30 days there from for grant of certificate of registration to the gaming authority, on payment of fee of Rs.1 lakh.
- ✓ The five-member gaming authority would be led by a retired bureaucrat not below the rank of chief secretary
- ✓ It is empowered to issue show cause notice to an online games provider, if they fail to comply with the provisions and also can revoke the registration if required.
- ✓ The authority will have to submit to the government an annual report on the outcome of regulatory measures undertaken, plan for the year ahead, number of certificates and show-cause notices issued, among other things, by October 30 every year.
- ✓ With the law coming into force, playing online games of chance, rummy and poker, with money or other stakes is banned.
- ✓ Any person, who provides online gambling service, would be punished with imprisonment for a term which may extend to three years or with fine which may extend to Rs.10 lakh.
- ✓ Any person aggrieved by an order of the gaming authority revoking or suspending the certificate of registration can prefer an appeal within a fortnight to an appellate authority notified.

STATES

- **The first animal birth control training centre in the country - will soon come up in Lucknow, Uttar Pradesh**
- ✓ The veterinary officers, paramedics and civic officials involved in managing population of canines will be trained in the proposed training centre.
- ✓ The centre will come up at Jarhara in Indiranagar and is going to be operational within a few weeks
- ✓ The Lucknow Municipal Corporation along with Animal Welfare Board of India (AWBI) will prepare the module of the training programme, which will also be circulated to other states.

NATIONAL

- **On April 22, the Indian Space Research Organisation (Isro) - successfully launched two Singapore satellites — TeLEOS-2 (a synthetic aperture radar satellite) and Lumelite-4 (a technology demonstration nano-satellite) — in their desired orbits onboard PSLV-C55 mission.**



- ✓ The fourth stage of the rocket, the PSLV Orbital Experimental Module (POEM), conducted seven scientific experiments with seven payloads attached to its PS4 upper stage.
 - ✓ It is a repurposed fourth and final stage of the rocket that normally ends as space debris, after dropping back into the atmosphere and burning up.
 - ✓ Isro has now developed it to be used as an experimental platform to conduct tests with non-separable payloads
 - ✓ These seven payloads belong to ISRO, Bellatrix, Dhruva Space, and the Indian Institute of Astrophysics
 - ✓ One mission by the Indian Institute of Space Science and Technology, ARIS-2, will study the ionosphere, the zone where Earth's atmosphere meets space.

- ✓ The module is also carrying an electronic propulsion system by the start-up Bellatrix Aerospace and satellite deployment systems developed by the start-up Dhruva Space.
 - ✓ These payloads were powered by scientists after the primary and co-passenger satellites are separated
 - ✓ The payloads have an operational lifetime of 30 days in space
 - ✓ For the first time, there will be a deployable solar panel on the PS4 upper stage of a rocket to generate energy for powering the PSLV rocket's final stage for conducting month-long experiments.
- ✓ Polar Satellite Launch Vehicle, PSLV-C55 is a dedicated commercial PSLV mission of NewSpace India Limited (NSIL), which is the commercial arm of ISRO, for an international satellite customer.
- ✓ The rocket lifted off from the first launch pad at Satish Dhawan Space Centre in Sriharikota.
- ✓ It was PSLV's 57th flight and also the 16th flight of PSLV with a CA (core-alone) variant
 - ✓ This is the lightest version of launch vehicle as it has only four core stages and no strap-on boosters to give an added thrust.
- ✓ Around 19 minutes after the lift-off, PSLV-C55 placed 741kg TeLEOS-2 as the primary satellite in a 586km orbit.
- ✓ Fifty seconds later, the rocket placed 16kg Lumelite-4 as a co-passenger satellite in the desired orbit.
- ✓ The PSLV-C55 rocket's main payload is an earth observation satellite, TeLEOS-2, developed by SD Engineering.
 - ✓ It will be used to support satellite imaging requirements of Singapore government agencies
 - ✓ In December 2015, ISRO successfully placed the TeLEOS-1 satellite in the PSLV-C29 mission along with five other satellites of Singapore into a 550 km circular orbit.
- ✓ The other satellite is Lumelite-4, co-developed by the Institute for Infocomm Research and Satellite Technology and Research Centre of the National University of Singapore.
 - ✓ It was built to demonstrate the "High-Performance Space-borne VHF Data Exchange System"
 - ✓ Further, the 16-kg satellite will augment Singapore's maritime navigation and benefit the global shipping community
- ✓ This is also the first time that the first two stages of the PSLV were combined at the newly created PSLV Integration Facility, as it cuts down the time between missions.
- ✓ For forthcoming PSLV missions, all four stages of the rocket will be integrated at the new facility, transported to the launchpad on a mobile platform, and then integrated with the satellite before launch.

- **The traditional convocation held annually to award degrees to IIT students - will now be replaced by a 'commencement' ceremony at the IIT-Bombay.**
- ✓ A commencement ceremony is commonly held in the West, but the IIT-Bombay is probably the first in the country to organise it.
- ✓ Though the event will resemble the convocation, students will not be awarded degrees.
- ✓ The idea is to make the ceremony more inclusive for graduating students and allow every single graduand to celebrate the day with batchmates and family.
- ✓ Degrees will be awarded by respective departments in August or later, whenever the students complete all the credit criteria.
- ✓ The convocation ceremony is usually held in August every year
- ✓ The commencement ceremony will be held in May every year, soon after the semester-end examinations, starting with the current batch.
- ✓ The ceremony this year will be held on May 2, with Union minister of education Dharmendra Pradhan as chief guest.
- ✓ This year, the institute will also be conferring the Degree of Doctor of Science (Honoris Causa) on professor Rohini Godbole, honorary professor, IISc-Bengaluru.

- **On April 19, the Union Cabinet, chaired by Prime Minister Narendra Modi - has approved the National Quantum Mission (NQM) at a cost of Rs 6,003.65 crore for the next eight years - from 2023-24 to 2030-31.**
- ✓ The new mission targets developing intermediate scale quantum computers with 50-1,000 physical qubits in eight years across various platforms like superconducting and photonic technology
 - ✓ In quantum computing, the basic unit of information is called a 'qubit'.
- ✓ The mission will help develop magnetometers with high sensitivity in atomic systems and atomic clocks for precision timing, communications and navigation
- ✓ It will also support the design and synthesis of quantum materials such as superconductors, novel semiconductor structures and topological materials for the fabrication of quantum devices.
- ✓ The mission would greatly benefit communication, health, financial and energy sectors as well as drug design, and space applications.
- ✓ Under NQM, there will be four broad themes — Quantum Computing, Quantum Communication, Quantum Sensing and Metrology and Quantum Material and Devices.
- ✓ The Department of Science and Technology (DST) will lead this national mission, supported by other departments.
- ✓ The Mission Technology Research Council will work as a scientific advisory body for the governing body.
- ✓ Quantum technology is a field of physics and engineering that studies and applies the principles of quantum mechanics to the development of new technologies.

- ✓ Quantum mechanics is the branch of physics that describes the behaviour of matter and energy at a microscopic scale, where the classical laws of physics do not apply
 - ✓ The principle is used in semiconductors, lasers, Blu-ray, transistors, mobile phones, USB drives, MRI, electron microscopes, and even the basic light switch.
 - ✓ Quantum computers use quantum bits (qubits), instead of classical bits to perform calculations.
 - ✓ The advantage of quantum computing is that it can solve the most complex problems much faster with more authenticity in highly secure manner.
 - ✓ Finance Minister Nirmala Sitharaman in her 2020 Budget speech had said that India was set to invest Rs 8,000 crore over the next five years in the National Mission on Quantum Technology or the QuEST programme.
 - ✓ QuEST (Quantum-Enabled Science and Technology) falls under the Department of Science and Technology's Interdisciplinary Cyber Physical Systems (ICPS) division.
 - ✓ Last year, IIT Madras became the first institute from India to join IBM's Quantum Network
 - ✓ Among other nations, the US, China, France, Austria, and Finland are the only countries which are in the research and development stage and are yet to venture into the application stage of the technology
- **The Ministry of Civil Aviation - launched the fifth bidding round of the regional connectivity programme to expand air connectivity to the remotest areas of the country**
- ✓ This round of the Regional Connectivity Scheme-Ude Desh Ka Aam Nagrik (RCS UDAN) will focus on Category-2 and Category-3 routes involving 20–80-seater aircraft and more than 80-seater aircraft, respectively.
 - ✓ Notably, the previous length cap of 600 km has been waived off in the fifth round of bidding, with there being no restriction on the distance covered between the origin and destination of a flight being operated under the scheme.
 - ✓ Besides, no predetermined routes are being offered in this round, as only network and individual routes proposed by airlines will be considered.
 - ✓ To prevent monopolisation of the scheme, no single airline will be awarded the same route, whether in different or the same networks.
 - ✓ In case an airline is unable to launch operations within four months of the award of a route, the Ministry of Civil Aviation will deduct 25% from the performance guarantee deposited by it
 - ✓ Launched in 2017, more than 1.4 crore passengers have travelled by air on subsidised tickets under RCS UDAN.

- **The Union Health Ministry - has requested States and Union Territories to develop 100 food streets in 100 districts across the country to promote hygienic and safe food practices.**
- ✓ This initiative is being taken up as a pilot project to create other such streets across the country for ensuring hygienic and safe food practices.
- ✓ The aim of this project is to encourage safe and healthy food practices among food businesses and community members.
- ✓ This unique initiative will be implemented through National Health Mission in convergence with the Ministry of Housing and Urban Affairs.
- ✓ Under the initiative, a financial assistance of one crore rupees per food street or district will be given by the government.
- ✓ This assistance will be provided under National Health Mission (NHM) in the ratio of 60:40 or 90:10 with the condition that standard branding of these food streets will be done as per FSSAI guidelines

CONFERENCES & SUMMITS

- **The first edition of the biannual Army Commanders conclave 2023 – concluded in New Delhi on April 21**



- ✓ Defence Minister Rajnath Singh addressed the conference on April 19.
- ✓ The Chief of Defence Staff, the Chief of the Naval Staff, and the Chief of the Air Staff also addressed the Army Commanders conference, which commenced on April 17.
- ✓ A hybrid format was used for the conference, utilising existing technology to enable secure communication.
- ✓ The forum reviewed the progress of the activities as part of 'Year of Transformation-2023' along with progress on Agnipath Scheme and digitisation and automation initiatives.
- ✓ During the conference, the top leadership also brainstormed current and emerging security scenarios and reviewed the operational preparedness of the Indian Army.
- ✓ The last day of the conference featured retrofitted electric version of vintage Maruti Suzuki Gypsy

- ✓ Army Commanders Conference is an apex-level event that is an institutional platform for conceptual-level deliberations, resulting in making important policy decisions for the Indian Army

PERSONALITIES

- **Indian swimming sensation Prabhat Koli (23) - became the only Indian open water swimmer to bag three Guinness records**



- ✓ Koli is credited with three Guinness records, and all as youngest swimmer to cross ocean routes.
- ✓ Early last month, Koli became the youngest person in the world to have completed the Ocean Seven Challenge
- ✓ According to Guinness, Koli is recognised as the youngest person to swim across the Tsugaru Channel from Honshu to Hokkaido, Japan while aged 18 years and 46 days on September 11, 2017.
- ✓ The second record came as the youngest to swim across the North Channel from Northern Ireland to Scotland, UK, on August 4, 2018, while he was 19 years and eight days.
- ✓ His third was the youngest swimmer to complete the Oceans Seven open water swimming challenge, after crossing the Cook Strait in New Zealand at 23 years and 217 days on March 1
- ✓ Starting open water swimming at the age of 12, Koli completed 19 international swims including the English Channel.
- ✓ Koli was the recipient of prestigious awards like Shivchhatrapati Puraskar of Maharashtra government and Central government's Tenzing Norgay National Adventure Award

SCIENCE, TECHNOLOGY & ENVIRONMENT

- **A dead NASA satellite that studied the sun for more than a decade - fell to Earth over the Sahara Desert in Sudan on April 20**

- ✓ Most of the 660-pound (300-kilogram) satellite, called Rhesi, was expected to burn up while descending through the atmosphere
 - ✓ The satellite spent over a decade studying the sun's behavior and characteristics.
 - ✓ It documented a huge range of solar flares, from tiny nanoflares to massive superflares tens of thousands of times bigger and more explosive.
 - ✓ It captured images in high-energy X-rays and gamma rays, recording more than 100,000 solar events.
 - ✓ Rhesi stands for the Reuven Ramaty High Energy Solar Spectroscopic Imager.
 - ✓ The Rhesi spacecraft was launched into Low Earth Orbit (LEO) onboard the Orbital Sciences Corporation Pegasus XL rocket and entered into service in 2002
 - ✓ It was deactivated in 2018 following a communication problem and has since been in a degrading orbit around Earth
 - ✓ The spacecraft was tasked with observing solar flares and coronal mass ejections from the Sun from its position in low-Earth orbit.
- **A rare hybrid solar eclipse, which was a combination of two types of solar eclipses – occurred on April 20**



- ✓ This 'hybrid' solar eclipse is named the 'Ningaloo Eclipse' and it occurs once every 400 years
- ✓ Ningaloo Eclipse is referred to as a hybrid solar eclipse because it will transition from being an annular eclipse to a total eclipse in certain regions of the world before becoming an annular eclipse again.
 - ✓ In an annular eclipse, the Moon does not completely cover the Sun, resulting in a "ring of fire" appearance where a small dark circle is visible on top of the Sun.
 - ✓ In a total eclipse, the Moon will pass between Earth and the Sun, completely obstructing its face, leading to a complete darkening of the sky
- ✓ The Ningaloo Eclipse was observed from certain areas along the western coast of Australia and southeast Asia, while it was not witnessed in any areas in India, whether in total or partial

- ✓ Its name is derived from the Ningaloo coast of Australia that has been designated as a UNESCO World Heritage Site
- ✓ Eclipses tend to occur in pairs, and following the total solar eclipse on April 20, there will be a penumbral lunar eclipse, indicating that the alignment of the Sun, Earth, and Moon will be imperfect, on May 5.

DEFENCE

- **India - has successfully conducted the maiden flight trial of a sea-based interceptor missile capable of thwarting an incoming nuclear ballistic missile on April 21**



- ✓ The test of the 'endo-atmospheric interceptor missile' from a warship against an 'electronic target' was conducted by the DRDO and Navy off the Odisha coast in the Bay of Bengal
 - ✓ The trial's purpose was to engage and neutralize a hostile ballistic missile threat
 - ✓ The DRDO has earlier successfully completed a series of tests for a land-based two-tier ballistic missile defence (BMD)
 - ✓ The BMD is designed to track and destroy nuclear ballistic missiles both inside (endo) and outside (exo) the earth's atmosphere at altitudes from 15-25 km to 80-100 km for "a higher kill probability"
- **The Indian Air Force (IAF) - will take part in a mega multilateral Exercise INIOCHOS-23 in Greece.**



- ✓ The multi-national air exercise hosted by the Hellenic Air Force will be conducted at the Andravida Air Base in Greece from April 24, 2023, until May 4, 2023.
- ✓ The Indian Air Force will participate in the exercise with four Su-30 MKI and two C-17 aircraft
- ✓ Other nations expected to take part in the exercise include Cyprus with an AW139 Helicopter; France with Rafales; Italy with Tornados; Jordan with F-16s; Saudi Arabia with F-15s; Slovenia with PC-9s; Spain with EF-18s; and the USA with F-16s and MQ-9s.
- ✓ Additionally, Austria will participate with INTEL personnel and Canada with Air Battle Managers.
- ✓ The aim of the exercise is to enhance international cooperation, synergy and interoperability among the participating Air Forces

SPORTS

- **Jyothi Surekha Vennam - claimed the individual and compound mixed team gold medals in the season opening Archery World Cup Stage 1 in Antalya on April 22.**



- ✓ In the team event, India missed out on equalling the world record of hitting a perfect score (160) after Jyothi's World Cup debutant partner Ojas Deotale hit a 9 in the last end.
 - ✓ The Indian duo defeated Chinese Taipei's Chen Yi-Hsuan and Chen Chieh-Lun to bag the gold medal
 - ✓ This was World No. 11 Jyothi's second World Cup gold in the mixed team event after achieving the feat with Abhishek Verma in 2022.
- ✓ In the individual final, Jyothi defeated former world champion Sara Lopez of Colombia to win her maiden individual World Cup gold.
 - ✓ In 2021 at the Yankton World Championship, Jyothi lost to the same Colombian opponent to end up with a silver medal.
- ✓ This first individual World Cup gold medal helped Jyothi qualify for the World Cup finals at Hermosillo, Mexico, scheduled later this year.
- **India batter Suryakumar Yadav - was named as T20 Cricketer of the Year in the 2023 edition of the Wisden Cricketers' Almanack, published on April 18**



- ✓ Surya, known for his all-round batting, played 31 T20I innings in 2022, amassing 1164 runs at an average of 46.56 and a remarkable strike rate of 187.43, including two hundreds and nine half-centuries.
 - ✓ Surya, who currently occupies the No. 1 position in the ICC T20I batting rankings, was named the ICC Men's T20I Player of the Year for 2022.
- ✓ England's ace all-rounder Ben Stokes was named the Wisden Almanack's leading men's cricketer in the world for the third time in four years.
 - ✓ The all-rounder, who appears on the cover of the 160th edition of Wisden alongside England Test head coach Brendon McCullum, previously won the award in 2019 and 2020, with countryman Joe Root taking the award in 2021.
- ✓ Stokes' teammate Jonny Bairstow was the inaugural recipient of the new Wisden Trophy, awarded for the outstanding individual Test performance, after his twin centuries against India at Edgbaston
- ✓ Australia's Beth Mooney was named the leading women's cricketer in the world for the second time in three years, having led her country to World Cup triumphs in the 50-over and 20-over tournaments and winning gold at the 2022 Commonwealth Games.
- ✓ India's Harmanpreet Kaur created history by becoming the first Indian woman to be named among the Wisden Cricketers of the Year, chosen by the Wisden editor in a tradition dating back to 1889.
- ✓ The other overseas cricketers of the year named by Wisden are New Zealand's Tom Blundell and Daryl Mitchell plus England's Ben Foakes and Matthew Potts.

