

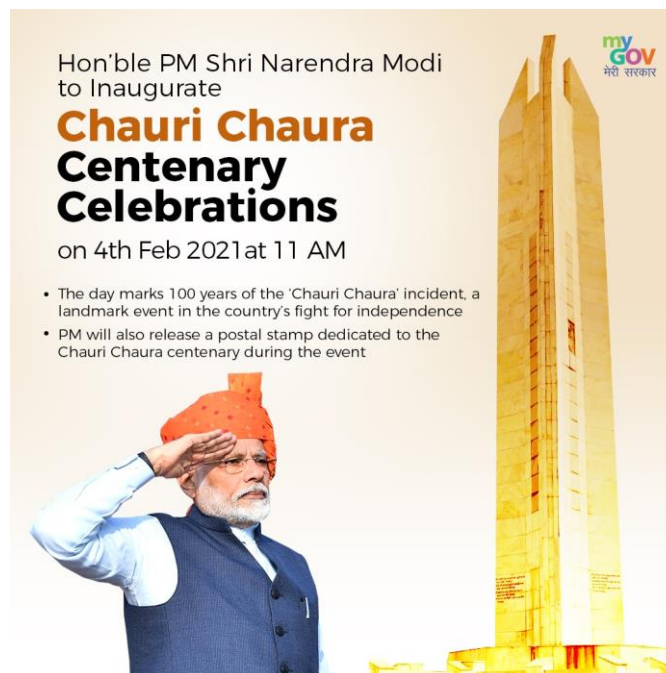
February - 08

TNPSC BITS

- ❖ The Punjab and Haryana High Court stayed a law that reserves 75 percent of jobs for Haryanvi in private establishments across the state.
- ❖ Jason Holder became the first West Indies male cricketer to take a hat-trick wicket in T20I cricket.
 - He achieved this feat against the England team.
- ❖ The United Arab Emirates will introduce a federal corporate tax on business profits starting for the first time.
 - The tax will be levied on all corporations and commercial activities in the country, except for the "extraction of natural resources".

NATIONAL

100 years of Chauri Chaura incident



- ❖ Chauri Chaura is located in Gorakhpur of Uttar Pradesh.
- ❖ Mahatma Gandhiji called off the non – cooperation movement due to the incident that occurred in Chauri Chaura.
- ❖ The people set up a fire to the police station.



- ❖ The incident occurred on February 4, 1922.
- ❖ India recently celebrated the 100 years of the Chauri Chaura incident.

India's Unemployment Rate

- ❖ The Centre for Monitoring Indian Economy recently released the unemployment report.
- ❖ According to the report, unemployment in India was at 6.57% in January 2022.
- ❖ This is the lowest since March 2021.
- ❖ The unemployment in the urban regions was 8.16%.
- ❖ It was 5.84% in rural areas.
- ❖ In December 2021, the unemployment rate in the country was 7.91%.
- ❖ It was 9.3% in urban and 7.28% in rural.
- ❖ Telangana had the lowest unemployment rate in January 2022.
- ❖ Haryana had the highest unemployment rate.

Sonali Singh

- ❖ The Government of India has appointed Sonali Singh to hold the additional charge of the Controller General of Accounts (CGA), under the Department of Expenditure, Ministry of Finance.
- ❖ She is serving as the Additional Controller General of Accounts since October 2019.
- ❖ Prior to that, she had also served as Additional Secretary at Central Vigilance Commission.

INTERNATIONAL

UNEP

- ❖ The United Nations Environment Programme (UNEP) is celebrating its 50th anniversary in 2022.
- ❖ It was founded in 1972 following the landmark UN Conference on the Human Environment.
- ❖ Major Reports of UNEP are Emission Gap Report, Global Environment Outlook, Frontiers, Invest into Healthy Planet.

- ❖ Major Campaigns of UNEP are Beat Pollution, UN75, World Environment Day, Wild for Life.



SCIENCE AND TECHNOLOGY

Hack-proof quantum communication

WHAT WAS THE EXPERIMENT ?	
<p>Isro-SAC held a live videoconference using quantum-key-encrypted signals between two buildings 300 metres apart within their Jodhpur Tekra campus</p> <p>ISRO's NEXT LEAP: QUANTUM SATELLITES: Isro will soon demonstrate Satellite Based Quantum Communication (SBQC) between two Indian ground stations</p>	<p>CHINA'S CHALLENGE</p> <p>2016 China launched the world's first quantum communication satellite QUESS(Mozi/Micius) and achieved QKD with two ground stations 2,600km apart</p> <p>2017 An over 2,000-km-long optical fibre network was completed for QKD between Beijing and Shanghai</p> <p>2021 The world's first integrated quantum communication network was built combining over 700 optical fibres on the ground with two ground-to-satellite links. This achieved a QKD over a total distance of 4.6K km</p>
<p>ISRO's FEAT</p> <ul style="list-style-type: none">➤ The experiment was performed at night to ensure no interference of direct sunlight➤ Most of mission critical technologies were built by ISRO in-house➤ Critical to the experiment were NAVIC receiver for time synchronization between the transmitter and receiver modules,➤ A special gimbal mechanism instead of large-aperture telescopes was used for optical alignment	

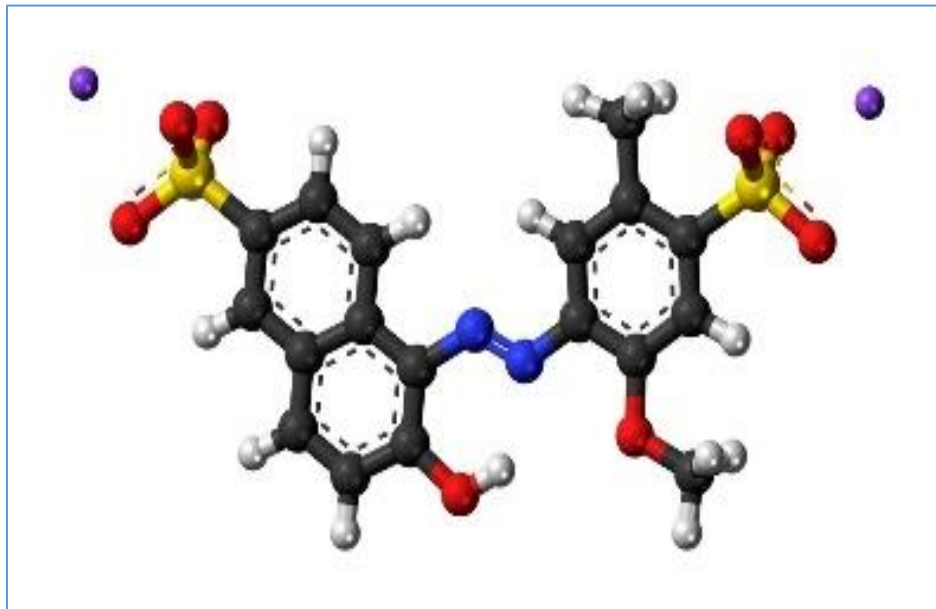
- ❖ The scientists from the Ahmedabad-based Space Applications Centre and Physical Research Laboratory successfully demonstrated quantum entanglement.

- ❖ Using real-time Quantum Key Distribution, they conducted hack-proof communication between two places separated by 300 meters.
- ❖ Quantum communication is one of the safest ways of connecting two places with high levels of code and quantum cryptography that cannot be decrypted or broken by an external entity.
- ❖ If a hacker tries to crack the message in quantum communication, it changes its form in such a manner that would alert the sender and would cause the message to be altered or deleted.

Moons Make Planets Habitable

- ❖ A new study has examined the moon formations and concluded that only certain types of planets can form moons that are large in respect to their host planets.
- ❖ The moon controls the length of the day and ocean tides, which affect the biological cycles of life forms on our planet.
- ❖ The moon also contributes to Earth's climate by stabilizing Earth's spin axis, offering an ideal environment for life to develop and evolve.
- ❖ Because the moon is so important to live on Earth, scientists conjecture that a moon may be a potentially beneficial feature in harboring life on other planets.

Research on Ring-Shaped Molecules



- ❖ MIT chemical engineers' team has created a new material, which is stronger than steel and lighter as plastic.

- ❖ The material can be easily manufactured in large quantities.
- ❖ Their study was published in 'Nature Journal'.
- ❖ It can self-assemble into sheets, unlike all other polymers.

X-particles in Quark-gluon Plasma

- ❖ A mysterious "X" particle comprising four quarks and first seen in 2003, has been found in the quark-gluon plasma produced in heavy-ion collisions at the Large Hadron Collider (LHC).
- ❖ The observation was made by physicists working on CERN's Compact Muon Solenoid (CMS) experiment.
- ❖ Further studies of the particle could help explain how familiar hadrons such as protons and neutrons formed from the quark-gluon plasma believed to have been present in the early universe.



AI-based Chest X-Ray

- ❖ An Artificial Intelligence (AI) based chest X-Ray technique was recently developed by researchers from the Indian Institutes of Technology Jodhpur (IIT-J).
- ❖ This chest X-Ray technique will be used for Covid-19A screening.
- ❖ The team of researchers has proposed a deep learning-based algorithm called COMiT-Net.

- ❖ This algorithm will learn the abnormalities present in chest X-Ray images for differentiating non-covid affected lung from Covid affected lung.

PERSONALITIES, AWARDS, AND EVENTS

Lata Mangeshkar

- ❖ Legendary singer Lata Mangeshkar has passed away at the age of 92 at Mumbai.
- ❖ She born at Indore.
- ❖ Lata Mangeshkar was conferred with the Dadasaheb Phalke Award in 1990.
- ❖ For her contribution to Indian music, she also was bestowed with Padma Bhushan in 1969 and Bharat Ratna in 2001.



Book by Subhash Garg



- ❖ The former finance secretary of India, Subhash Chandra Garg has announced his debut book named "The \$10 Trillion Dream".

- ❖ The new book explores the critical policy issues that India faces today and suggests reforms for it to become a USD 10 trillion economy by the mid-2030s.
- ❖ It is published by Penguin Random House India.

SPORTS

ICC Spirit of Cricket Award 2021

- ❖ New Zealand cricketer, Daryl Mitchell has been named the winner of the International Cricket Council (ICC) Spirit of Cricket Award 2021.
- ❖ He has become the 4th New Zealand player to win the award after Daniel Vettori, Brendon McCullum, and Kane Williamson.
- ❖ The ICC Spirit of Cricket Award is annually awarded by the ICC to recognize the player most notable for “upholding the ‘Spirit of the Game’”.



2028 Olympics





- ❖ The 2028 Olympics is to be held in Los Angeles.
- ❖ This is after the 2024 Olympics to be held in Paris.
- ❖ The 2022 Olympics was held in Tokyo.
- ❖ These are all the summer Olympics, the main Olympics.
- ❖ The one that is being held in China right now is Winter Olympics.
- ❖ 2028 Olympics includes surfing, climbing, and skateboarding.
- ❖ These are new sports.
- ❖ They were introduced in the 2020 Tokyo Olympics.

