Prelim Bits 09-04-2024 | UPSC Daily Current Affairs

New York Earthquake

A rare earthquake of 4.8 hit the densely populated New York City metropolitan area.

- The tremors that hit near New Jersey, were reportedly felt widely from Washington, DC to New York City to New England.
- The region is unaccustomed to earthquakes.
- There have only been 24 earthquakes of 2.5 magnitude or greater in New Jersey since 1700.
- **East Coast –** Earthquakes are less common on the eastern than western edges of the US because the East Coast does not lie on a boundary of tectonic plates.
- However, they have occurred in every state east of the Mississippi River.
- Earthquakes in the eastern US are felt across a far broader area because the bedrock is much older and harder, transferring seismic energy more easily.
- The biggest Eastern quakes usually occur along the mid-Atlantic Ridge, which extends through Iceland and the Atlantic Ocean.
- **Rocks –** The rocks in the western US are younger and contain more faults that absorb earthquake energy.
- Those older rocks have been exposed to more extreme temperatures and pressure, and faults have had more time to heal.
- **Seismic Waves –** Seismic waves travel across the resulting harder and denser faults much more efficiently, so the effects of a quake are felt across a larger area.
- In the West, faults are newer and absorb more of the seismic wave energy without spreading as far.

References

1. USA Today – 4.8 magnitude earthquake rattles New York City
2. Live Mint – New York earthquakes

Charminar

- **Built by –** Charminar was built by Sultan Mohammed Quli Qutb Shah in 1591.
- **Built for –** The actual reason behind building Charminar is still not clear.
- It is said that this square shaped structure with four pillars and intricate carvings was built in honour of his wife, Bhagmati.
- Charminar was built to acknowledge the elimination of the plague which had affected the entire city immensely during that era.
- It is believed that the Sultan had prayed for the end of this plague with which his people were suffering.
- Hence, as the plague ended, he built the Charminar as a tribute to Allah.

The four pillars are also said to be dedicated to the first four caliphs of Islam.

- **Architecture –** An Iranian architect Mir Momin Astrawadi, who had settled in Hyderabad, designed Charminar.
- **Tazias –** The architectural design of Charminar is inspired from the Shia "tazias".
- These Tazias were built in the memory of Hussain, who was the son in law of Prophet Muhhamed and had lost his life in the battle of Karbala.
- Charminar has been built with granite and lime mortar.
- The manner with which each pillar has been built makes it appear as a lotus leaf.
- The arches around the structure do lead to slightly shorter appearance when in comparison to the minars.

Charminar, along with the Qutb Shahi Monuments of Hyderabad: the Golconda Fort, and the Qutb Shahi Tombs, were included in the tentative list of UNESCO World Heritage Site.

References

1. Times of India – In Ramzan, Charminar has many charms
2. Hyderabad – History of Charminar
3. Britannica – Charminar

Cantonments

Land portions from 10 cantonment boards to be run by local bodies.

- **Cantonment –** A cantonment is created as well as administered by the Central government.
- Cantonments are designed as places of residence of both civilians and military personnel.
- Cantonments are different from the Military Stations.
- Military Stations are purely meant for the use and accommodation of the armed forces and these are established under an executive order.
- It is the Entry 3 of Union List (Schedule VII) of the Constitution of India.
- Cantonments are notified under the Cantonments Act, 1924 (succeeded by the Cantonments Act, 2006).
- The overall municipal administration of the notified Cantonments is the function of the Cantonment Boards which are democratic bodies.
- The Station Commander of the Cantonment is the ex-officio President of the Board.
- The Board has equal representation of the elected and nominated/ex-officio members to balance the official representation with the democratic composition.
- There are four categories of Cantonments which depend on the size of population residing inside a Cantonment.
- Directorate General Defence Estates (DGDE) is an Inter Services Organisation of the

Ministry of Defence which directly controls the Cantonment Administration.

- The executive officer of the cantonment board is appointed by the President of India.
- He/She implements all the resolutions and decisions of the board and its committees and he/she belongs to the central cadre established for the purpose.
- **Denotified local bodies –** These areas will be placed under the jurisdiction of the state local bodies.
- The ownership of land owned by the Armed Forces and central government will remain unchanged.
- The land given on lease to private institutions and organisations will remain with the central government.
- At present, cantonment boards provide civic services like trade license, birth and death certificates, water supply, sewerage connections, and building plan approvals to those living within their jurisdiction.

10 cantonment boards are, Ramgarh Cantonment; Deolali Cantonment; Dehradun Cantonment; Clement Town Cantonment; Mathura Cantonment; Shahjahanpur Cantonment; Babina Cantonment; Fatehgarh Cantonment; Nasirabad Cantonment and Ajmer Cantonment.

- Only six cantonments were established after independence, Jammu in 1954, Badami Bagh in 1954, Morar in 1956, Dehu Road in 1958, Babina in 1959, and Ajmer in 1962.

Reference

The Indian Express – Land portions from 10 cantonment boards to be run by local bodies

U.N. Membership Process

UN Security Council refers Palestinian application to become full UN member to committee.

- **Open to –** UN full membership is open to all peace-loving States that accept the obligations contained in the United Nations Charter and are able to carry out these obligations.
- States are admitted to membership in the United Nations by a decision of the General Assembly upon the recommendation of the Security Council.
- **The procedure –**
    1. The State submits an application to the Secretary-General and a letter formally stating that it accepts the obligations under the Charter.
    2. The Security Council considers the application.
    3. Any recommendation for admission must receive the affirmative votes of 9 of the 15 members of the Council, provided that none of its five permanent (P5) members have voted against the application.
        - **P5 members –** China, France, the Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America.
    4. If the Council recommends admission, the recommendation is presented to the General Assembly for consideration.
    5. A two-thirds majority vote is necessary in the Assembly for admission of a new

State.

6. Membership becomes effective the date the resolution for admission is adopted.

- It should be noted that the normal change of Governments, as through a democratic election, does not raise any issues concerning the credentials of the representative of the State concerned.

Quick Facts
Palestine
• Palestine, area of the eastern Mediterranean region, comprising parts of modern Israel and the Palestinian territories of the Gaza Strip and the West Bank. • Palestine was among former Ottoman territories placed under UK administration by the League of Nations in 1922. • All of these territories eventually became fully independent States, except Palestine. • The British Mandate incorporated the Balfour Declaration of 1917, expressing support for the establishment in Palestine of a national home for the Jewish people. • The UN proposed terminating the Mandate and partitioning Palestine into two independent States, one Palestinian Arab and the other Jewish, with Jerusalem.

References

1. The Hindu – U.N. Security Council refers Palestinian application to become full U.N. member to committee
2. Reuters – U.N. Security Council refers Palestinian application to become full U.N. member to committee
3. UN – About UN Membership

Solar Eclipse

- **Solar Eclipse –** A solar eclipse takes place when the Moon moves in the middle of Earth and the Sun.
- The Moon blocks the light of the Sun, either fully or partially, which casts a huge shadow on some parts of the world.
- A solar eclipse happens on a new moon day.
- There are four different types of solar eclipses, including total solar eclipse, annual solar eclipse, partial solar eclipse, and hybrid solar eclipse.

Types of Solar Eclipse	
Total Solar Eclipse	**Annular Solar Eclipse**

• A total solar eclipse happens when the Moon passes between the Sun and Earth, completely blocking the face of the Sun. • The sky will darken, as if it were dawn or dusk. • People in the path of a total solar eclipse can see the Sun's corona, the outer atmosphere, which is otherwise usually obscured by the bright face of the Sun. • A total solar eclipse is the only type of solar eclipse where viewers can momentarily remove their eclipse glasses.	• An annular solar eclipse happens when the Moon passes between the Sun and Earth, but when it is at or near its farthest point from Earth. • Because the Moon is farther away from Earth, it appears smaller than the Sun and does not completely cover the Sun. • As a result, the Moon appears as a dark disk on top of a larger, bright disk, creating what looks like a ring around the Moon.
Partial Solar Eclipse	**Hybrid Solar Eclipse**
• A partial solar eclipse happens when the Moon passes between the Sun and Earth but the Sun, Moon, and Earth are not perfectly lined up. • Only a part of the Sun will appear to be covered, giving it a crescent shape.	• Because Earth's surface is curved, sometimes an eclipse can shift between annular and total as the Moon's shadow moves across the globe. • This is called a hybrid solar eclipse.

Lunar Eclipses

- Lunar eclipses occur at the full moon phase.
- When Earth is positioned precisely between the Moon and Sun, Earth's shadow falls upon the surface of the Moon, dimming it and sometimes turning the lunar surface a striking red over the course of a few hours.

Types of Lunar Eclipses	
Penumbral Eclipse	**Partial Lunar Eclipse**
• The Moon travels through Earth's penumbra, or the faint outer part of its shadow. • The Moon dims so slightly that it can be difficult to notice.	• An imperfect alignment of Sun, Earth and Moon results in the Moon passing through only part of Earth's umbra. • The shadow grows and then recedes without ever entirely covering the Moon.
Total Lunar Eclipse	
• The Moon moves into the inner part of Earth's shadow, or the umbra. • Some of the sunlight passing through Earth's atmosphere reaches the Moon's surface, lighting it dimly. • Colors with shorter wavelengths, the blues and violets, scatter more easily than colors with longer wavelengths, like red and orange. • Because these longer wavelengths make it through Earth's atmosphere, and the shorter wavelengths have scattered away, the Moon appears orangish or reddish during a lunar eclipse. • The more dust or clouds in Earth's atmosphere during the eclipse, the redder the Moon appears.	

References

1. The Indian Express – What makes a total solar eclipse so rare?
2. NASA – Types of Solar Eclipses

Other Important Topics

Voter Verified Paper Audit Trail (VVPAT)

The Supreme Court (SC) said that petitions seeking 100% verification of Voter Verified Paper Audit Trail (VVPAT) slips would be taken up soon.

• Voter verifiable paper audit trail (VVPAT) or verifiable paper record (VPR) is a method of providing feedback to voters using a ballot less voting system.
• VVPAT was introduced in **2013**.
• VVPAT is attached with the Electronic Voting Machine (EVM).
• VVPAT provides visual verification for the vote cast by a voter ***by printing a slip of paper with the voter's choice on it.***
• This slip of paper, containing the candidate's serial number, name, and party symbol, is displayed in the machine behind a glass window, giving the voter ***7 seconds*** to verify her vote.
• No voter can take the VVPAT slip back home.
• It is later used to verify votes cast in five randomly selected polling booths.
• The VVPAT was used for the first time in all 21 polling stations of the Noksen Assembly constituency of Nagaland in 2013.
• By June 2017, there was 100% adoption of VVPATs.

Electronic Trading Platforms (ETPs)

Reserve Bank of India (RBI) Governor raised concerns over unauthorized forex trading platforms and asked banks to maintain vigil against such illegal activities.

• Electronic Trading Platform (ETP) are electronic systems that constitute other than a recognised stock exchange.
• In ETP transactions in eligible instruments like securities, money market instruments, foreign exchange instruments, derivatives, etc. are contracted.

Maasai- Mara Ecosystem in Kenya

• Maasai Mara Ecosystem is a vast grassland savannah in the ***south of Kenya,*** home to approximately ***25% of Kenya's wildlife.***
• The perennial flowing ***Mara River*** flows across the ecosystem and the river drains into ***Lake Victoria in Tanzania.***
• The ecosystem bisects the ***Mara National Reserve and the Mara Triangle.***
• The Mara-Serengeti migration of wildebeest is the most species diverse migration to occur year on year.

Maasai Mara National Reserve

• It is located in Kenya along the border of Tanzania and is contiguous with the neighboring Serengeti National Park.
• It was established in 1974.

Sitars and Tanpuras

The sitars and tanpuras of Miraj, a small town in Maharashtra have been awarded the Geographical Indication (GI) tags.

• Sitars and tanpuras are ***traditional Indian musical instruments.***
• **Sitars –** It is a stringed instrument with a long neck and a gourd-shaped body.
• Sitar is used in Hindustani classical.
• **Tanpuras –** It is a long-necked string instrument that provides a drone accompaniment in Indian classical music.
• It looks like the sitar, it is missing a top gourd and does not have any frets.
• These frets allow for the Sitar to tune the sympathetic strings, which the Tanpura does not have.

TSAT-1A Satellite

India's first private sub-metre resolution earth observation satellite, TSAT-1A is launched by SpaceX's Falcon 9 rocket in the U.S.

• TSAT-1A is a sub-metre high-resolution earth observation satellite carried into space as part of the Bandwagon-1 rideshare mission.
• **Launched by –** Tata Advanced Systems Ltd (TASL), India, in collaboration with Satellogic.
• It will provide high-resolution satellite images, boasting increased collection capacity, dynamic range, and low-latency delivery through its multispectral and hyperspectral capabilities.

Bandwagon-1 mission

• It is a rideshare mission organized by SpaceX to launch multiple small satellites into orbit.
• The mission is named Bandwagon-1 as it allows smaller satellite operators to jump on the bandwagon and share a ride to space, reducing costs and increasing access to space.

Anti-dumping duty on sodium cyanide

• The Directorate General of Trade Remedies (DGTR) recommended imposition of anti-dumping duty on ***sodium cyanide (NaCN)*** imported from ***China, the European Union, Japan and Korea.***
• The revised definitive anti-dumping duties on the import of sodium cyanide is for a ***period of 5 years.***
• Sodium cyanide is used
1. In the extraction of gold and silver from their respective ores
2. In electroplating and the heat treatment of metals, and
3. In manufacturing insecticides, dyes, pigments, and bulk drugs, etc.

• Sodium cyanide releases hydrogen cyanide gas, a highly toxic chemical asphyxiant that interferes with the body's ability to use oxygen.
• Exposure to sodium cyanide can be rapidly fatal.

India Flora Online

A professor of Indian Institute of Science (IISc) launched India Flora Online.
• India Flora Online is an online platform that provides information and resources related to the flora and plant life of India.
• It is most comprehensive attempt to document the plant wealth in India.
• It includes a record of plants from Afghanistan, Nepal, Tibet, Bhutan, Bangladesh, Sri Lanka, Myanmar and Pakistan.
• It is the fourth such plant database initiative following Digital Flora of Karnataka, Digital Flora of Eastern Ghats, and Flora of Peninsular India.
Digital Flora of Eastern Ghats and Flora of Peninsular India, both released in 2019, list 4,097 & 10,210 species, while the most recent, India Flora Online–has details of a whopping 15,349 plants found across India.

Lesotho Highlands Water Project

• The Lesotho Highlands are formed by the Drakensberg and Maloti mountain ranges in the east and central parts of the country of Lesotho, in Africa
• It is a large-scale water supply scheme in which water is diverted from the ***highlands of Lesotho to South Africa's Free State and the greater Johannesburg area***, launched in **1998.**
• It is developed in partnership with the governments of Lesotho and South Africa.
• It involves the construction of a series of dams, reservoirs and tunnels throughout Lesotho.
• These all deliver water to the ***Vaal River system*** in South Africa.

Harappan settlement in Gujarat

Archaeologists discovered 5,200-year old Harappan settlement at Padta Bet in Kachchh district, Gujarat.

• **Findings -** The excavated remains included the remains of a circular structure and other rectangular structures of varying sizes and made of locally available sandstone and shales.

• The presence of plenty of pottery, artefacts, and a few animal bone fragments from these areas are indicative of the occupation of Harappan people in the region.

• Spanning from the Early Harappan to Late Harappan periods, i.e. ***3200 BCE to 1700 BCE.***

• The evidence of ceramics also indicate the presence of Early Harappan, Classical Harappan, and Late Harappan types.

Jalyukta Shivar Yojana

• It is a flagship initiative launched by the ***Government of Maharashtra*** in 2014.

• **Aim -** To make the state drought-free and water-abundant by creating cement barrages as well as deepening, widening and de-siltation of water bodies.

SHANKAR IAS PARLIAMENT
Information is Empowering