Prelim Bits 13-04-2024 | UPSC Daily Current Affairs

Madrasas

The Supreme Court stayed an Allahabad High Court order, which had declared the Uttar Pradesh Board of Madrasa Education Act, 2004, as unconstitutional.

- **Madrasas –** Madrasas are institution of higher education in the Islamic sciences.
- In Arabic-speaking countries, the word in modern times refers to any institution of education, especially primary or secondary education.
- The early madrasas developed out of occasional lectures delivered at mosques.
- Khan lodgings were later adjoined to mosques for students who traveled to participate.
- The origin of these madrasas are traced back to Khurasan and Transoxania in the 10th century, as well as in the region now known as northern Iran.
- By the end of the 12th century, madrasas flourished in Damascus, Baghdad, Mosul, and most other Muslim cities.
- The madrasah functioned until the 20th century as a theological seminary and law school, with a curriculum centred on the Quran and the Hadith.
- Arabic grammar and literature, mathematics, logic, and, in some cases, natural science were studied in madrasahs in addition to Islamic theology and law.
- Tuition was free, and food, lodging, and medical care were provided as well.
- Instruction usually took place in a courtyard and consisted primarily of memorizing textbooks and the instructor's lectures.
- The lecturer issued certificates (ijazat; singular, ijazah) to his students that constituted permission to repeat his words.

Uttar Pradesh Board of Madrasa Education Act, 2004
• The Act aimed to regulate and govern the functioning of madrasas in the state of Uttar Pradesh. • It provided a framework for the establishment, recognition, curriculum, and administration of madrasas across the state. • Under the Act, the Uttar Pradesh Board of Madrasa Education was established to oversee the activities of madrasas in the state. • However, the rules guiding the madrasa board were enacted only in 2017. • There are a total of 16,513 recognised and 8,449 unrecognised madrasas in the state of Uttar Pradesh. • Out of the 16,513 recognised madrasas, 558 are fully funded by the state government, these madrasas employ around 9,000 teachers. • The rest of the recognised madrasas are government-aided, privately-run madrasas. • The Allahabad High Court earlier, in a judgement declared the Uttar Pradesh Board of Madrasa Education Act, 2004, illegal. • The High Court held that the Act violated the principle of secularism and fundamental rights provided under Article 14 of the Constitution.

References

1. The Indian Express – SC stays order against UP madrasa law
2. The Wire – UP Madrasa Act Struck Down
3. UNESCO – Madrasas as Universal Centers of Education and Culture
4. Britannica – Madrasah

Global Trade Outlook and Statistics

Global goods trade is expected to pick up gradually this year following a contraction in 2023: the World Trade Organization (WTO).

- **Released By –** World Trade Organisation (WTO).
- The report indicates primary signs of fragmentation in trade flows.
- **Findings –** An evident recovery in the demand for tradable goods is already observable in 2024.
- The trade scenario appears more positive on the services side, with a 9% increase in commercial services exports to $7.54 trillion, partially counterbalancing the decline in goods trade.
- Global GDP growth at market exchange rates will hover around 2.6% in 2024 and 2.7% in 2025, marking a slight deceleration from 3.1% in 2022 to 2.7% in 2023.
- With geopolitical tensions affecting trade patterns marginally, the report says the global trade in non-fuel intermediate goods, which provides a useful gauge of the status of global value chains, was down 6%.
- High energy prices and persistent inflation have adversely impacted the demand for manufactured goods, leading to a 1.2% drop in the volume of world merchandise trade for 2023.
- This decline is more pronounced in value terms, with merchandise exports decreasing by 5% to $24.01 trillion.
- **India –** India's goods exports stood at $451 billion in FY23 and %394.99 billion in FY24 so far (April-February).
- The country's share in global goods exports and imports stood at 1.8% and 2.8% in 2023, respectively.

References

1. Trade Finance Global – Global Trade Outlook and Statistics
2. Fortune India – Global Trade to pick up in 2024
3. WTO – Trade growth likely to pick up in 2024

GPT-4 Vision

OpenAI's ChatGPT has evolved by leaps and bounds, now churning text is not the only function, it can also create images from natural language prompts.

ChatGPT

• **ChatGPT –** ChatGPT is a large language model developed by OpenAI that can be used for natural language processing tasks such as text generation and language translation.
• It is based on GPT-3.5 (Generative Pretrained Transformer 3.5) model and uses deep learning algorithms to generate text responses to prompts.
• ChatGPT uses natural language processing technology to understand and generate responses to questions and statements that it receives.
• **Applications –** The ChatGPT can
1. Write jokes and essay
2. Guess at medical diagnoses
3. Create text-based games
4. Explain scientific concepts at multiple levels of difficulty
5. Translate messages in real time
6. Automate customer service and delivery

• It cannot independently write and run code, but can aid in the code production by outlining specific programming principles.

- **GPT-4V –** GPT-4 with Vision, also referred to as GPT-4V, allows users to instruct GPT-4 to analyse image inputs.
- GPT-4 Vision has been considered OpenAI's step forward towards making its chatbot multimodal, an AI model with a combination of image, text, and audio as inputs.
- It allows users to upload an image as input and ask a question about it.
- This task is known as visual question answering (VQA).
- **LLM –** GPT-4 Vision is a Large Multimodal Model (LMM).
- LLM is essentially a model that is capable of taking information in multiple modalities like text and images or text and audio and generating responses based on it.
- It is not the first and only LMM, there are many others such as CogVLM, LLaVA, Kosmos-2, etc.
- LMMs are also known as Multimodal Large Language Models (MLLMs).
- **Capabilities –** GPT-4 Vision has some groundbreaking capabilities such as processing visual content including photographs, screenshots, and documents.
- The latest iteration allows it to perform a slew of tasks such as identifying objects within images, and interpreting and analysing data displayed in graphs, charts, and other visualisations.
- GPT-4 Vision can also interpret handwritten and printed text contained within images.
- This is a significant leap in AI as it, in a way, bridges the gap between visual understanding and textual analysis.
- **Limitations –** The model is not suitable for interpreting specialized medical images like CT scans and shouldn't be used for medical advice.
- The model may not perform optimally when handling images with text of non-Latin alphabets, such as Japanese or Korean.
- Enlarge text within the image to improve readability, but avoid cropping important details.
- The model struggles with tasks requiring precise spatial localization, such as identifying chess positions.

References

1. The Indian Express – What is OpenAI's GPT-4 Vision?
2. Open AI – GPT-4 Vision

Sulthan Bathery

BJP demands renaming Sulthan Bathery in Wayanad to Ganapathivattom.

- **Sulthan Bathery –** It is a municipal town in Wayanad, Kerala.
- **Temple –** Sulthan Bathery has a stone temple that was once known as Ganapathyvattam.
- The temple, built in the prevalent architectural style of the Vijayanagar dynasty, was constructed by Jains who migrated to Wayanad from areas in present-day Tamil Nadu and Karnataka in the 13th century.
- **Tipu Sultan –** The temple was partly destroyed by Tipu Sultan.
- Between 1750 and 1790, today's northern Kerala was invaded several times by the rulers of Mysuru, Hyder Ali and his son Tipu.
- Tipu Sultan used the Maha Ganapathy temple in Sulthan Bathery as a battery or store for weapons for his army in the Malabar region (today's North Kerala, including Wayanad).
- This led to the British recording Ganapathyvattam as Tipu Sultan's Battery, and the name survived as Sulthan Bathery.

References

1. The Indian Express – History of Sulthan Bathery
2. The Hindu – BJP seeks to change name of Sulthan Bathery to Ganapthi Vattam
3. Times of India – BJP demands renaming Sulthan Bathery to Ganapathivattom

Volcanic Vortex Rings

Mount Etna, one of the most active volcanoes in the world, is known for the volcanic vortex ring phenomenon.

Mount Etna
• Mount Etna, sometimes referred to as Etna, is an active volcano on the east coast of Sicily, the largest island in the Mediterranean Sea, off the coast of Italy. • Etna's peak is the highest in Italy south of the Alps, and it is Europe's largest and one of the most active volcanoes. • Etna's summit has five craters, which are responsible for most of the volcano's eruptions. • There are also "flank" eruptions that occur out of 300-odd vents of varying sizes along the slopes of the mountain. • Etna is in almost constant activity, and has seen, since the year 1600, at least 60 flank eruptions and many more summit eruptions. • In recent years, summit eruptions have occurred in 2006, 2007-08, on two occasions in 2012, in 2018, and 2021; flank eruptions have taken place in 2001, 2002-03, 2004-05, and 2008-09. • Etna has been a World Heritage Site since 2013, and according to UNESCO, the volcano's eruptive history can be traced back 500,000 years. • At least 2,700 years of this activity has been documented.

Volcano Vortex Rings

- Vortex rings are generated when gas, predominantly water vapour, is released rapidly through a vent in the crater.
- The vent that has opened up in Etna's crater is almost perfectly circular, so the rings that have been seen above the mountain since April 2 are also circular.
- The phenomenon was first observed at Etna and Vesuvius in Italy in 1724, and has been documented in an engraved plate from 1755.

In more recent times, volcanic vortex rings have been observed at volcanoes such as Redoubt in Alaska, Tungurahua in Ecuador, Pacaya in Guatemala, Eyjafjallajökull and Hekla in Iceland, Stromboli in Italy, Aso and Sakurajima in Japan, Yasur in Vanuatu, Whakaari in New Zealand, and Momotombo in Nicaragua.

- Volcanic smoke rings were produced in the same way as dolphins blow bubble rings.
    - Dolphins compress the water in their mouths, and using their tongue they push it out of their mouths and create such a pressure that it forms a ring.
- The rings can remain in the air for up to 10 minutes, but tend to disintegrate quickly if conditions are windy and turbulent.

References

1. The Indian Express – What are volcanic vortex rings?
2. ABC News – Vortex rings rise from Italy's Mount Etna Volcano
3. CBS News – Rare pink volcanic vortex bubbles spew out of Mount Etna

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