Prelim Bits 27-12-2021 | UPSC Daily Current Affairs

RBI's Norms on Tokenisation

The Reserve Bank of India has extended the deadline given to the online merchants and financial payments companies for implementation of the norms for tokenisation of card data by 6 months to June 30, 2022.

- **Tokenisation** refers to replacement of actual credit and debit card details with an alternate code called the "token", which will be unique for a combination of card, token requestor and device.
- As per the new guidelines, the RBI prohibited merchants from storing customer credit and debit card details on their servers with effect from January 01, 2022.
- Also, the merchants must adopt card-on-file (CoF) tokenisation as an alternative to card storage. It applies to domestic, online purchases.
- **Response** - Most of the leading banks are ready for the switchover.
- But other stakeholders - mostly merchants - argue that the systems at their backend are not yet ready to adopt the new regime and had sought further time in putting new norms into effect.
- **Impacts** - Customers who don't have the tokenisation facility will have to key in their card details each time they order something online.
- This may impact transaction value, especially when done through stored cards. In case of multiple cards, each will have to be tokenised.
- A tokenised card transaction is considered safer as the actual card details are not shared with the merchant during transaction processing.

Reference

1. https://indianexpress.com/article/explained/explained-what-is-tokenisation-and-why-has-rbi-issued-new-guidelines-7688122/
2. https://www.thehindu.com/business/explained-what-is-tokenisation-of-debit-and-credit-cards/article38027437.ece

Magnetar

Researchers have succeeded in measuring for the first time the characteristics of a flare on a distant magnetar.

> The flare, which spewed within a few tenths of a second as much energy as the Sun would shed in 100,000 years, was captured in 2020 by the International Space Station's Atmosphere-Space Interactions Monitor (ASIM) instrument.

- A magnetar is a rare compact type of **neutron star** teeming with energy and magnetism.
- Only 30 Magnetars have been spotted within the Milky Way so far.

- **Formation -** During the course of their evolution, massive stars (masses around 10-25 times the mass of the Sun) eventually collapse and shrink to form very compact objects called neutron stars.
- A subset of these neutron stars is the so-called magnetars.
- **Characteristics** - Magnetars are isolated neutron stars with **intense magnetic fields** much higher than in ordinary pulsars, typically ~10^{15} G.
- Magnetars emit energy in the range given by luminosities of 10^{37} - 10^{40} joules per second. (Luminosity of our sun = 10^{26} joules per second).
- These are **highly dense** and have breathtakingly **high rotation speeds** (rotational periods can be just 0.3 to 12.0 seconds).
- Further, these magnetars emit violent flares.
- Eruptions in magnetars are believed to be due to instabilities in their magnetosphere, or "starquakes" produced in their crust - a rigid, elastic layer about one kilometre thick.
- This causes waves in the magnetosphere, and interaction between these waves causes dissipation of energy.
- Magnetars are very difficult to observe when they are silent. It is only during a flare that they can be observed, and these flares are so short-lived that it presents a formidable problem.

Reference

1. https://www.thehindu.com/sci-tech/science/study-of-distant-magnetar-reveals-facets-of-the-exotic-star/article38037663.ece
2. https://www.sciencedirect.com/topics/physics-and-astronomy/magnetars

INS Khukri

INS Khukri decommissioned after 32 years of glorious service to the nation.

- INS Khukri was the first of the indigenously built Missile Corvettes.
- INS Khukri was built by the Mazagaon Dock Shipbuilders in 1989. It was affiliated with the Gorkha brigade of the India Army.
- It had the distinction of being part of both the Western and Eastern Fleets.
- **Legacy** - INS Khukri has a legacy with the naval history of India.
- The first INS Khukri (F149), which was a Type 14 Blackwood-class frigate, was commissioned into the Indian Navy in 1958.
- IT was sunk off the coast of Diu, Gujarat, by the Pakistan Navy Daphné-class submarine PNS Hangor during the Indo-Pakistan War of 1971.

Missile Corvettes

- Missile Corvettes are agile high-speed ships and have considerable firepower. They are ideal for a littoral environment.
- Indian Navy has four Missile Corvettes - INS Kamorta, INS Kadmatt, INS Kiltan and INS Kavaratti.
- These were commissioned in the Indian Navy in 2014, 2016, 2017 and 2020 respectively.
- **Project 28** - In 2020, the last of 4 indigenously built anti-submarine warfare (ASW) stealth corvettes 'INS Kavaratti' was commissioned under Project 28.
- The ships under Project 28 have been designed locally by the Navy's in-house Directorate of Naval Design (DND).
- These were built locally by Kolkata based Garden Reach Shipbuilders and Engineers.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1784779
2. https://www.thehindu.com/news/national/andhra-pradesh/ins-khukri-decommissioned-after-32-years-of-service-to-nation/article38028225.ece
3. https://timesofindia.indiatimes.com/city/vijayawada/navy-decommissions-32-yr-old-ins-khukri/articleshow/88481876.cms
4. https://www.financialexpress.com/defence/ins-khukri-sails-away-into-the-sunset-served-india-for-32-years/2389249/

Pseudoephedrine

- Pseudoephedrine is largely known as a **sympathomimetic drug.**
- It is in a class of medications called **nasal decongestants** that is used to relieve nasal congestion caused by allergies, cold and hay fever.
- It also temporarily relieves sinus congestion and pressure.
- Pseudoephedrine will relieve symptoms but will not treat the cause of the symptoms or speed recovery.
- It works by causing narrowing of the blood vessels in the nasal passages.
- **Other uses** - Legally, this substance is used in the manufacturing of amphetamines, which can be sold only on the prescription of doctors.
- Illegally, it is used in the making of drugs, which are sold without any prescription.

Status in India

- Pseudoephedrine is a controlled substance, as it is being used for making the highly addictive drugs.
- It is one of the 7 controlled substance in India, which is being used by pharmaceutical companies in making various medicines.
- Other controlled substances are Acetic Anhydride, Ephedrine & its Salts, N-Acetyl Anthranilic Acid, Anthranilic Acid and two others.
- These substances are also known as precursor substances. They are used for manufacturing narcotics drugs and psychotropic substance.
- Section 9A of the Narcotics Drug and Psychotropic Substances (NDPS) Act, 1985 authorizes the law enforcement agencies to control and regulate these substances, including pseudoephedrine in India.

Agency	Purpose
Narcotics Control Bureau (NCB)	Gives clearance about the use of pseudoephedrine in the manufacturing of medicines.
Central Bureau of Narcotics (CBN)	Gives permission in case of the import and export of pseudoephedrine.
States' health department, Customs departments	Besides the above two agencies, they also control the trade of pseudoephedrine in India.

Reference

1. https://indianexpress.com/article/cities/chandigarh/drug-mentioned-in-fir-its-uses-and-abuses-7686290/
2. https://medlineplus.gov/druginfo/meds/a682619.html#:~:text=Pseudoephedrine%20is%20used%20to%20relieve,the%20symptoms%20or%20speed%20recovery.

Revamped Distribution Sector Scheme

- Recently, the Ministry of Power had launched the Reforms-based and Results-linked, Revamped Distribution Sector Scheme (RDSS).
- **Scheme Objectives**
    1. Reduction of the AT&C losses to pan-India levels of 12-15% by 2024-25
    2. Reduction of the ACS-ARR gap to zero by 2024-25.
    3. Developing Institutional Capabilities for Modern DISCOMs
    4. Providing financial assistance to DISCOMs for modernisation and strengthening of distribution infrastructure, and
    5. Improvement in the quality, reliability, and affordability of power supply to consumers through a financially sustainable and operationally efficient DISCOMs/ Power Departments.
- **Assistance** - The scheme provides conditional financial assistance to DISCOMs for strengthening of supply infrastructure.
- The assistance will be based on meeting pre-qualifying criteria.
- It is also based upon achievement of basic minimum benchmarks by the DISCOM evaluated on the basis of agreed evaluation framework tied to financial improvements.
- **Implementation** of the Scheme would be based on the action plan worked out for each state rather than a "one-size-fits-all" approach.
- Nodal Agencies - Rural Electrification Corporation (REC) and Power Finance Corporation (PFC).

Aggregate Technical & Commercial Losses

- The concept of Aggregate Technical & Commercial losses provides a realistic picture of loss situation in the context it is measured.
- It is combination of energy loss (Technical loss + Theft + inefficiency in billing)& commercial loss (Default in payment + inefficiency in collection).
- AT&C Losses = (Energy input – Energy billed) * 100 / Energy input.

ACS-ARR Gap

- It is the gap between the average cost of supply (ACS) and the average revenue realised (ARR).

Reference

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2. https://npp.gov.in/glossary
3. https://economictimes.indiatimes.com/blogs/et-commentary/more-power-to-discoms/

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