

1. NPCI's Interchange Fee For PPI-Based UPI Transactions

Topic: Economy



In News: The National Payments Corporation of India (NPCI) issued a circular saying that Unified Payments Interface (UPI) transactions of above INR 2,000 made through prepaid payment instruments (PPI) to merchants will attract an interchange fee of 1.1%.

More on the Topic:

- Peer-to-peer (P2P) and peer-to-peer-merchants (P2PM) transactions will not be covered under the ambit of the new charges.
- As per the NPCI, **P2PM transactions are classified as transactions with small merchants who have projected monthly inward UPI transactions of less than or equal to INR 50,000.**
- The interchange fee will only apply on payments made to **online merchants, large merchants and small offline merchants.**
- In the card payment industry, **interchange fee is the charge that merchants pay to issuer banks for every credit and debit card transaction.**
- The fee covers costs related to authentication, verification and processing systems at different levels of debit and credit cards transactions.
- Meanwhile, PPIs are instruments that facilitate purchase of goods and services, conduct of financial services, enable remittance facilities, among others, against the value stored therein. Simply put, mobile wallets, gift cards, prepaid cards, among others, are PPIs.

What are Prepaid Payment Instruments?

- The RBI defines **PPIs as payment instruments that facilitate the buying of goods and services**, including the transfer of funds, financial services, and remittances, against the value stored within or on the instrument.

- PPIs are in the form of payment wallets (like Paytm Wallet, Amazon Pay Wallet, PhonePe Wallet, etc.), smart cards, mobile wallets, magnetic chips, vouchers, etc. As per the regulations, banks and NBFCs can issue PPIs.

The National Payments Corporation of India (NPCI):

- The National Payments Corporation of India (NPCI) is an initiative taken by the Reserve Bank of India (RBI) and Indian Bank’s Association (IBA) to operate the retail payments and settlement systems in India.
- This organisation was founded in the year 2008 **under the Payment and Settlement Systems Act, 2007.**
- NPCI has been incorporated as a **‘not for profit’ company under section 8 of Companies Act 2013.**
- NPCI offers a range of products and services, including **Unified Payments Interface (UPI), National Electronic Funds Transfer (NEFT), Immediate Payment Service (IMPS), Bharat Bill Payment System (BBPS), RuPay card, and others.**

Source: Indian Express

2. Type 1 diabetes

Topic: Science and Technology





In News: The National Commission for Protection of Child Rights(NCPCR) has written to States to introduce concessions for children with Type 1 diabetes in schools.

More on the Topic:

- T1D is diagnosed in childhood or adolescence as a **condition where the pancreas produces little or no insulin.**
- This requires the children to constantly monitor their sugar levels and diet, and regulate physical activity. Treatment involves taking multiple injections of insulin daily, lifelong.
- According to data from the International Diabetes Federation Atlas 2021, **India has the world's highest number of children and adolescents living with Type I Diabetes Mellitus (T1DM)**, at over 2.4 lakh, in the southeast Asia region.
- It is an **autoimmune disorder**, which means that the body's immune system **mistakenly attacks and destroys the insulin-producing cells** in the pancreas. The exact cause of this condition is not known, but **genetic and environmental factors** are thought to play a role.

How is Type 1 Diabetes is treated?

- Anyone who has type 1 diabetes **needs insulin therapy throughout their life.**
- There are many types of insulin, including: Short-acting insulin. Sometimes called regular insulin, this type starts working around 30 minutes after injection.

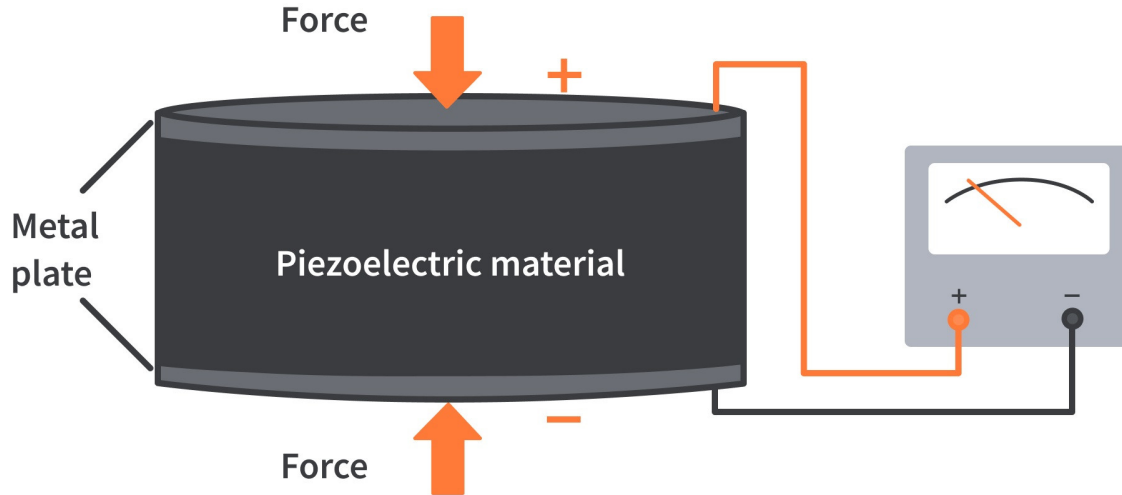
Other types of Diabetes:

- Diabetes is a condition that happens when your blood sugar (glucose) is too high. It develops when your pancreas doesn't make enough insulin or any at all, or when your body isn't responding to the effects of insulin properly. Diabetes affects people of all ages.
- **Type 2 diabetes:** With this type, patients body doesn't make enough insulin and/or body's cells don't respond normally to the insulin (insulin resistance). This is the most common type of diabetes. It mainly affects adults, but children can have it as well.
- **Gestational diabetes:** This type develops in some people during pregnancy. Gestational diabetes usually goes away after pregnancy. However, if anyone have gestational diabetes, they are at a higher risk of developing Type 2 diabetes later in life.

Source: Hindu

3. Piezoelectric effect

Topic: Science and Technology



In News: For the first time, scientists have reported evidence of the piezoelectric effect in liquids.

More on the Topic:

- In the piezoelectric effect, **a body develops an electric current when it is squeezed.**
- Quartz is the most famous piezoelectric crystal: it is used in this capacity in analog wristwatches and clocks.
- Such crystals are also used in cigarette lighters, electric guitars, TV remote controls, audio transducers, and other instruments where converting mechanical stress to a current is useful.

Science behind Piezoelectricity:

- Piezoelectricity is **the generation of electric charges in certain solid materials in response to applied mechanical stress.**
- Piezoelectric property essentially is based on the interplay between mechanical and electrical features of a material.
- The bonds that keep materials together are **electrons** and these electrons are the basis for electricity
- There exists a connection between material mechanics and material electronics.
- Therefore, changing one will impact the other.

Source: Hindu

4. SMILE AND SHRESHTA Scheme

Topic: Government Schemes

In News: The implementation of the Scheme for Residential Education for Students in High Schools in Targeted Areas (SHRESHTA) and Support for Marginalised Individuals for Livelihood and Enterprise (SMILE) was reviewed recently.

More on the Topic:

Under the Scheme for Residential Education for Students in High Schools in Targeted Areas (SHRESHTA):

- Earlier known as Grant-in-Aid to Voluntary and other Organizations working for Scheduled Castes), financial assistance is provided to NGOs for running projects related to education of students belonging to Scheduled Castes.
- The Scheme broadly covers 3 types of projects namely (i) Residential Schools (ii) Non Residential Schools and (iii) Hostels, both for Primary and Secondary Students.

Support for Marginalised Individual for Livelihood and Enterprise (SMILE):

- The Support for Marginalised Individual for Livelihood and Enterprise (SMILE) does not specifically cover persons belonging to Scheduled Castes.
- It is under the Ministry of Social Justice and Empowerment.
- It is a Central Sector scheme.

Source: Indian Express

5. DNA Profiling of Elephants

Topic: Environment and Ecology



In News: The government plans to conduct DNA profiling of elephants as part of the elephant census 2022 after previous counts threw up possibly inaccurate numbers.

More on the Topic:

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- The Ministry of Environment, Forest and Climate Change (MoEFCC), also for the first time, is converging elephant and tiger population estimation. The results for the census are expected to come in by July next year.
- **The DNA profiling of elephants will be done to develop a scientific method of population estimation. To ensure accuracy all DNA samples will be tested twice.**
- The census will be conducted in three phases.
- First, ground surveys will be conducted for indirect elephant signs including broken branches, footprints and dung.
- Results from camera traps and DNA analysis of dung samples will then be analysed.
- The numbers will finally be extrapolated to give a range for each region.
- Elephants will be identified for their herd, health and nutrition level, and body characteristics such as ear and tusk size.

Project Elephant:

- The Government of India introduced Project Elephant in 1992 as a Centrally Sponsored Scheme with the following goals:
- To safeguard elephants, their habitat, and migration routes
- To address problems of animal-human conflict
- Elephant welfare in captivity

Conservation status of Asian Elephant:

- IUCN: Endangered
- Wildlife (Protection) Act, 1972: Schedule I.
- CITES: Appendix I

Source: Hindu

6. Vembanad and Ashtamudi lakes

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Topic: Environment and Ecology



In News: The National Green Tribunal (NGT) has imposed a penalty of Rs 10 crore on the Kerala government for failing to protect the Vembanad and Ashtamudi lakes, which are included in the Ramsar list of wetlands.

More on the Topic:

- The two wetlands have long been susceptible to massive encroachments, pollution and depletion of ecosystems.
- The condition of Vembanad lake deserves more attention. Water quality here is very low, with deficient levels of oxygen.
- **Vembanad Lake:** It is the longest lake in India and the largest lake in the state of Kerala. The lake is situated at sea level and is separated from the Laccadive Sea by a narrow barrier island.
- The lake is also known as Punnamada Lake (in Kuttanad) and Kochi Lake (in Kochi).
- In 2002, the lake was included in the list of **wetlands of international importance**, as defined by the Ramsar Convention. It is the second-largest Ramsar site in India, only after the Sunderbans in West Bengal.
- **Ashtamudi Lake:** Ashtamudi Lake, in the Kollam District of the Indian state of Kerala, is the most visited backwater and lake in the state.
- It has been recognized as a **Ramsar site**, a wetland site designated internationally important under the Ramsar Convention.



- **The Ramsar Convention:** is an international treaty for the conservation and sustainable use of wetlands, and India is a signatory to this treaty.

Source: Business Standard

7. Pradhan Mantri Gram Sadak Yojana (PMGSY)

Topic: Government Schemes



In News: PM has expressed happiness on Pradhan Mantri Gram Sadak Yojana.

More on the Topic:

- PMGSY - Phase I was launched in 2000 as a **100 % centrally sponsored scheme** with an objective to provide single all-weather road connectivity to eligible unconnected habitation of designated population size (500+ in plain areas and 250+ in North-East, hill, tribal and desert areas, 00 - 249 population in LWE districts as per Census, 2001) for overall socio-economic development of the areas.
- Also, upgradation (to prescribed standards) of the existing roads in those Districts where all the eligible Habitations of the designated population size have been provided all-weather road connectivity was to be taken up.
- However, Upgradation is not central to the Programme. In Upgradation works, priority was to be given to Through Routes of the Rural Core Network, which carry more traffic.

Source: Business Standard
