Prelim Bits 29-07-2017

Swadhar Greh Scheme

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- The Scheme is implemented by the Ministry of Women and Child Development targeting women victims.
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- Women victims of difficult circumstances who are in need of institutional support for rehabilitation are being given help so that they could lead their life with dignity.
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- The Scheme envisages providing shelter, food, clothing and health as well as economic and social security for the women victims.
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- The scheme focuses on establishing one Swadhar Greh in each district.
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Zealandia

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- Scientists have recently attempted to solve the mysteries of Zealandia by setting sail on an expedition to South Pacific.
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- Zealandia, an underwater landmass was once part of the Gondwana super-continent but broke away some 75 million years ago.
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- It is submerged beneath South Pacific, extending from south of New Zealand to north of New Caledonia, covering 5 million square kilometres.
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- A piece of seafloor called the Cato Trough still separates Zealandia and Australia.
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- It meets all the criteria that are satisfied by the existing seven continents i.e
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1. it is elevated above the area that surrounds it,
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2. has its own distinctive geology,
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3. the area that it takes up is well defined and
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4. has a crust thicker & lighter continental crust than the regular ocean floor with dark volcanic rocks.
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Integrated Health Information Platform (IHIP)

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- Recently, a scheme to set up an Integrated Health Information Platform (IHIP) to create the Electronic Health Records (EHRs) with the help of Health Information Exchanges has been approved.
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- Electronic Health Records contains medical history of citizens.
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- EHR intends to bring standardisation and homogeneity of healthcare information across various systems.
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- State/UTs are already working on computerisation and implementation of hospital information system (for creation electronic records) in their hospitals/health facility with support under National Health Mission.
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Titan

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- Titan is the largest moon of Saturn.
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- Scientists identified negatively charged molecules called ‘carbon chain anions’ in the atmosphere of Titan using the data collected by Cassini Spacecraft.
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- These linear molecules in carbon chain anions are understood to be building blocks towards more complex molecules, and may have acted as the basis for the earliest forms of life on Earth.

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Cassini Spacecraft

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- It is a joint NASA-European space agency mission.
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- Cassini-Huygens is an unmanned spacecraft sent to the planet Saturn in 2004.
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- It is the fourth space probe to visit Saturn (pioneer 11, Voyager1, Voyager 2) and the first to enter orbit.
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- Its design includes a Saturn Orbiter and a Lander called “Huygens” for the moon Titan.
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- This was the first landing ever accomplished in the outer solar system.
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Neem Coated Urea

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- Urea, the nitrogenous fertilizer when applied to soil, is hydrolysed into ammonia and then to nitrite and nitrate.
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- This process is called Nitrification.
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- Thus most plants take nitrogen in the form of Nitrates. When the process of nitrification is too rapid, nitrogen will escape to atmosphere and plants will not be able to recover it from Urea efficiently.
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- Coating Urea with Neem oil or Neem cake has been proved to be an effective natural inhibitor to the loss of nitrogen to atmosphere.
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- It slows down the process of nitrate formation and hence excess nitrate is not available for denitrification.
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- Neem coating leads to more gradual release of urea, helping plants gain more nutrients and resulting in higher yields.
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- There is lower underground water contamination due to leaching of urea and also neem serves as a natural insecticide
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- Neem-coating will help check heavily subsidized urea's pilferage to chemical industry and other uses such as making of adulterated milk.
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- Government has mandated all indigenous producers of Urea to produce 100% of urea as Neem coated urea only.
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Accidental Insurance for RuPay ATM Card Holders

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- All RuPay ATM-cum-debit cardholders are presently eligible for accidental death and permanent disability insurance cover.
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- RuPay Classic cardholders are eligible for cover of Rs.1 lakh, whereas RuPay Premium cardholders are eligible for cover of Rs.2 lakh.
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- Insurance premium is paid by the National Payments Corporation of India.
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CRISPR

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- For the first time, scientists in the US have successfully used gene-editing tools on human embryos to correct defective DNA that cause inherited diseases.
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- The effort involved changing the DNA of a large number of one-cell embryos with gene-editing technique CRISPR.
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- CRISPR stands for Clustered Regularly Interspaced Short Palindromic Repeats.
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- CRISPR - Cas9 is a most prominent genome editing technique by targeting specific stretches of genetic code to edit DNA at precise locations.
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- The technique allows researchers to permanently modify genes in living cells and organisms and to correct mutations at precise locations in the human

genome to treat genetic causes of disease.
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- It can be used to target multiple genes simultaneously and can also activate gene expression instead of cutting the DNA.
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