Prelim Bits 26-08-2018

Lithium-ion battery

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- Scientists have recently developed novel lithium-ion batteries with components that prevent them from catching fire and causing injuries to users.
- Lithium-ion batteries are all about the movement of lithium ions.
- The ions move one way when the battery charges (when it's absorbing power); they move the opposite way when the battery discharges (when it's supplying power).
- Lithium ion batteries are more reliable than older technologies such as nickel-cadmium.
- Nickel batteries appear to become harder to charge unless they're discharged fully first, it is not the case with lithium ion batteries.
- Lithium-ion batteries don't contain cadmium, a toxic, heavy metal.
- It has high energy density i.e. it stores more energy per unit of weight when compare to other kind of batteries.
- But it still stores a hundred times less energy dense than gasoline (which contains 12,700 Wh/kg by mass or 8760 Wh/L volume).
- It is used in every modern cellphone, laptop, tablet, and most other rechargeable gadgets.

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ICESAT-2

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- The Ice, Cloud and Land Elevation Satellite-2 (ICESat-2) satellite is

scheduled to be launched by NASA in the month of September.
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- It is a laser-armed satellite which measures changes in the heights of Earth's polar ice.
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- It will measure the average annual elevation change of land ice covering Greenland and Antarctica to within the width of a pencil, capturing 60,000 measurements per second.
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- Its Advanced Topographic Laser Altimeter System (ATLAS) measures height by timing how long it takes individual light photons to travel from the spacecraft to Earth and back.
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- NASA started the ICESAT mission in the year 2003 and continued in 2009 with NASA's Operation IceBridge.
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- ICESat-2 will also measure the height of ocean and land surfaces, including forests.
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Poshan Maah

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- Poshan Maah (National Nutrition Month) is being celebrated in the month of September as part of Jan Andolan under POSHAN Abhiyaan.
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- PM's Overarching Scheme for Holistic Nourishment (POSHAN) Abhiyan strive to reduce the level of stunting, under-nutrition, anemia and low birth weight babies.
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- It targets to reduce stunting, undernutrition, anemia and reduce low birth weight by 2%, 2%, 3% and 2% per annum respectively.
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- Mission 25 by 2022 – Although it targets to reduce stunting by 2%, Mission would strive to achieve reduction in Stunting from 38.4% (NFHS-4) to 25% by 2022.
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- It may include the following nutrition strategies and interventions
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i. supplementary nutrition,
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ii. IYCF(Infant and Young Child Feeding)immunisation,
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iii. food fortification,
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iv. adolescent nutrition,
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v. dietary diversification
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vi. maternal health
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- Behaviour change communication is the key component of POSHAN Abhiyaan for converting it into Jan Andolan (People's movement).
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- All the States and districts will be covered in a phased manner i.e. 315 districts in 2017-18, 235 districts in 2018-19 and remaining districts in 2019-20.
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- It will be funded 50% by the Government of India and 50% by World Bank or other Multinational Development Banks.
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Genetic Disorders

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- The Centre has prepared a draft policy proposing compulsory genetic screening of all pregnant women to prevent inherited disorders such as thalassemia and sickle cell anaemia.
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- Thalassemia and sickle cell anaemia are variants of Haemoglobinopathies.
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- Hemoglobinopathy is a kind of genetic defect that results in abnormal structure of one of the globin chains of the hemoglobin molecule.
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- Thalassemia usually results in underproduction of normal globin proteins, often through mutations in regulatory genes.
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- The abnormality results in improper oxygen transport and destruction of red

blood cells.
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- It has wide-ranging effects on the human body like iron overload, bone deformities and in severe cases can cause heart diseases.
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- The disease has no cure and people living with thalassemia require regular blood transfusions as an effective measure to prolong life.
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Comprehensive Economic Cooperation Agreement

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- India and Singapore have recently signed the Second Protocol amending the Comprehensive Economic Cooperation Agreement (CECA).
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- The CECA was the first comprehensive agreement covering trade in goods, services and investments, which India had signed with any of its trading partners.
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- CECA involve tariff reduction/elimination in a phased manner on listed or all items except the negative list and tariff rate quota (TRQ) items.
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- Singapore is the second largest trading partner of India within ASEAN and India is the largest trading partner of Singapore in South Asia.
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Source: The Hindu, Indian Express

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