Prelim Bits

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Northern Lights

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- The Northern Lights is also known as the Aurora Borealis.
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- After the Winter Solstice, a mass of energetic particles from the Sun smashed into the magnetic field around Earth stirring up a stunning display of northern lights.
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- The northern lights stretched across British Columbia, Alberta, Saskatchewan, Manitoba, Nunavut and Northwest Territories, areas that often fall under the auroral oval.
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- The collision of solar particles and pressure into our planet's magnetosphere accelerates particles trapped in the space around Earth at altitudes of 100 to 400 kilometers, where they excite oxygen and nitrogen molecules and release photons of light.
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- The Northern lights was captured by NASA Satellite "The Suomi NPP" with the Day-Night band (DNB) of the Visible Infrared Imaging Radiometer Suite (VIIRS).
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Swachh Swasth Sarvatra

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- It is an inter-ministerial joint initiative between the Ministry of Drinking Water and Sanitation and the Ministry of Health and Family Welfare.

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- It leverages achievements of two complementary programmes – Swachh Bharat Mission (SBM) and Kayakalp – of the Ministry of Drinking Water and Sanitation and Ministry of Health and Family & Welfare, respectively.
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- The three key components of Swachh Swasth Sarvatra are:\n
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    - Community Health Centres (CHCs) in ODF blocks supported to achieve Kayakalp certification
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    - Gram Panchayat of Kayakalp Primary Health Centres (PHCs) prioritized to become ODF
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    - Training in WASH (Water, Sanitation and Hygiene) of CHC/PHC nominees
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- It is a much needed programme to achieve open defecation free India by 2019
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2016 will last a second longer than other years

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- On December 31, 2016, a "leap second" will be added to the world's clocks at 23 hours, 59 minutes and 59 seconds Coordinated Universal Time (UTC).
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- UTC is computed in Paris, France, at the International Bureau of Weights and Measures.
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- Historically, time was based on the mean rotation of the Earth relative to celestial bodies and the second was defined in this reference frame.
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- The invention of atomic clocks defined a much more precise “atomic” timescale and a second that is independent of Earth’s rotation.
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- Measurements show that the Earth, on average, runs slow compared to atomic time, at about 1.5 to 2 milliseconds per day.
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- Scientists have determined that after roughly 500 to 750 days, the difference between Earth rotation time and atomic time would be about one second.

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- The International Earth Rotation and Reference Systems Service (IERS) is the organisation which monitors the difference in the two time scales and calls for leap seconds to be inserted in or removed from UTC when necessary to keep them within 0.9 seconds of each other.
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\n**Poverty trap**

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- It is a spiralling mechanism which forces people to remain poor.
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- And is so binding in itself that it doesn't allow the poor people to escape it.
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- Poverty trap generally happens in developing and under-developing countries, and is caused by a lack of capital and credit to people.
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Appropriation Bill

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- It gives power to the government to withdraw funds from the Consolidated Fund of India for meeting the expenditure during the financial year.
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- Post the discussions on Budget proposals and the Voting on Demand for Grants, the government introduces the Appropriation Bill in the LokSabha.
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- It is intended to give authority to the government to withdraw from the Consolidated Fund, the amounts so voted for meeting the expenditure during the financial year.
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\n**Capital gain**

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- It is the profit, one earns on the sale of an asset like stocks, bonds or real

estate.
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- It results in capital gain when the selling price of an asset exceeds its purchase price.
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- Capital loss arises when the cost price is higher than the selling price.
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- Capital gains can be of two types: realised and unrealised. 1) Realised capital gain can be described as the gain made on an investment that has been sold for a profit.
\n 2) Unrealised capital gain can be described as the gain on an investment that has not been sold yet but can make profit if sold later.
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\nInvisible Hand

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- The unobservable market force that helps the demand and supply of
\n goods in a free market to reach equilibrium automatically is the invisible hand.
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- The phrase invisible hand was introduced by Adam Smith in his book 'The Wealth of Nations'. He assumed that an economy can work well in a free market scenario where everyone will work for his/her own interest.
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Economies of scale

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- It is the cost advantage that arises with increased output of a product.
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- Economies of scale arise because of the inverse relationship between the quantity produced and per-unit fixed costs; i.e. the greater the quantity of a good produced, the lower the per-unit fixed cost because these costs are spread out over a larger number of goods.
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- It may also reduce variable costs per unit because of operational efficiencies and synergies.

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- Classified into two main types as Internal – arising from within the company; and *External* – arising from extraneous factors such as industry size.
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