Prelim Bits 09-10-2018

Zika Virus

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- Indian Council of Medical Research (ICMR) surveillance system has recently detected cases of Zika Virus in Jaipur.
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- Zika virus is a member of the virus family Flaviviridae.
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- It is a mosquito-borne disease transmitted by Aedes mosquitoes.
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- It can be passed from a pregnant woman to her fetus. Infection during pregnancy can cause certain birth defects.
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- Zika infection during pregnancy can cause a birth defect of the brain called microcephaly and other severe brain defects.
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- It is also linked to other problems, such as miscarriage, stillbirth, and other birth defects.
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- There is no vaccine or medicine for Zika.
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- The disease is currently being reported by 86 countries worldwide.
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- Symptoms of Zika virus disease are similar to other viral infections such as dengue, which include fever, skin rashes, conjunctivitis, muscle and joint pain and headache.
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- In India, the first outbreak was reported in Ahmedabad in January-February 2017 and 2nd outbreak in Krishnagiri district in Tamil Nadu.
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- Both were successfully contained through intensive surveillance and vector management.
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- According to WHO, Zika is no longer a public health emergency of international concern.
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Diphtheria

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- Government hospitals in Delhi has reported a dozen diphtheria deaths in children over the past two weeks.
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- Diphtheria is a highly contagious respiratory disease caused by the **bacterium** Corynebacterium diphtheria.
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- It primarily infects the throat and upper airways and produces a toxin affecting other organs.
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- The toxin causes a membrane of dead tissue to build up over the throat and tonsils, making breathing and swallowing difficult.
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- The disease is spread through direct physical contact or from breathing in the coughs or sneezes of infected individuals.
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- It can be fatal if left untreated, but has become increasingly rare in recent decades due to high rates of vaccination.
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Nobel Memorial Prize in Economic Sciences

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- Nobel Memorial Prize in Economic Sciences rewards the design of methods that addresses sustainable growth in the global economy and welfare.
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- It is not formally a Nobel Prize.
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- It was created by the Swedish central bank “in memory of Alfred Nobel” and first awarded in 1969.
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- This year, it is awarded to William D. Nordhaus and Paul M.Romer from USA.
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- Nordhaus is known for persuading governments to address climate change, preferably by imposing a tax on carbon emissions.
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- Paul M. Romer is known for integrating technological innovations into long-run macro-economic analysis.
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Cyclone Luban

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- Tropical Cyclone Luban is spinning through the Arabian Sea.
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- It is forecast to track toward Oman, Yemen or the Gulf of Aden in the week ahead.
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- The cyclone is named as Luban by oman authorities.
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- Tropical cyclones are most likely to develop in the Arabian Sea in the spring and fall.
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- It usually affects the Arabian Peninsula every one to two years.
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- The cyclone typically weaken as they approach the Arabian Peninsula due to dry desert air.
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- This year, **Cyclone Sagar** made landfall in western Somalia in May. It was the country's strongest and westernmost tropical cyclone in records dating to the mid-1960s.
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Voyager 2

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- NASA has recently reported that Voyager 2 is nearing heliosphere (Sun's outer border) and could soon enter interstellar space.
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- Voyager 2 is the space probe launched by NASA in 1977 to study the outer planets (Jupiter, Saturn, Uranus and Neptune).
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- **Heliopause** - The place where the sun’s constant flow of material and magnetic field stop affecting its surroundings.
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- Heliopause marks the end of a region created by our sun that is called the heliosphere.
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- The sun creates **heliosphere** by sending a constant flow of particles and a

magnetic field out into space at over 670,000 miles per hour. This stream is called the ‘solar wind.’
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- **Interstellar Space** is the part of space that exists between stars with cold particles around it.
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- Inside the heliosphere, the solar particles are hot but less concentrated. Outside of the bubble, they are very much colder but more concentrated.
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- Once an object arrive in interstellar space, there would be an increase of “cold” particles around it.
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Source: The Hindu, BusinessLine, Indian Express

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