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GSAT-30

- ISRO has launched latest communication satellite, GSAT-30, from the Guiana Space Centre in Kourou.
- The 3,357-kg satellite will replace INSAT-4A which was launched in 2005 and marks the first mission of the year for Indian Space Research Organisation.
- The high-power satellite is equipped with 12 normal C band and 12 Ku band transponders.
- GSAT-30 will provide DTH (direct to home) television services, connectivity to VSATs (that support working of banks') ATMs, stock exchange, television uplinking and teleport services, digital satellite news gathering and e-governance applications.
- The satellite will also be used for bulk data transfer for a host of emerging telecommunication applications.
- The satellite will provide communication services to Indian mainland and islands through the Ku band and wide coverage over Gulf countries, a large number of Asian countries and Australia through the C band."
- For this operation ISRO hired a foreign launcher as GSAT-30 is much heavier than the 2,000-kg lifting capacity of its geostationary launch vehicle GSLV-MkII.

Yada Yada virus

- Researchers have reported the discovery of a new virus called Yada Yada.
- Yada Yada is an alphavirus, a group of viruses that are as "small, single-stranded positive-sense RNA viruses (that) include species important to human and animal health, such as Chikungunya virus and Eastern equine encephalitis virus… (and which) are transmitted primarily by mosquitoes and (are) pathogenic in their vertebrate hosts".
- Unlike some other alphaviruses, Yada Yada does not pose a threat to human beings.
- The virus was detected in mosquitoes trapped as part of the Victorian Arbovirus Disease Control Programme in Encephalitis Virus Surveillance traps set up overnight in three locations in Victoria, Australia, for seven weeks in late 2016, the researchers reported.

Article 131

- Kerala became the first state to challenge the Citizenship (Amendment) Act (CAA) before the Supreme Court. However, the legal route adopted by the state is different from the 60 petitions already pending before the court.
- The Kerala government has moved the apex court under Article 131 of the Constitution, the provision under which the Supreme Court has original jurisdiction to deal with any dispute between the Centre and a state; the Centre and a state on the one side and another state on the other side; and two or more states.
- Under article 131Supreme Court has three kinds of jurisdictions: original, appellate and advisory.
- Under its advisory jurisdiction, the President has the power to seek an opinion from the apex court under Article 143 of the Constitution.
- Under its appellate jurisdiction, the Supreme Court hears appeals from lower courts.
- In its extraordinary original jurisdiction, the Supreme Court has exclusive power to adjudicate upon disputes involving elections of the President and the Vice President, those that involve states and the Centre, and cases involving the violation of fundamental rights.
- For a dispute to qualify as a dispute under Article 131, it has to necessarily be between states and the Centre, and must involve a question of law or fact on which the existence of a legal right of the state or the Centre depends.
- In a 1978 judgment, State of Karnataka v Union of India, Justice P N Bhagwati had said that for the Supreme Court to accept a suit under Article 131, the state need not show that its legal right is violated, but only that the dispute involves a legal question.
- Article 131 cannot be used to settle political differences between state and central governments headed by different parties.
- The other petitions challenging the CAA have been filed under Article 32 of the Constitution, which gives the court the power to issue writs when fundamental rights are violated.
- A state government cannot move the court under this provision because only people and citizens can claim fundamental rights.
- Under Article 131, the challenge is made when the rights and power of a state or the Centre are in question.
- However, the relief that the state (under Article 131) and petitioners under Article 32 have sought in the challenge to the CAA is the same — declaration of the law as being unconstitutional.

Fastest Growing Cities

- According to recent reports Malappuram at the top of the “Top ten fastest-growing cities” in the world, based on “Total % change, 2015-20 forecast”.
- The list, based on data from the United Nations Population Division, appears unusual; this is because the total fertility rate (TFR, the number of children a woman is likely to have in the childbearing age of 15-49) in Kerala is 1.8 as per NITI Aayog data from 2016 below the replacement rate of 2.1.
- The UN list refers to “urban agglomerations” (UA), which are extended areas built around an existing town along with its outgrowths — typically villages or other residential areas or universities, ports, etc., on the outskirts of the town.
- The Census defines a UA as “a continuous urban spread consisting of a town and its adjoining urban outgrowths or two or more physically contiguous towns together”.
- Thus, the UA of Greater Mumbai includes Greater Mumbai and the municipal corporation areas of Mira-Bhayander, Thane, Navi Mumbai, and Kalyan-Dombivali, plus the municipal council areas of Ulhasnagar, Ambernath and Badlapur.
- The National Capital Territory of Delhi is a UA that includes the Municipal Corporation of Delhi (MCD) and New Delhi Municipal Council (NDMC) areas, as well as 107 “Census towns” erstwhile surrounding villages where more than 75% of the population is now engaged in non-agricultural pursuits.
- Urban populations can grow when the birth rate exceeds the death rate (natural growth); when workers migrate to the city in search of jobs; when more areas get included within the boundaries of the city; or when existing rural areas are reclassified as urban.
- The low fertility rate in Kerala means the increase in the population of Malappuram and other cities is not because women are having more children; rather it is because more villages are being transformed into towns, and city borders are expanding.
- According to the Census definition, an urban area is either a census town (CT) or a statutory town (ST). An ST is any place with a municipal corporation, municipal council, or cantonment board.

NEON

- Among the most-discussed new concepts at the annual Consumer Electronics Show (CES) in Las Vegas this year was NEON.
- The first project of Samsung’s Star Labs, NEONs are being called the world’s first artificial humans.
- They look and behave like real humans, and could one day develop memories and emotions though from behind a 4K display.
- NEONs are computationally created virtual humans — the word derives from

NEO (new) + humaN.

- For now the virtual humans can show emotions when manually controlled by their creators.
- But the idea is for NEONs to become intelligent enough to be fully autonomous, showing emotions, learning skills, creating memories, and being intelligent on their own

H9N2 virus

- Indian scientists have detected the country's first case of infection with a rare variant of the virus that causes avian influenza, or bird flu.
- In the December 2019 issue of the Emerging Infectious Diseases journal of the US Centers for Disease Control and Prevention (CDC), scientists of the National Institute of Virology (NIV), Pune, have reported avian influenza A(H9N2) virus infection in a 17-month-old boy in Maharashtra.
- H9N2 is a subtype of the influenza A virus, which causes human influenza as well as bird flu.
- The H9N2 subtype was isolated for the first time in Wisconsin, US in 1966 from turkey flocks.
- According to the US National Centre for Biotechnology Information (NCBI), H9N2 viruses are found worldwide in wild birds and are endemic in poultry in many areas.
- H9N2 virus infections in humans are rare, but likely under-reported due to typically mild symptoms of the infections.

Source : The Hindu, Indian Express

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