Prelim Bits 16-12-2019

GIMS

- Government Instant Messaging System (GIMS) is the platform in the testing stage developed by National Informatics Centre.
- It is the Indian equivalent of popular messaging platforms such as Whatsapp and Telegram.
- It is being packaged for employees of Central and state government departments and organisations for intra and inter organisation communications.
- It is seen as a secure Indian alternative without the security concerns associated with apps hosted abroad or owned by foreign entities.
- It employs end-to-end encryption for one-to-one messaging.

StrandHogg

- StrandHogg is a bug that allows real-time malware applications to pose as genuine applications and access user data of all kind.
- It poses threat to all versions android system including Android 10.
- It can then potentially listen to their conversations, access photo album, read/send messages, make calls, record conversations and get login credentials to various account.
- Recently, Union Home Ministry has sent an alert to all states warning about this bug.
- The information was shared by the Threat Analytical Unit, Indian Cyber Crime Coordination Centre.

Indian Cyber Crime Coordination Centre

- It is under the Ministry of Home Affairs.
- It would deal with cybercrimes such as financial frauds, circulation of communal and pornographic contents.
- The centre would maintain a list of suspects and the leads generated during investigations in cybercrime cases.
- This would be shared with law enforcement agencies through a "secured internal network".

Hydrogen Fuel Cells

- Fuel Cell electric vehicles uses hydrogen as a source of fuel and an oxidant to create electricity by an electrochemical process.
- The fuel cell combines hydrogen and oxygen to generate an electric current, water being the only by-product.
- Like conventional batteries, it converts chemical energy into electrical energy.
- It gets differed from battery operated vehicles which stores energy whereas fuel cells rely on a constant supply of fuel and oxygen.
- It is similar to the combustion engines with constant supply of fuel (petrol or diesel) but there will be no moving parts as in the combustion engines.
- **Pros** – It produce much smaller quantities of greenhouse gases and none of the air pollutants that cause health problems.
- It is far more energy efficient than tradition combustion technologies.
- Unlike battery-powered electric vehicles, fuel cell vehicles do not need to be plugged in.
- **Cons** – While they do not generate gases that contribute to global warming, the process of making hydrogen needs energy often from fossil fuel sources.
- Hydrogen is more explosive than petrol thus raising the questions of safety.
- The vehicles are expensive, and fuel dispensing pumps are scarce.

Asteroid Bennu

- The Origins, Spectral Interpretation, Resource Identification, Security-Regolith Explorer (OSIRIS-REx) was launched by NASA in 2016.
- Its target is Near-Earth Asteroid called Bennu.
- It will be NASA’s first to collect samples from an asteroid and return to Earth.
- It will help scientists investigate how planets formed and how life began, as well as improve our understanding of asteroids that could impact Earth.
- NASA have recently identified the target area, known as the “Nightingale site”.
- The site is just 16 metres across and sits inside a large crater in Bennu’s northern hermisphere.

Near-Earth Asteroid

- Asteroids, or minor planets, are small and often irregularly shaped celestial bodies.
- Most of them orbit the Sun in the so-called main asteroid belt, between the orbits of the planets Mars and Jupiter.
- An asteroid is coined a Near Earth Asteroid (NEA) when its trajectory brings it within 1.3 Astronomical Units (AU) from the Sun and hence within 0.3 AU of the Earth's orbit.

- NEA are also known Potentially Hazardous Asteroid.
- The largest known NEA is Ganymed.

Source: The Hindu, The Indian Express

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