Prelim Bits 01-02-2019

Corruption Perception Index

- India has improved its ranking by three positions in the Global Corruption Index 2018.
- The index was released by released by the Transparency International.
- India was ranked 81st in 2017, is ranked 78 in 2018/
- Denmark and New Zealand topped the 2018 index while Somalia, Syria and South Sudan were at the bottom respectively.
- US has dropped out of top 20 countries for the first time since 2011.
- The CPI reveals that the continued failure of most countries to significantly control corruption is contributing to a crisis of democracy around the world.
- The CPI measures public sector corruption in 180 countries and territories.
- It draws upon 13 expert assessments and surveys of business executives to give each country a score from zero (highly corrupt) to 100 (very clean).

Project 75(I)

- The Defence Acquisition Council (DAC) approved indigenous construction of six submarines for the Indian Navy at a cost of over Rs. 40,000 crores.
- This is the second project under the Ministry of Defence's ambitious Strategic Partnership (SP) model.
- The model aims at providing a significant fillip to the Government's 'Make in India' program.

- Strategic Partnership model envisages indigenous manufacturing of major defense platforms by an Indian Strategic Partner.
- Indian Strategic Partner will collaborate with foreign Original Equipment Manufacturers (OEM) to set up production facilities in the country.
- The model has a long term vision of promoting India as a manufacturing hub for defense equipment through transfer of niche technologies and higher Indigenous Content.

Samantha Express

- 'Samantha Express' is a special tourist train covering prominent places associated with chief architect of the Indian Constitution Dr BR Ambedkar and Gautam Buddha.
- It will be run by the Indian Railway Catering and Tourism Corporation.
- It will embark on its maiden journey on April 14 from Nagpur.
- The train will cover Chaityabhoomi (Mumbai), Mhow (Indore), Bodhgaya (Gaya), Sarnath (Varanasi), Lumbini (Nautanwa), Kushinagar (Gorakhpur), Deekshabhoomi (Nagpur), all places linked with either Lord Buddha or Ambedkar.
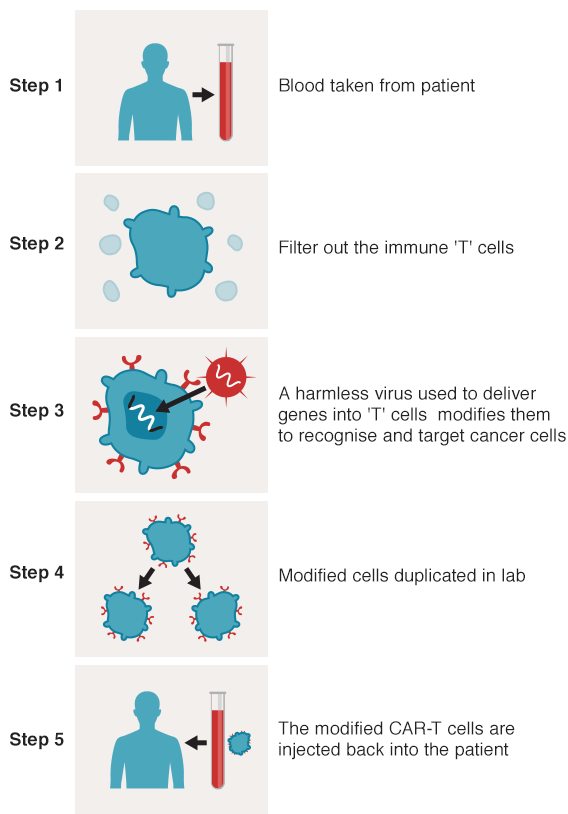
CAR-T

- An 11-year-old has become the first patient to receive CAR-T therapy (immunotherapy) that uses the body's own cells to fight cancer.
- CAR-T is a personalized form of cancer treatment.
- CAR-T involves removing immune cells and modifying them in a laboratory so they can recognize cancer cells.

- Immunotherapy is treatment that uses your body's own immune system to help fight cancer
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- First, the patient has blood removed and the white blood cells are separated out, with the rest of the blood being returned to the patient.
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- A harmless virus is used to insert genes into T-cells, a special type of immune cell.
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- These genes cause the T-cells to add a hook on to their surface, known as a chimeric antigen receptor (CAR).
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- These engineered CAR-T cells - programmed to recognize and destroy the patient's cancer cells - are multiplied in huge numbers and then infused back into the patient.
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How CAR-T therapy works

Step 1	Blood taken from patient
Step 2	Filter out the immune 'T' cells
Step 3	A harmless virus used to deliver genes into 'T' cells modifies them to recognise and target cancer cells
Step 4	Modified cells duplicated in lab
Step 5	The modified CAR-T cells are injected back into the patient

Source: BBC research

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Phased Manufacturing Program

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- Phased Manufacturing Program (PMP) is under implementation to promote indigenous manufacturing of Cellular Mobile Handsets and sub-assemblies/ components/ accessories.
- Ministry of Electronics and Information Technology had notified PMP in 2017 to encourage manufacturing of mobile components in the country.
- It also aims to promote the indigenous manufacturing of populated printed circuit boards, camera modules and connectors in 2018-19, and display assembly, touch panels, vibrator motor and ringer in 2019-20.
- It is expected that India's handset manufacturing industry to grow to $500 billion (Rs 32, 50,000 crore) in five to seven years.
- The policy sets a time-bound framework for establishing the country as a hub for mobile and component manufacturing.
- It would also help to meet the bulk of global handset needs over time, besides creating 5.6 million jobs.

Amami rabbits

- Japan's Environment ministry has started to catch feral cats on Amami Oshima island to avoid them from preying on Amami rabbits.
- Ammai rabbits are endemic to the Ryukyu Archipelago of Japan
- So it is also known as the Ryukyu rabbit.

- The Amami rabbit is a living remnant of ancient rabbits that once lived on the Asian mainland and it is often called a living fossil.
- The rabbit is a primitive, dark-furred rabbit.
- IUCN has classified the rabbit as endangered.
- The Amami rabbit is also classified as a Japanese National Monument.

Source: PIB, The Hindu