Prelim Bits 10-10-2019

Global Competitiveness Index

- The Global Competitiveness Index (GCI) was launched in 1979 by the World Economic Forum (WEF).
- It maps the competitiveness landscape of 141 economies through 103 indicators organised into 12 pillars.
- In 2019, Singapore has become the world's most competitive economy followed by the US.
- Hong Kong SAR is ranked 3rd, Netherlands is 4th and Switzerland is ranked 5th.
- Asia-Pacific region emerged as the most competitive followed closely by Europe and North America.
- China is ranked 28th (the highest ranked among the BRICS) while Vietnam is the most improved country in the region this year at 67th place.
- India has moved down 10 places to rank 68th, largely due to improvements witnessed by several other economies.
- India is among the worst-performing BRICS nations along with Brazil (ranked even lower than India at 71st this year).
- India’s rank in individual parameters are,
    i. 2nd globally for shareholder governance,
    ii. 3rd in terms of market size, renewable energy regulation,
    iii. 15th place in terms of corporate governance.
    iv. 109th out of 141 countries in Health Life Expectancy.
- Limited ICT adoption, poor health conditions and low healthy life expectancy are some of the negatives.

GEMINI system

- GEMINI (GAGAN Enabled Mariner’s Instrument for Navigation and Information) is a new marine information dissemination system.
- It is to provide disaster warnings to fishermen by utilizing GAGAN (GPS Aided Geo Augmented Navigation) satellite systems of the AAI and ISRO.
- It is a portable device which receives data from the GAGAN satellites and sends it to the user’s cellphone App, which decode the alerts.
- It is developed by INCOIS under Ministry of Earth Sciences and Airport

Authority of India.

- INCOIS regularly provides information, advisories, ocean data, weather forecasts, potential fishing zones data to beneficiaries like fishermen, Indian Navy, marine industries, shipping etc.
- But due to the limited range of mobile networks, the disaster warning couldn't reach beyond 10-12km of the coastline which was acutely felt during 2017 Ockhi cyclone.
- The data coverage of GEMINI covers the entire India Ocean full-time, which will help in information transmission to the fishermen far away from coastal areas.

Chemistry Nobel Prize

- John B Goodenough, M Stanley Whittingham and Akira Yoshino share the Chemistry Nobel Prize for their work on rechargeable devices, which are used for portable electronics.
- The foundation of the lithium-ion battery was laid during the oil crisis of the 1970s.
- The crisis led to development of energy technologies that did not rely on fossil fuels.
- M Stanley Whittinghamdiscovered an energy-rich material called **titanium disulphide** as a cathode and metallic lithium as a anode in a lithium battery.
- The first commercial lithium-ion battery was released in 1991.

Click here to know more about Lithium-ion Battery.

DHRUV Programme

- Pradhan Mantri Innovation Learning Programme – DHRUV is a 14-day learning programme launched by Ministry of HRD in ISRO HQ in Bengaluru.
- 60 brightest and talented students from Science, Mathematics and Performing Arts have been chosen for the programme.
- It aims to further sharpen innovative imagination, skills and knowledge of the students to bringsolutions to socio-economic, political and environmental issues in the country.
- Every student to be called 'DHRUV TARA' will be mentored by renowned experts.

Source: PIB, The Hindu, DownTo Earth



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