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5G

- Department of Telecommunications (DoT) has sought inputs on sale and use of radio frequency spectrum over next 10 years, including 5G bands.
- 5G or fifth generation is the latest upgrade in the long-term evolution (LTE) mobile broadband networks.
- 5G works in 3 bands, namely low, mid and high frequency spectrum.
- **Low band spectrum** shows promise in terms of coverage and speed of internet and data exchange, but the maximum speed is limited to 100 Mbps (Megabits per second).
- It can be used and installed for commercial cell phone users who may not have specific demands for very high speed internet, but it may not be optimal for specialised industrial needs.
- **Mid-band spectrum** offers higher speeds compared to the low band, but has limitations in terms of coverage area and penetration of signals.
- It may be used for specialised industrial needs.
- **High-band spectrum** offers the highest speed of all the three bands, but has extremely limited coverage and signal penetration strength.
- Internet speeds in the 5G spectrum has been tested to be as high as 20 Gbps (giga bits per second), while in 4G it is at 1 Gbps.

Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP)

- MGIEP is a United Nations Educational, Scientific and Cultural Organisation’s (UNESCO's) category 1 Research Institute.
- It was established by UNESCO in cooperation with the Government of India in 2012.
- It will support member governments, provide advocacy, commission research and enhance capacity building.
- It focuses on mobilising the world’s youth to put into practice in their own communities the UN’s Sustainable Development Goals.
- It will act as a clearing house for Education for Sustainable Development (ESD) and Peace Education.
- Both MGIEP and UNESCO will play a major role in the implementation of the National Educational Policy -2020.

Indian Telecom Services Performance Indicator Report

- This report was released by the Telecom Regulatory Authority of India (TRAI), a statutory authority under Department of Telecommunications, Ministry of Communications.
- It provides a broad perspective of the Telecom Services in India.
- This quarterly report presents the key parameters and growth trends of the Telecom Services as well as Cable TV, DTH & Radio Broadcasting services in India.
- It is compiled mainly based on the information furnished by the Service Providers.

NGC 2808

- Indian Institute of Astrophysics (IIA) has spotted rare hot UV-bright stars in the massive globular cluster NGC 2808 of our Milky Way Galaxy.
- [IIA is an autonomous institute of the Department of Science & Technology, Government of India]
- NGC 2808 is said to have at least five generations of stars, which exist in the late stages of evolution of a Sun-like star.
- Old globular clusters, referred to as dinosaurs of the Universe, help to understand how stars evolve through various phases between their birth and death.
- UV-bright stars have been distinguished from the relatively cooler main-sequence stars using images from Ultraviolet Imaging Telescope (UVIT) onboard satellite AstroSat.
- [AstroSat is India's first multi-wavelength space satellite. To know more about AstroSat, click here.]
- IIA combined the UVIT data with observations made using other space missions along with ground-based optical observations.
- From the data, the properties of the stars of this cluster such as their surface temperatures, luminosities and radii were derived.
- The properties of these stars were then used to place them on what the Hertzsprung-Russel (HR) diagram along with theoretical models.

Shramshakthi Portal

- Ministry of Tribal Affairs (MoTA) is launching a National Migration Support Portal called ShramShakti.
- This would effectively help in the smooth formulation of State and National level programs for migrant workers. s
- MoTA will also launch Shram-Saathi, a training manual for migrant workers.

Source: PIB, The Indian Express, UNESCO

