

5G Rollout in India

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Context - India is going to get 5G services very soon. The Union Cabinet chaired by Prime Minister Narendra Modi has finally approved the Department of Telecommunications (DoT)'s 5G spectrum auction through which spectrum will be assigned to bidders to provide 5G services to the public as well as enterprises.

Key Developments

- The cabinet claimed that the 5G network will provide speed and capacity that would be about 10 times higher than what is possible through the current 4G services.
- A total auction of 72097.85 MHz of spectrum with 20 yrs validity by July-end will be put to auction, which is said to be held by the end of July 2022.
- The spectrum auction is said to benefit from the Telecom Sector Reforms announced in September 2021.
- The reforms include zero Spectrum Usage Charges (SUC) on the spectrum acquired in the upcoming auction, providing significant relief to the service providers in terms of the operating cost of telecom networks.
- The cabinet also said that for the very first time "there is no mandatory requirement to make upfront payment by the successful bidders." Payments for spectrum can be made in 20 equal annual installments to be paid in advance at the beginning of each

year.

- The availability of sufficient backhaul spectrum is also necessary to enable the roll-out of 5G services. To meet the backhaul demand, the Cabinet has decided to provisionally allot 2 carriers of 250 MHz each in E-band to the Telecom Service Providers.
- The Cabinet also decided to double the number of traditional Microwave backhaul carriers in the existing frequency bands of 13, 15, 18 and 21 GHz bands.

5G Technology

- 5G is the 5th generation mobile network. It is a new global wireless standard after 1G, 2G, 3G, and 4G networks.
- It enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.
- Internet speeds in the high-band spectrum of 5G has been tested to be as high as 20 Gbps (gigabits per second), while, in most cases, the maximum internet data speed in 4G has been recorded at 1 Gbps.