Fixing Frequencies First

Why in news?

The Government proposal to conduct the required spectrum auctions in 2022 to facilitate the roll-out of 5G in 2022-23 has triggered speculation about the feasibility of the timeline.

What is 5G?

- 5G is the 5th generation mobile network and a new global wireless standard after 1G, 2G, 3G, and 4G networks.
- 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.

What are the benefits of 5G?

- The benefits of 5G include
    - Higher multi-Gbps peak data speeds (upto 20 Gbps compared to 4G's 1Gbps)
    - Ultra low latency (reduce the latency down to 1-4 milliseconds)
    - More reliability (deliver signals more reliably than earlier cellular networks will benefit fields such as virtual reality)
    - Massive network capacity
    - Increased availability
    - More uniform user experience to more users
    - Higher performance
    - Improved efficiency (consume less power on devices leading to longer battery life)

What are the crucial issues surrounding the introduction of 5G services?

- The foremost issues include
    - Questions around the particular frequencies the regulator is likely to recommend
    - The Government's plans on pricing the spectrum
    - The viability of the new technology both for the telecom companies and the economy as a whole
    - Financially stressed private telecom service provider industry now reducing to a near duopoly (Vodafone Idea's plan to convert some of its outstanding interest dues to the DoT into an equity stake that will make the Union government the largest shareholder)
    - highly capital intensive 5G technology
- However, most countries that have commercialised 5G so far largely find that the industrial and public utility applications envisaged are still at least a few years away.
- Recently, top US airlines wrote to the Biden administration stating that 5G services deployment around airports should be banned because it may interfere with sensitive airplane

instruments.

- With the COVID-19 pandemic having shown up the existing mobile networks' inadequacies in terms of enabling the delivery of education to remote students, it may make the most sense to delay the introduction of 5G until policymakers are sure its economic payoff will outweigh the high cost.

References

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2. https://www.qualcomm.com/5g/what-is-5g

