

**GOVERNMENT OF INDIA  
MINISTRY OF COMMUNICATIONS  
DEPARTMENT OF TELECOMMUNICATIONS  
LOK SABHA  
UNSTARRED QUESTION NO. 751  
TO BE ANSWERED ON 20<sup>TH</sup> DECEMBER, 2017**

**SPECTRUM AUCTION**

751. ADV. M. UDHAYAKUMAR:  
SHRI JAYADEV GALLA:

Will the Minister of COMMUNICATIONS be pleased to state:

- (a) whether the Government proposes to auction 5G Spectrum in the bands over and above 3000 MHz and if so, the details thereof along with the reasons for delay, if any, in auctioning of the said spectrum;
- (b) the amount of spectrum remaining in the bandwidth of 3400, 3500 and 3600 MHz along with the time by which the Government proposes to auction these remaining spectrum along with the spectrum remaining in bands such as 800, 2100, 2300 and 2500 MHz;
- (c) the difference between the quality of services under 5G and 4G technology; and
- (d) whether the 5G network loses its intensity over longer distance thus affecting its wider coverage and if so, the details thereof and the steps proposed to be taken by the Government to address this issue?

ANSWER

**THE MINISTER OF STATE (IC) OF THE MINISTRY OF COMMUNICATIONS &  
MINISTER OF STATE IN THE MINISTRY OF RAILWAYS  
(SHRI MANOJ SINHA)**

(a) & (b) The Government has already sought recommendations from Telecom Regulatory Authority of India (TRAI) on the applicable Reserve Price and related issues for auction of right to use of spectrum above 3000 MHz (3300-3400 MHz and 3400-3600 MHz) besides frequency bands 700 MHz, 800 MHz, 900 MHz, 1800 MHz and 2100 MHz, 2300 MHz and 2500 MHz. The availability of spectrum in these bands, as conveyed to TRAI, is at **Annexure-I**. It also includes unsold spectrum in various frequency bands in the last auction held in October 2016. Recommendations from TRAI are awaited.

It is for information that the standardisation work in respect of 5G technology is in progress in the International Telecom Union (ITU), Geneva, Switzerland under the official name of IMT (International Mobile Telecommunication) 2020. The standardisation is expected to be completed around the year 2020 after which the frequency bands, already auctioned, can be utilised for deployment of 5G.

(c) Any new generation of mobile technology is always super to earlier generation. However, at this point of time, it may not be possible to compare the Quality of Service between 4G technology network which is fully developed and being deployed world over and 5G technology which is under development and yet to be standardized and commercially deployed.

(d) The coverage of network depends on frequency bands not on technology. Therefore, it is not possible to indicate about coverage/intensity of 5G network in absence of spectrum band in which 5G would be deployed.

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## Annexure-I

## Available spectrum in various bands

S. No.	Name of LSA	FDD Bands					TDD Bands		No Band Plan	
		700 MHz	800 MHz	900 MHz	1800 MHz	2100 MHz	2300 MHz	2500 MHz	3300 MHz	3400 MHz
1	Andhra Pradesh	35.00	7.50		2.00	20.00		30.00	100.00	175.00
2	Assam	35.00			3.00	15.00			100.00	175.00
3	Bihar	35.00	2.50	4.60	0.40	10.00		10.00	100.00	175.00
4	Delhi	35.00	2.50		10.80	15.00		20.00	100.00	175.00
5	Gujarat	35.00	1.25	3.00	1.60	15.00		10.00	100.00	175.00
6	Haryana	35.00	1.25			10.00			100.00	175.00
7	Himachal Pradesh	35.00	3.75		5.80	20.00		10.00	100.00	175.00
8	Jammu & Kashmir	35.00			9.60	10.00		10.00	100.00	175.00
9	Karnataka	35.00	2.50		4.20	15.00		40.00	100.00	175.00
10	Kerala	35.00	2.50		1.40	10.00		0.00	100.00	175.00
11	Kolkata	35.00	2.50			15.00		20.00	100.00	175.00
12	Madhya Pradesh	35.00	2.50			15.00			100.00	175.00
13	Maharashtra	35.00	7.50		1.40	10.00		10.00	100.00	175.00
14	Mumbai	35.00	5.00			15.00		20.00	100.00	175.00
15	North East	35.00				15.00			100.00	175.00
16	Odisha	35.00	3.75		1.40	15.00			100.00	175.00
17	Punjab	35.00	2.50		4.40	10.00		10.00	100.00	175.00
18	Rajasthan	35.00	2.50						100.00	175.00
19	Tamil Nadu	35.00	2.50	6.20		5.00		40.00	100.00	175.00
20	Uttar Pradesh (East)	35.00	2.50	0.60		5.00			100.00	175.00
21	Uttar Pradesh (West)	35.00	2.50	1.20		15.00			100.00	175.00
22	West Bengal	35.00	1.25		0.80	15.00			100.00	175.00
	<b>Total</b>	<b>770.00</b>	<b>58.75</b>	<b>15.60</b>	<b>46.80</b>	<b>275.00</b>		<b>230.00</b>	<b>2200.00</b>	<b>3850.00</b>

FDD: Frequency Division Duplex; TDD: Time Division Duplex

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