of any problem arising in NSP-1. Therefore, adequate redundancy has been built into the system. Monitoring of bandwidth utilization is done on real time basis to identify network problem. Service Level Agreements with penalties are in place with the service providers. To address operational problems, Circle Heads are authorized to upgrade bandwidth as and when required. In case of any network problems that arise as part of regular operations, a well-managed response system has been set up. The project has a Help Desk wherein individual problems are raised, which are managed and resolved immediately.

Commercial availability of 5G Networks

4061. SHRI K. R. ARJUNAN: Will the Minister of COMMUNICATIONS be pleased to state:

(a) whether 5G networks are expected to be commercially available in 2020;

(b) whether by 2022, 5G networks will have billions of subscribers and will cover a sizeable percentage of population for the technology; and

(c) whether Government had dropped hints about making spectrum auctions an annual affair and this was being done to end complaints about spectrum scarcity once and for all, if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF COMMUNICATIONS (SHRI MANOJ SINHA): (a) and (b) The standardization of technology for 5G services is in progress at the International Telecommunication Union (ITU), Geneva, Switzerland. Small scale deployments of 5G networks are expected in some countries like the Republic of Korea, Japan and the United States of America around the year 2020.

(c) The Government has not made any plan to auction spectrum every year. Spectrum auctions were conducted every year from 2012 onwards in various spectrum bands as per availability. 964.8 MHz of spectrum out of 2354.75 MHz was purchased by various Telecom Service Providers through auction conducted in October, 2016. Thereafter, there has been no complaint of spectrum scarcity.

Internet connectivity in remote rural areas by Network Balloons

4062. SHRI PARTAP SINGH BAJWA: Will the Minister of COMMUNICATIONS be pleased to state:

(a) whether Government is planning to partner with any multi-national corporation that makes use of network balloons to provide internet connectivity to remote rural areas, if so, the details thereof; and

(b) whether this particular technology has components that could lead to issues related to privacy of individuals and also national security, if so, the steps Government has taken to circumvent these issues?