MULTIPLE ACCESS CONTROL

- In wireless communication systems, it is often desirable to allow the subscriber to send information simultaneously
- The mobile station to the base station while receiving information from the base station to the mobile station.
- There are several different ways to allow access to the channels are
- Frequency division multiple-access (FDMA)
- Time division multiple-access (TDMA)
- Code division multiple-access (CDMA)
- Space division multiple access (SDMA)

FDMA

- FDMA is the basic technology for advanced mobile phone services. The features of FDMA are as follows.
- FDMA allots a different sub-band of frequency to each different user to access the network.
- If FDMA is not in use, the channel is left idle instead of allotting to the other users.
- FDMA is implemented in Narrowband systems and it is less complex than TDMA.

TDMA

- TDMA shares a single carrier frequency with several users where each users makes use of non-overlapping time slots.
- Data transmission in TDMA is not continuous, but occurs in bursts. Hence hands off process is simpler.
- TDMA uses different time slots for transmission and reception thus duplexers are not required.
- TDMA has an advantage that is possible to allocate different numbers of time slots per frame to different users.