

## **LEARNING OBJECTIVES - Lecture 27 (Multiple Access Channel)**

*After attending lecture and completing the associated readings, you should be able to:*

1. Set up the basic problem formulation for the capacity region of multiple access channels.
2. Prove the achievability scheme for a fixed input distribution using the random coding argument.
3. Prove, using time sharing, the convexity of the capacity region.
4. Discuss the general role of auxiliary random variables in multiterminal information theory, and the importance of cardinality bounds for a so-called “computable” characterization.
5. State Caratheodory’s theorem.