Lecture #5 Speech and Channel Coding Techniques

1. **Define Bandwidth**

   It is the range of frequencies that is available for the transmission of data.

2. **Define Frequency**

   It is the rate (cycles/sec or HZ) at which the signals repeat.

3. **What is the use of Speech Coding?**

   Speech Coding is used to save the bandwidth and improve bandwidth efficiency

4. **What are the methods followed in Speech Coding?**

   - ♣ Wave Form Coding
     - ♣ Time Domain Waveform Coding
     - ♣ Frequency Domain Waveform Coding
   - ♣ Source Coding
   - ♣ Hybrid Coding

5. **What are the attributes of Speech Coding?**

   - ♣ Transmission Bit Rate
   - ♣ Delay
   - ♣ Complexity
   - ♣ Quality

6. **Define Channel**

   A channel is a portion of the communications medium allocated to the sender and receiver for conveying information between them.

7. **What is the use of Channel Coding?**

   It is used to improve the signal quality and reduce the Bit - Error – Rate (BER)

8. What are the classifications of Channel Coding?

- Automatic Repeat Request (ARQ)
- Forward Error Correction (FEC)

9. What is the process of ARQ?

In this, the transmission errors are detected by the receiver but not corrected.

10. What is the process of FEC?

In this, the transmission errors are detected by the receiver and also corrected

11. What are the common Error Correction Codes used now a days?

- Reed Solomon (RS)
- Viterbi (V)
- Reed Solomon Viterbi (RSV)

12. What are the Schemes used in Channel Coding?

- RS Codes
- Convolutional Codes
- Turbo Codes