

### **Give the difference between cable and voice modems.**

- Cable modem operates on higher frequencies up to 850MHz.
- Cable modem uses more complex modulation and demodulation techniques than simple FSK modulation.
- Cable modems connect subscribers to cable tv and voice modem connect subscriber to the telephone network.
- Cable modem works on Bit rate of 30Mbps and voice modem works on 56000 bps.
- Cable modem works on voice and video whereas voice modem work only on voice.

### **What are scramble and descramble circuits used for?**

- Scramble circuit detects the undesirable sequence of 0 and 1 and convert them into sequence more acceptable.
- It randomizes the data to convert data back at the receiver.
- For this different algorithms are used both at the transmitter and the receiver.
- Descramble circuit generates the original sequence at the receiver.
- Example: eight consecutive 0's are converted to alternate 0's and 1's which is more acceptable to the clock recovery.