Homework Ch. 10

1. Multiplexing is the process of transmitting multiple signals over a single channel.

2. The primary benefit of multiplexing is increased data throughput.

3. A Demultiplexer (Demux) is a circuit used to recover multiplexed signals.

4. The basic principle of FDM is that each signal is given a different frequency.

5. A linear mixer combines multiple signals in FDM.

6. A modulator is the name of the circuit that applies frequency multiplexing.

7. Most telemetry systems use FDM.

8. Telemetry is used in aircraft and missile instruments and for monitoring medical devices.

9. Spatial multiplex is the transmission of multiple wireless signals on a common frequency but do not interfere with each other. Spatial multiplexing is used in satellite and cellular telephone systems.

10. L and R are the designation of the left and right audio channels, respectively.

11. L+R, L-R, SCA and RDS

12. Balance modulation is used on the L-R channel.

13. Frequency modulation is used by SCA signals.

14.A demodulation circuit is used for demux in FDM,

15. In TDM, multiple signals take turns transmitting data over the channel.

16. Sampling an analog signal creates Pulse amplitude modulation (PAM).

17. Clock recovery circuits are used to recreate the clock.

18. The MUX and DEMUX are kept synchronized by a synchronizing pule applied to one of the input channels at the transmitter.

19. The time period is called a frame.

20. A PAM demux is used to demodulate a PAM signal

21. FETs are used as switches.

22.Divide the number of samples per frame by the frame period.

23. PAM transmits data by encoding the data in the amplitude of a series of signal pulses.

24. A phase detector tracks pam frequency changes.

25. Analog signals are transmitted in a PCM by encoding the analog signal

26. T-Carrier system

27. The default sampling rate is 8khz

28. 8 bits

29. PCM is reliable, inexpensive, and highly resistant to noise

30.193 bits

31. Broadband because baseband only allows one signal at a time.