Note that these questions are from the text. I present those that I can here so that you may get started before the text is available.

1. Chapter 1, question 1: Imagine that you have trained your St. Bernard, Bernie, to carry a box of three 8 mm tapes instead of a flash of brandy. (When your disk fills up, you consider that an emergency.) These tapes each contain 7 GB. The dog can travel to your side, wherever you may be, at 18 km/hour. For what range of distances does Bernie have a higher data rate than a transmission line whose data rate (excluding overhead) is 150 Mb/sec.

2. Chapter 2, question 2: A noiseless 4 kHz channel is sampled every 1 msec. What is the maximum data rate?

3. Chapter 2, question 3: Television channels are 6 MHz wide. How many bits/sec can be sent if four-level digital signals are used? Assume a noiseless channel.

4. Chapter 2, question 4: If a binary signal is sent over a 3 kHz channel whose signal-to-noise ratio is 20 dB, what is the maximum achievable data rate?

5. Chapter 2, question 9: Is the Nyquist theorem true for optical fiber or only for copper wire? Why?

6. Chapter 2, question 22: [This question relies on a figure in the book, so you must obtain a copy of the text to answer it.]

7. Chapter 2, question 28: Ten signals, each requiring 4000 Hz, are multiplexed on to a single channel using FDM. How much minimum bandwidth is required for the multiplexed channel? Assume that the guard bands are 400 Hz wide. [Note: A guard band is an excess portion of the frequency range used to buffer one FDM channel from another, thus reducing frequency. See Section 2.5.4 in the book for a more complete explanation and example.]