1. What is the bit-rate of a channel with a bandwidth of 2 MHz if the SNR is 30 dB? What is the SNR required to double the bit-rate?

2. For a channel with baud rate of 1000, how do we achieve a bit-rate of 8000 bps? If QAM is used, what is the type of QAM that should be used?

3. Explain the relative advantages and disadvantages of cable and DSL. Which fast evolving application model renders cable Internet less desirable for home users?