

Assignment 1 CSE -311 Computer communication Networks Date: 23-08-2014

Each question carry two marks (duration 10 minutes)

1. Two networks each provide reliable connection oriented service. One of them offers a reliable byte stream and other offers a reliable message stream. Are these identical? If so, why is the distinction made? If not, give an example of how they differ
2. An image is 1024 x 768 pixels with 3 byte/pixel. Assume the image is uncompressed. How long does it take to transmit it over a 56-kbps modem channel? Over a 1-Mbps cable modem? Over a 10-Mbps Ethernet? Over 100-mbps Ethernet?
3. Assume that the TV picture is to be transmitted over a channel with 4.5-MHz bandwidth and a 35-dB SNR. Find the capacity of the channel(bps)
4. Given a channel with an intended capacity of 20 Mbps, the bandwidth of the channel is 3 MHz. Assuming white thermal noise, what SNR is to achieve this capacity?
5. If the received signal level for a particular digital system is -151 dBW & the receiver system effective noise temperature is 1500K, what is E_b / N_0 for a link transmitting 2400bps?