**IC EX 1A: Assignment I**

Chapter 1 Questions - On this assignment you may discuss these answers with your classmates, but each student must submit their own assignment for their grade.  Enter your answers online through Webclass to the questions for each part.

Q8 on Page 17.

a) In what units is transmission speed normally measured?    
*Answer: Bits per second (bps). (Page 14)*

b) Is network speed normally measured in bits per second or bytes per second?    
*Answer: Normally measured in bits per second (bps)* ***not*** *bytes per second. (Page 15)*

c) Give the names and abbreviations for speeds in increasing factors of 1000.    
*Answer: Metric prefixes are added to the base unit, bps for speeds of kilobits per second (kbps), megabits per second (Mbps), gigabits per second (Gbps), terabits per second (Tbps), and so on.*

d) What is 55,000,000,000 bits per second with a metric suffix?    
*Answer: 55 Gbips*

e) Write out 100 kpbs in bits per second (write a number without any metric suffix).    
*Answer: 100,000 bits per second*

f) Write the following speeds properly:  0.067 Mbps, 23,000 kbps, 45.62 Gbps, and 13 kbps.    
*Answer: 67 kbps, 23 Mbps, 45.62 Gbps, and 13 kbps.*

Q1 on Page 44.

a) The telephone system has an availability of 99.999 percent.  How much downtime is that per year?    
*Answer: Downtime: 0.001% per year = 0.00365 days = 0.0876 hours = 5.256 minutes = 315.36 seconds = 5 minutes and 15.36 seconds.*

b) With an availability of 99.9 percent, how much downtime is that per year?    
*Answer: Downtime: 0.1% per year = 0.365 days = 8.76 hours = 525.6 minutes = 8 hours and 45.6 minutes.*

c) With an availability of 99 percent, how much downtime is that per year?   
*Answer: Downtime: 1% per year = 3.65 days = 87.6 hours = 3 days and 15.6 hours.*