King Fahd University of Petroleum & Minerals
Department of Mathematics & Statistics
STAT-319-Term153-I
Quiz #3

Name:                                      ID:                          Serial:

Q 1:  The resistance of 1 meter of copper cable at a certain temperature is normally distributed with mean equal to 23.8 and standard deviation equal to 1.28.

a.  What is the probability that a 1-meter segment of copper cable has resistance between 24.2 and 24.5?

b.  If a sample of size 25 cables randomly selected, find the probability that the sample mean is more than 23.29.

Q 2: Suppose component lifetimes are exponentially distributed with mean 7 hours. Find

a. The probability that the lifetime of a component exceeds 7 hours.

b. If a sample of size 100 components selected randomly, what is the probability that the average lifetime for the 100 components exceeds 6.8 hours.