KFUPM Term 122 Date: 18/3/2013

Mathematics & Statistics STAT 319 Duration: 25 minutes

Quiz# 3

Name: ID #: Section 2 Serial #:

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**Q1.** The number of flaws in an optic fiber cable has an average of 8 per 1000 feet. Then:

a. What is the probability that it takes more than 150 feet to see the next flaw?

b. What is the expected length (in feet) to see a flaw in the cable?

c. Approximate the probability that less than 12 flaws will be seen in 1000 feet of the fiber optic cable.

P.T.O. ➔

**Q2.** The percentage of electronic components that fail in less than 1000 hours of continuous use is 25%. If a sample of 200 such components are randomly selected:

a. Approximate the probability that, at most 45 of them will fail in less than 1000 hours?

b. Approximate the probability that the mean number of components, those will fail in less than 1000 hours, will be at least 51.

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With My Best Wishes