STAT319   Quiz 2   Monday February 27, 2012

Name: —————————————————   ID #: —————————————

1) An article is visually inspected successively by two different inspectors. When a defective item comes through, the probability that it gets by the first inspector is 0.10. Of those getting by the first inspector, the second inspector will miss 5 out of 10. Find the probability that a defective item will get by both inspectors.

2) A random sample of 5 plates is taken from a process that has been showing 12% nonconformance. What is the probability of the sample having at least 2 nonconforming plates?

3) A test instrument correctly identifies excessive current draw in an electronic device with probability 0.97. It incorrectly identifies a good device as having excessive current draw with probability 0.05. Suppose that 2% of the devices produced experience excessive current draw.

   a) Find the probability that a randomly selected device is classified as having excessive current draw.

   b) Find the probability that a randomly chosen device classified as having excessive current draw has been correctly classified.