

King Fahd University of Petroleum & Minerals
Department of Mathematics & Statistics
STAT-201-Term181
Quiz #2-30/10/2018

Name:

ID:

Serial:

Q1: The average number of field mice per acre in a 5-acre wheat field is estimated to be 12. Find the probability that fewer than 3 field mice are found on a given acre.

Q2: The finished inside diameter of a piston ring is normally distributed with a mean of 10 centimeters and a standard deviation of 0.03 centimeter.

- a. What proportion of rings will have inside diameters exceeding 10.075 centimeters?
- b. Below what value of inside diameter will 15% of the piston rings fall?

Q3: Of the bolts manufactured for a certain application, 90% meet the length specification, and can be used immediately, 6% are too long and can be used after being cut, and 4% are too short and must be scrapped. a. A sample of 3 bolts is selected.

- a. What is the probability that the first one is too short, the second one is too long and the third one meets the length specification?
- b. What is the probability that 2 out of 5 bolts are too long?