

Department of Mathematics and Statistics KFUPM
STAT 319-03, Term 151, Quiz#3, Time: 40 mins

Instructor's Name: (Abbas)

Student's Name: _____ ID: _____ Section#: 03

Q.No.1:- The time until recharge for a battery in a laptop computer under common conditions is normally distributed with a mean of 260 minutes and a standard deviation of 49 minutes.

a) What value of battery life in minutes is exceeded by 95% of all batteries?

b) What is the probability that a battery lasts less than 271.52 minutes?

- c) If 16 batteries are selected, what is the probability that exactly 9 of them will each last less than 271.52 minutes?
- d) If 36 batteries are selected, approximate (using normal approximation) the probability that at least 13 of them will each last less than 271.52 minutes?
- e) If a random sample of 36 batteries is selected, what is the probability that the mean recharging time is at most 260 minutes?