Pstat 172B: Quiz 4 NAME:_____ *May 13, 2008*

For the future lifetimes of (40) and (50):

(i) The future lifetimes of (40) and (50) are independent.

(ii) The survival function for (40) is based on a constant force of mortality, $\mu = 0.05$.

(ii) The survival function for (50) follows De Moivres law with $\omega = 110$.

1. (5 pts.) Calculate the conditional probability that both (40) and (50) die within 10 years, given that at least one of them survives 5 years.

2. (5 pts.) Calculate the probability that (40) will die second and within 5 years of the death of (50).