Grading

Hao Peng

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1. 50 points for homework question 1:

   - Three renewal events: failure renewal; inspection renewal without replacement; inspection renewal with replacement. The probabilities of renewal events: $Pr(X + H < \tau)$,failure renewal; $Pr(X > \tau)$,inspection renewal without replacement; $Pr(X < \tau \cap X + H > \tau)$, inspection renewal with replacement. (10 points)
   - Substitute the pdf and cdf of X (exponential distribution) and H (uniform distribution) in the expressions for calculating the probabilities of renewal events. (10 points) A remark should be provided to consider the boundaries of the uniform distribution. Or, different cases have been distinguished to discuss the expressions considering the boundaries of the uniform distribution. (10 points)
   - Renewal cycle cost for different renewal events are correct. (10 points)
   - Renewal cycle length for different renewal events are correct. (10 points)
   - If the closed forms of the integrals are derived, they will get extra 10 points (However, if they have 100 points for this homework, they can not get the extra points. In other words, the highest score for this assignment is 100 points).

2. 50 points for homework question 2:

   - Two renewal events: failure renewal and inspection renewal. The probabilities of renewal events are correct. The summation of the probabilities of renewal events is one. (10 points)
   - Renewal cycle cost for different renewal events are correct. (10 points)
   - Renewal cycle length for different renewal events are correct. (10 points)
   - The distribution of first passage time Tc is correct. (10 points)
   - The conditional first passage time Th given that Tc=u is correct. (10 points)