Stochastic Processes, Long Quiz, 2025 Fall

• Duration: 60 minutes

• Weight: 10% of final grade

• Closed material, No calculator

• Name: _____

• Student ID: ____

• E-mail: ______@seoultech.ac.kr

• Write legibly.

 $\bullet\,$ Justification is necessary unless stated otherwise.

#1. State the definition of memoryless property by providing a mathematical expression. [5pts]

#2. Let $X \sim exp(\lambda)$. Find $\mathbb{E}X^2$.[5pts]