Stochastic Processes, Quiz 1, 2025 Spring

- Duration: 60 minutes
- Closed material, No calculator

- Name: ______________________
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- Write legibly.
- Justification is necessary unless stated otherwise.

1	3
2	3
3	4
Total	10

#1. State the definition of memoryless property by providing a mathematical expression. [3pts]

#2. Let X be a uniform random variable with parameter 0 and 1.

(a) Carefully state its pdf. `[1pts]`

(b) From the pdf, please derive its cdf. `[2pts]`

#3. Let X be a Poisson random variable with parameter 5, and let $Y = min(X, 3)$.

(a) State the pmf of Y. `[2pts]`

(b) Find the variance of Y. `[2pts]`