

**EXAM FOR PROBABILITY & STATISTICS (6PAS1)  
WINTER SEMESTER 2025/2026**

QUESTIONS SET NO. 4

1. Define the binomial distribution, and compute its expectation and variance.
2. You are waiting at the stop where a bus and a tram stop. The bus comes every four minutes, and the tram comes every six minutes. Find the probability that
  - a) the bus will arrive before the tram;
  - b) the bus will arrive in less than 3 minutes, and the tram will arrive in less than one minute.