

Department of Mathematics
MTL 106 (Introduction to Probability Theory and Stochastic Processes)
Tutorial Sheet No. 7
Answer for Selected Problems

2. $m_X(t) = 0$, $C_X(s, t) = \text{Cov}(X_s, X_t) = 1 + st + s^2t^2$.
3. $C(t_1, t_2) = \text{Cov}(N(t_1), N(t_2)) = \lambda \min(t_1, t_2)$.
5. $E[S_n] = 1$, $n = 1, 2, \dots$
6. 1
7. Yes, the process $\{X_t, t \geq 0\}$ is Wide-Sense Stationary.
8. Yes, the process $\{Y_t, t \geq 0\}$ is Wide-Sense Stationary.
11. Yes, $\{X_t, t \geq 0\}$ is Wide-Sense Stationary.
13. The statement is false.
14. Covariance stationary.
16. Not covariance stationary