Random Process

Some definitions:

Stationary - statistical properties do not change with time.

Strict-Sense Stationary (SSS) -

$$F_{X(t_1+\tau),X(t_2+\tau),(t_k+\tau)}(x_1, x_2, \ldots, x_k) = F_{X(t_1),X(t_2),\ldots,X(t_k)}(x_1, x_2, \ldots, x_k)$$

for all τ, k, and t.

Wide-Sense Stationary (WSS) - $\mu_X(t) = \mu$
$R_X(t_1, t_2) = R_X(\tau)$ where $\tau = t_1 - t_2$