Three basic selection criteria:-

1. Mean of the series should be constant.
2. Variance of the series should not be a function of time.
3. The covariance of the ith term and (i+m)th term should not be a function of time.
4. In cases where the stationary criterion are violated, the first requisite becomes to stationarize the time series and then try stochastic models to predict this time series. There are multiple ways of bringing this stationarity. Some of them are Detrending, Differencing etc.