



A weakly stationary series is where the joint probability distribution of any k observations is the same, regardless of the starting point, t



A strictly stationary series can only be weakly stationary when the series is short

Correct!



Strictly stationary series are always weakly stationary



Weakly stationary series are always strictly stationary

Question 3

1 / 1 pts

A White Noise series ...



has constant variance



has a mean = 0



All other options are correct



has no autocorrelation structure

Correct!

Question 4

1 / 1 pts

Autocorrelation is ...



can only exist in an autoregressive series



standardised autocovariance



can only be calculated when the mean of the series is 0



standardised variance

Correct!

Question 5

1 / 1 pts

An AR(1) is stationary ...

- Correct!
- ☒ when the parameter is greater than -1 and less than 1
 - ☐ when the error term is small
 - ☐ when the parameter is less than 1
 - ☐ when the parameter is greater than -1

Question 6

1 / 1 pts

An AR(1) with a large value for the parameter will show ...

- Correct!
- ☐ non-constant mean
 - ☒ clustering
 - ☐ oscillation
 - ☐ little in the way of a pattern

Question 7

1 / 1 pts

The plot of the autocorrelation function (acf) of an AR(1) will show _____ while the plot of the partial autocorrelation function (pacf) of an AR(1) will show _____ ?

- Correct!
- ☒ exponential decay 1 significant lag
 - ☐ no discernible pattern 1 significant lag
 - ☐ decay 1 significant lag

☐ exponential decay 2 significant lags

Question 8

1 / 1 pts

If we wish to determine whether an AR(p) is stationary, we ...

☐ look at a plot of the series to determine if it is stationary

☐ test whether the roots of the characteristic equation lie inside the unit circle in the complex domain

☒ test whether the roots of the characteristic equation lie outside the unit circle in the complex domain

☐ test whether a root of the characteristic equation lies on the unit circle in the complex domain

Correct!

Question 9

1 / 1 pts

If we had an AR(2) ...

☐ the pacf would have many significant lags

☒ the acf would show exponential decay and the pacf would show 2 significant lags

☐ the first lag in the acf and in the pacf would be equal to the largest of the 2 parameters

☐ the acf would show cut-off and the pacf would show exponential decay

Correct!

Question 10

1 / 1 pts

A Moving Average time series (MA) ...

- ☐ has an acf plot that shows decay and a pacf plot that shows cut-off
- ☐ has an acf plot that shows persistence and a pacf plot that shows cut-off
- ☒ has an acf plot that shows cut-off and a pacf plot that shows persistence or decay
- ☐ is very rare when we are modelling "real" data

Correct!

Quiz Score: **10** out of 10