

Course: 0504 Time Series Analysis  
Assessment: Time Series Analysis Concepts  
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Correct answers: 28 / 28  
Time spent: 00:00:51  
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Attempt#: 1

Is the following statement true or false? Stock market daily closing prices is an example of time series data.

- ☒ True  
☐ False

Correct answer

True

Feedback

- That is correct! Well done!

Is the following statement true or false? White Noise time series has a linear trend.

- ☐ True  
☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false? In an ARIMA model, d is number of auto regressive terms.

- ☐ True
- ☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false? A trend in time series is a recurring pattern that occurs over a period of time.

- ☐ True
- ☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false? Random walk is considered to be a non-stationary time series.

- ☒ True
- ☐ False

Correct answer

True

Feedback

- That is correct! Well done!

If an ARMA(p,q) model is an adequate representation of the data generating process, then the residuals should be:

- ☒ White noise
- ☐ Random walk

Correct answer

White noise

We can check whether a time series is stationary by plotting:

- ☒ correlogram
- ☐ scatter plot

Correct answer

correlogram

Is the following statement true or false? White noise series is always stationary time series.

- ☒ True
- ☐ False

Correct answer

True

Feedback

- That is correct! Well done!

Country-wise death rate due to Covid 19 as on a given date is an example of:

- ☐ Time series data
- ☒ Cross sectional data

Correct answer

Cross sectional data

A slow decay pattern in an autocorrelation function against lag is indicative of:

- ☐ Stationary time series
- ☒ Non – stationary time series

Correct answer

Non – stationary time series

Is the following statement true or false?

Time series analysis can be used to predict the next day's air quality index of a particular location.

- ☒ True
- ☐ False

Correct answer

True

Feedback

- That is correct! Well done!

Which of the following methods is used in time series forecasting?

- ☐ Mann-Whitney test
- ☒ ARIMA
- ☐ Both

Correct answer

ARIMA

Is the following statement true or false? The higher the AIC value, the better the model fit.

- ☐ True
- ☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false? The MA (q) model generates forecasts using a weighted average of past errors.

- ☒ True
- ☐ False

Correct answer

True

Feedback

- That is correct! Well done!

Is the following statement true or false? The AIC value in ARIMA is always a number between 0 and 1.

- ☐ True
- ☒ False

Correct answer

False

Feedback

- That is correct! Well done!

In the case of the Dickey Fuller test, a time series is called stationary if:

- ☒ The null hypothesis is rejected
- ☐ The null hypothesis is not rejected

Correct answer

The null hypothesis is rejected

Is the following statement true or false?

Estimating the number of hotel rooms booked for next 3 months is a time series problem.

- ☒ True

☐ False

Correct answer

True

Feedback

- That is correct! Well done!

Is the following statement true or false? The Dickey-Fuller test is used to test whether a time series is a white noise process.

☐ True

☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false?

The lag of order two in time series analysis is  $Y(t) - Y(t-2)$  where  $Y(t)$  is the value at time  $t$ .

☐ True

☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false? The ARIMA model can have an order of different values for p and q.

- ☒ True
- ☐ False

Correct answer

True

Feedback

- That is correct! Well done!

Is the following statement true or false? In an ARIMA(p,d,q) model, it is possible to have d=2.

- ☒ True
- ☐ False

Correct answer

True

Feedback

- That is correct! Well done!

Is the following statement true or false? In an ARIMA(1,2,2) model, the time series is differenced twice.

- ☒ True



- ☐ False

Correct answer

True

Feedback

- That is correct! Well done!

Is the following statement true or false? The statistical properties of a stationary time series are unchanged over time.

- ☒ True
- ☐ False

Correct answer

True

Feedback

- That is correct! Well done!

The consumer price index numbers announced by a central government each month is organized for last 5 years. This data is an example of:

- ☐ Cross sectional Data
- ☒ Time series Data
- ☐ Panel data

Correct answer

Time series Data

Is the following statement true or false?

The AIC value is interpreted as percentage of variation in time series explained by past values of the same series.

- ☐ True
- ☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false?

Using Dow-Jones index daily returns, values are calculated as percentage change from the previous day. The series of returns is no longer a “time series”.

- ☐ True
- ☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false?

A non-stationary time series can be converted into a stationary time series if it is divided by a suitable constant.

- ☐ True
- ☒ False

Correct answer

False

Feedback

- That is correct! Well done!

Is the following statement true or false? A stationary time series always has zero mean.

- ☐ True
- ☒ False

Correct answer

False

Feedback

- That is correct! Well done!