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NPTEL

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Courses » Applied Time-Series Analysis

Announcements

Course

Ask a Question

Progress



Unit 10 - Week 5: Models for Linear Stationary & Non-Stationary Processes

Course outline

R-based Exam

How to access the portal?

Assignment 0

R Tutorials

Week 1: Introduction & Overview

Week 2: Review of Probability & Statistics

Week 3: Introduction to Random Processes, Auto- and Cross-Correlation Functions

Week 4: Auto- and cross-correlation functions (contd.), Models for Linear Stationary Processes

Week 5: Models for Linear Stationary & Non-Stationary Processes

 Course Notes for Week 5

 Lecture 19B: Models for Linear Stationary Processes-8

Week 5 Assignment

The due date for submitting this assignment has passed. **Due on 2018-02-28, 23:59 IST.** As per our records you have not submitted this assignment.

1) 1 point

- Stationary for any arbitrary initial conditions
- Only asymptotically stationary, otherwise non-stationary because only mean is changing with time.
- Only asymptotically stationary, otherwise non-stationary because only ACF is changing with time
- Only asymptotically stationary, otherwise non-stationary because both mean and ACF are changing with time.

No, the answer is incorrect.

Score: 0

Accepted Answers:

Only asymptotically stationary, otherwise non-stationary because both mean and ACF are changing with time.

2) 1 point

- 0.9
- 0.59
- 0.74
- 0.47

No, the answer is incorrect.

Score: 0

Accepted Answers:

-0.9

3) 1 point

- Stationary, but not invertible
- Stationary and invertible
- Non-stationary, but invertible
- Neither stationary nor invertible

No, the answer is incorrect.

Score: 0

Accepted Answers:

Stationary and invertible

4) 1 point

- 2.3160

- Lecture 19C: Models for Linear Stationary Processes-9
- Lecture 20A: Models for Linear Stationary Processes -10
- Lecture 20B: Models for Linear Stationary Processes -11
- Lecture 21A: Models for Linear Stationary Processes -12
- Lecture 21B: Models for Linear Stationary Processes -13
- Lecture 22A: Models for Linear Stationary Processes -14 (with R Demonstrations)
- Lecture 22B: Models for Linear Stationary Processes -15 (with R Demonstrations)
- Lecture 22C: Models for Linear Stationary Processes -16 (with R Demonstrations)
- Lecture 23A: Models for Linear Non stationary Processes -1
- Quiz : Week 5 Assignment
- Data sets
- Solutions to week 05 Assignment
- Week 5 Feedback

Week 6: Models for Linear Non-Stationary Processes (contd.), Fourier Transforms

- 0.1526
- 0.7142
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

None of the above

5)

-
-
-
-

No, the answer is incorrect.

Score: 0

Accepted Answers:

6)

- 1,-2
- Insufficient information
- 0.5,0.6
- 0.889,-0.1111

No, the answer is incorrect.

Score: 0

Accepted Answers:

0.889,-0.1111

7)

-
- 0
-
-

No, the answer is incorrect.

Score: 0

Accepted Answers:

8)

- The series falls out of a stationary process riding on top of a deterministic trend
- The series exhibits integrating effects
- An AR(1) model best explains the series
- The series is mean-stationary, but variance non-stationary

No, the answer is incorrect.

Score: 0

Accepted Answers:

The series exhibits integrating effects

9)

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Numeric) 3



1 point

1 point

1 point

1 point

1 point

Week 7: Fourier Transforms, DFT and Periodogram

Week 8: Spectral Representations & Estimation Theory

Week 9: Estimation Theory

Week 10: Estimation Methods

Week 11: Estimation methods (contd.)

Week 12: Estimation of Power Spectral Density & Time Series Models

Case Studies on Modelling

DOWNLOAD VIDEOS

Interactive Session

10 For the data given in w5_q10.RData, use a two-sided simple moving-average filter and get an estimate of the trend. The slope of the resulting linear model is (Use $M = 8$ and approximate to 2 decimal places.)

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Numeric) 4.68



1 point



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