PREDICTIVE ANALYTICS ISM-E1003

SOLUTIONS

Homework 2, due date 18.03. at 10:00

What is the correct answer? Correct answer 4 points, incorrect answer -1 point, no answer 0 point.

1. Financial econometrics can best be described as

(a) **The application of statistical techniques to problems in finance**

(b) The application of mathematical models to problems in economics

(c) The application of financial techniques to problems in economics

(d) None of the above.

2. Which of the following is a serious problem encountered by applied econometricians in economics?

(a) Small samples problems

(b) Measurement error

(c) Data revisions

(d) **All of the above**.

3. Data that have been collected over a period of time on one or more variables is referred to as

(a) Cross-sectional data

(b) Time-cross-sectional data

(c) **Time-series data**

(d) Panel data.

4. Data that have been collected on one or more variables at a single point in time is referred to as

(a) **Cross-sectional data**

(b) Time-cross-sectional data

(c) Time series data

(d) Panel data.

5. For a series with a negative skew in its distribution (a long left tail), which of the following best describes the relationship between its measures of central tendency?

(a) mean > median > mode

(b) **mode > median > mean**

(c) mode > mean > median

(d) median > mode > mean.

6. Data that have both time series and cross-sections is referred to as

(a) Cross-sectional data

(b) Time-cross-sectional data

(c) Time-series data

(d) **Panel data**.

7. What is the most appropriate interpretation of the assumption  concerning the regression disturbance terms?

(a) The errors are nonlinearly independent of one another

(b) The errors are linearly dependent of one another

(c) The covariance of the errors is constant and finite over all its values

(d) **The errors are linearly independent of one another**.

8. Which of the following statements is TRUE concerning the correlation between two series?

(a) **It is unit-free**

(b) It scales with the product of the units of the two series

(c) It scales with the ratio of the units of the two series

(d) It will take the value –1 if there is no association between the two series.

9. If I have £10,000 now and I want it to grow by 50% within eight years, what interest rate, compounded annually, is required (to one decimal place)?

(a) **5.2% 10000\*1.052­­­­­­­­^8 = 15001.2 ≈ 15000**

(b) 6.2%

(c) 4.6%

(d) 7.4%

10. Which of these is NOT a reason for adding a disturbance term to a regression model ?

(a) Some determinants of the effect variable may be omitted from the model

(b) Some determinants of the effect variable may be unobservable

(c) **Some determinants of the independent variable may be omitted from the model**

(d) There may be errors in the way that the dependent variable is measured which cannot be modelled.