Home Assignment I
Introduction to Multivariate Statistical Modelling

Syllabus:

1. Introduction to multivariate statistical modelling (2h)

Full marks - 10

1. Which of the following is a discrete random variable? (Marks - 1)
   i) Number of the students in a class (T)
   ii) Time span for any experiment
   iii) The probability of occurrence of accident
   iv) The percentile obtained by a student in an exam

2. Probability density function is related to – (Marks - 1)
   i) Random discrete variable
   ii) Discrete variable
   iii) Random continuous variable (T)
   iv) Continuous variable

3. Probability mass function is related to – (Marks - 1)
   i) Random discrete variable (T)
   ii) Discrete variable
   iii) Random continuous variable
   iv) Continuous variable

4. Choose which of the following statements are true (Marks - 1)
   a) Principal component analysis is a dependence model
   b) Structural equation modeling is an interdependence model
   c) Multivariate analysis of variance is a dependence model
   d) Factor analysis is a dependence model
5. Which of the following data type is amenable to all arithmetic operations? (Marks - 1)
   a) Nominal data
   b) Ordinal data
   c) Interval data
   d) Ratio data (T)

6. Choose the right ones– (Marks - 1)
   a) Model verification is a static procedure (T)
   b) Model validation is a static procedure
   c) Model verification is done by the testing team
   d) Model validation is done by the testing team (T)

7. For a study, a set of data is collected from newspaper reports. The data source is regarded as - (Marks - 1)
   a) Primary data source
   b) Secondary data source
   c) Tertiary data source (T)

8. Temperature is measured in – (Marks – 1)
   i) Nominal scale of measurement
   ii) Interval scale of measurement
   iii) Ratio scale of measurement
   iv) Ordinal scale of measurement

9. Month is measured in – (Marks - 1)
   i) Nominal scale of measurement
   ii) Interval scale of measurement
   iii) Ratio scale of measurement
   iv) Ordinal scale of measurement