

MBA Degree (PT) V End Semester Examination- February, 2022

16-372-0520: Advanced Data Analytics for Business Decisions

(Regular)

Time: 3 Hours

Max. Marks: 50

PART A

(Answer ALL questions. Each question carries 2 marks)

1. What is multivariate analysis?
2. What is multiple regression? How does it differ from bivariate regression?
3. What is discriminant analysis? What is it used for?
4. What is factor analysis? Give example.
5. What is conjoint analysis?

(5X2=10)

PART B

(Answer ANY FIVE Questions. Each question carries 4 marks)

6. What is multidimensional scaling? Its advantages and limitations?
7. What is: (a) Wilks' lambda (b) Eigen value (c) Multicollinearity (d) Multiple Correlation
8. What are the assumptions and the benefits of Structural Equation Modeling?
9. What is cluster analysis? Give few examples of marketing situations where cluster analysis can be used.
10. Explain (a) Homoscedasticity (b) Heteroscedasticity
11. What is Multivariate Regression? Give 3 examples.
12. The following are the scores of the 12 members of men's golf team in tournament play:

89	90	87	95	86	81
111	108	83	88	91	79

- a) Construct a boxplot of the data.
- b) What is an Outlier? Are there any mild or extreme outliers?
- c) Find the mean and standard deviation.
- d) Based on the mean and median describe the distribution.

(5X4=20)

PART C

(Answer ANY TWO questions. Each question carries 10 marks)

- 13. Explain the Classification of Statistical techniques with a necessary chart
- 14. What is Logistic Regression? Express the Logistic Regression Model. Distinguish between Linear Regression and Logistic Regression
- 15. Suppose a marketing researcher wishes to determine market segments in a community based on patterns of loyalty to brands and stores. A small sample of seven respondents is selected as a pilot test of how cluster analysis is applied. Two measures of loyalty- V1 (store loyalty) and V2 (brand loyalty)- were measured for each respondents on 0-10 scale. Data Values are given below:

Respondents

Clustering Variable	A	B	C	D	E	F	G
V1	3	4	4	2	6	7	6
V2	2	5	7	7	6	7	4

- a) Draw a scatter plot
- b) Develop a proximity matrix of Euclidean Distance between observations
- c) Apply Agglomerative process to find final optimal Cluster solution
- d) Is there any Outlier(s)

(2x10=20)