M.Sc. DEGREE EXAMINATION,NOVEMBER 2019
II Year III Semester
Applied Multivariate Analysis

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Define Hotelling T^2 statistic.
2. Give the general structure of MANOVA table.
3. Define principal component.
4. State the criteria for deciding number of Principal components.
5. Define canonical correlation.
6. Discuss the interpretation of canonical correlation.
7. What are the standards of good classification?
8. Write the general expression for Fisher's linear discriminant function.
9. Define cluster analysis.
10. Distinguish between hierarchical and Non-hierarchical techniques.
11. State the test statistic to test the equality of covariance matrices.
12. Explain factor analysis.

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Discuss the applications of T^2 statistic.
14. State the properties of principal components.
15. Explain the extraction of canonical correlation.
16. Write a note on evaluation of method of classification.
17. Describe k-means clustering method.
18. Explain the test procedure for testing single covariance matrix.
19. Write a note on distances and similarity measures.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Describe the analysis of one way MANOVA.
21. Narrate the procedure of extraction of principal components.
22. Discuss the test procedure for testing the significance of canonical correlation.
23. Derive Fisher's linear discriminant function.
24. Write a note on hierarchical clustering techniques.

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