Stat-223 Data Processing Using Software I

50 Marks: 02 Credits

Number of Class: 20-26

Overview of SPSS: Meaning of SPSS, Concepts of Commands, Syntax Diagram, Running Commands in Inter-relative and Batch Mode, Sub-commands, Keywords, Values in Command Specifications, String Values in Command Specifications, Delimiters Command Order. Operation Commands, Data Definition and Manipulation Commands, File Management in SPSS, Commonly Used Procedure Commands for Data Analysis.

Data Management: Data Read, Write, Export, Import, Merge, Combining, Match, Updating, Transformation: Computing Recoding Variables. File Handling, File Transformations: Sub-setting, Sort Cases, Add Cases and Variables, Select Cases, Weight Cases.

Data Analysis: Computing Descriptive Statistics, Correlation, Regression, Comparing Group Means, Analysis of Categorical Data, Tests, Analysis of Variance, Demography, Graphical Representation etc. by SPSS.

SAS (Statistical Analysis System)

Input Statement: List Directed and Column Input, Pointers and Formats, Reading Structured and Unstructured Data Format List.

External File: Reading and Writing Raw and System Files, Reading and Writing Data from Program and ASCII Data from External File, File Options, Writing Data to External File, Creating and Reading Permanent SAS Data Set, Working with Large Data Sets Problems.

Data Management: Reading Data from Different Formatted Data Files, Converting Different Database Formatted Files to SAS System Files. Data Set Sub-setting, Concatenating, Merging and Updating Sub-setting, Combining Different Data from Multiple Files, Table Look Up, Updating Master File form Update File.

Arrays Used in SAS: Use of Array for Missing Values to Create New Variables, Transformation of Data Set, Temporary Arrays, Multidimensional Arrays.

Data Analysis: Computing Descriptive Statistics, Correlation, Regression, Comparing Group Means, Analysis of Categorical Data, Tests, Analysis of Variance, Demography, Graphical Representation by SAS.

References

1. Cody, R.P. and Smith, J.K. (1991): *Applied Statistics and the SAS Programming Language*, 3rd edition, Prentice Hall, Inc., New Jersey.
2. Afifi, A.A. and Azen, S.P. (1979): *Statistical Analysis: A Computer Oriented Approach,* 2nd edition, Academic Press, New York.
3. Norusis, M. J. (1988): *A Guide SPSS/PC for Data Analysis,* SPSS Inc., USA.