

	C.M. Kale			
<b>List of Exercises / Practicals:</b>				
1	Visit to construction site of a large project and submit Report.			
<b>List of Assignments/Tests:</b>				
1	Test on Unit 1 and Unit 2.			
2	Assignment on Unit 4 or Unit 5.			
<b>Name of the Subject:</b> Statistical and Quantitative Methods in Planning-I				
<b>Subject Code:</b> 1015504				
<b>Aim: To study Basic Statistical and Quantitative Methods and Applications in Planning.</b>				
Objective:				
<b>1.</b>	<b>To study the Data Collection Process and Methods for Data Presentation.</b>			
<b>2.</b>	<b>To study Time Series Analysis and Probability Distributions.</b>			
Pre-Requisites: --				
<b>Contents</b>				<b>Hours</b>
Unit - 1	<b>Data Collection</b> Statistical data and methods; collection of data, record, file, sources of data; questionnaire design, design of sample surveys; simple random sampling, stratified sampling, systematic samples, etc.; data coding, data verification			6
Unit - 2	<b>Basic Data Presentation</b> Statistical tables; types of tables, comparisons, methods of presentation, graphic presentation; types of charts; plotting a curve, rules for drawing curves; bar charts, pictography, pie charts, histograms			9
Unit - 3	<b>Statistical Methods</b> Raw data, frequency distribution, selecting number of classes, class limits, curves, cumulative frequency distribution and gives, measures of central tendency; arithmetic mean, median, mode, geometric mean and harmonic mean; measures of absolute dispersion, range, quartile deviation, average deviation, standard deviation, skewness and kurtosis. Statistical Programme for Social Sciences (SPSS) genstat and statisticia and its application for statistical methods.			12
Unit - 4	<b>Time Series Analysis</b> Variation in time series, trend analysis, cyclical variation, seasonal variation, irregular variation, time series analysis forecasting; Applications in planning.			12
Unit - 5	<b>Probability Theory and Probability Distribution</b>			9

	Introduction, addition rule, conditional probability, multiplication rule, random variables and probability distribution, mathematical expectation; Binomial distribution, Poisson distribution; and normal distribution			
<b>Text / Reference Books:</b>				
S. No.	Name of Authors	Titles of the Book	Edition	Name of the Publisher
1.	V.K. Kapoor, S.C. Gupta	Problems and Solutions in Statistics	--	Sultan Chand
2.	V.K. Kapoor	Applied Statistics	--	Sultan Chand
3.	M.R. Spiesel	Theory and Problems of Statistics – Schaun Series	--	McGram Hill
4.	S.K. Gupta	Fundamental of Statistics	--	Himalaya Publications
5.	Levin, Rubin	Statistics for Management	--	Prentice Hall
6.	McCuen	Statistical Methods for Engineers	--	Prentice Hall
<b>List of Exercises / Practicals:</b>				
1	Visit to the National Sample Survey Office and Submit Report			
<b>List of Assignments/Tests :</b>				
1	Test on Unit 1 and Unit 2			
2.	Assignment on Unit 4 or Unit 5.			