

Name of the Subject: Materials and Principles of Construction				
Subject Code: 1015503				
Aim: To study Building Materials and Principles of Construction of Buildings and Site Development.				
Objective:				
1.	To study Building Materials and understand about the Principles of Construction.			
2.	To study Principles of Site Development and Services Network.			
Pre-Requisites: --				
Contents				Hours
Unit 1	Introduction to Building Materials and Finishes Brick, timber, stone, cement, lime, glass, R.C.C., asbestos, paints and varnishes, Fiber Reinforced Plastic (FRP)			7
Unit 2	Structural Uses of Timber Timber used as lintels, post and trusses.			5
Unit 3	Principles of Construction and Building Elements Foundations, Footings, D.P.C., flooring, sills, lintel, roofing, parapets, coping, cladding expansion joints, waterproofing of roofs, external wall sections with details, beams, columns, slabs, retaining walls, etc.			8
Unit 4	Site Development Principles and components of site-development, setting out of buildings on site			6
Unit 5	Principles on of Service Lines and Networks Layout and construction of roads, culverts, flyovers, sewer and storm water drain, water supply lines, service duct under the road.			6
Text / Reference Books:				
S. No.	Name of Authors	Titles of the Book	Edition	Name of the Publisher
1.	R. N. Khanna	Handbook of Civil Engineering		Engineer Publisher, New Delhi.
2.	Sushil Kumar	Building Construction		Standard Publisher Distributer, NaiSarak.
3.	W.B. McKay	Building Construction		Orient Longman Pvt. Ltd., Mumbai.
4.	G.A. Mitchell, and A.M. Mitchell	Building Construction: Structure and Fabric		The Perfect Used Book Store, London, UK
5.	M.G. Shah and	Principles of Building Drawing		MacMillan, India Ltd.

	C.M. Kale			
List of Exercises / Practicals:				
1	Visit to construction site of a large project and submit Report.			
List of Assignments/Tests:				
1	Test on Unit 1 and Unit 2.			
2	Assignment on Unit 4 or Unit 5.			
Name of the Subject: Statistical and Quantitative Methods in Planning-I				
Subject Code: 1015504				
Aim: To study Basic Statistical and Quantitative Methods and Applications in Planning.				
Objective:				
1.	To study the Data Collection Process and Methods for Data Presentation.			
2.	To study Time Series Analysis and Probability Distributions.			
Pre-Requisites: --				
Contents				Hours
Unit - 1	Data Collection 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	Basic Data Presentation 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	Statistical Methods 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	Time Series Analysis Variation in time series, trend analysis, cyclical variation, seasonal variation, irregular variation, time series analysis forecasting; Applications in planning.			12
Unit - 5	Probability Theory and Probability Distribution			9

	Introduction, addition rule, conditional probability, multiplication rule, random variables and probability distribution, mathematical expectation; Binomial distribution, Poisson distribution; and normal distribution			
Text / Reference Books:				
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
List of Exercises / Practicals:				
1	Visit to the National Sample Survey Office and Submit Report			
List of Assignments/Tests :				
1	Test on Unit 1 and Unit 2			
2.	Assignment on Unit 4 or Unit 5.			