

## LESSON PLAN HOURLY WISE

**SUBJECT NAME: BUSINESS MATHEMATICS AND STATISTICS (M4 17 AR104)**

**OBJECTIVE:** To enable students to understand simple arithmetical calculations relating to topics on commerce and economics; and to enable students to grasp the fundamentals of statistics for interpreting business data.

**NO.OF LECTURE HOURS: 60**

SL.NO	UNIT AND OBJECTIVES	NO.OF LECTURE HOURS	METHODOLOGY/ INSTRUCTIONAL TECHNIQUES	EVALUATION/ LEARNING CONFIRMATION
	<b>Part A: Business Mathematics</b>	<b>10</b>		
<b>Unit 1</b>	<b>Theories of equations : to familiarize students with basics concepts of theory of equations and its applications</b>			
1.	Linear equations: concept, method of solving	1	Lecture and numerical problems	Question and answer; problems to be solved
2.	Quadratic equations : concept, formation, nature and formula for solving	1	Lecture and numerical problems	Question and answer; problems to be solved
3.	Simultaneous equations : concept , solving linear and quadratic simultaneous equations	2	Lecture and numerical problems	Question and answer; problems to be solved
4.	Application of equations in business and commerce	1	Lecture and numerical problems	Question and answer; problems to be solved
<b>Unit 2</b>	<b>Interest and Annuities : to familiarize students with interest theory and its applications</b>	<b>6</b>		
1.	Indices : laws of indices, proofs	0.5	Lecture	Question and answer
2.	Logarithms : laws of logarithms, proofs	0.5	Lecture	Question and answer
3.	Interest : a) simple interest : concept, formula for calculating simple interest b) compound interest : concept, formula for calculating compound interest , effective rate of interest, nominal rate, case of appreciation and depreciation of rupee	2	Lecture and numerical problems	Question and answer; problems to be solved
4.	Annuities :definition, types of annuities , formula for calculating different types of annuities; and for calculating present and future values	2	Lecture and numerical problems	Question and answer; problems to be solved
5.	Application of interest and annuities in business mathematics	1	Lecture and numerical problems	Question and answer; problems to be solved
<b>6.</b>	<b>CIA 1</b>	<b>1</b>	<b>MCQ'S AND NUMERICAL PROBLEMS</b>	

	<b>Part B: Business Statistics</b>	<b>50</b>		
<b>Unit 3</b>	<b>Introduction to statistics : to familiarize students with basics concepts of statistics</b>	<b>8</b>		
1.	Statistics : concept , characteristics, functions , scope and limitations	2	Lecture	Question and answer
2.	Classification : concept, types	2	Lecture	Question and answer
3.	Tabulation: concept, types	2	Lecture	Question and answer
4.	Diagrammatic and graphic representation : concept, types , applications using excel	2	Lecture and illustrations and using MS excel	Question and answer
<b>Unit 4</b>	<b>Measures of central tendency and dispersion : to familiarize students with concept of averages and dispersion and different methods of measuring them</b>	<b>14</b>		
1.	Measures of averages : a)Mean: concept , types of mean , formulae for calculating mean, merits and demerits of mean b)Median: concept, formulae for calculating median c)Mode: concept, formulae for calculating mode d)relationship between mean, median and mode	7	Lecture and numerical problems	Question and answer; problems to be solved
2.	Measures of dispersion : a)range : concept, formulae for calculating range, merits and demerits b)quartile deviation : concept, formulae for calculating QD, merits and demerits, coefficient c)mean deviation : concept, formulae for calculating MD, merits and demerits, coefficient d)standard deviation: concept, formulae for calculating SD, merits and demerits, coefficient e)relationship between QD, MD and SD	7	Lecture and numerical problems	Question and answer; problems to be solved
<b>3.</b>	<b>CIA 2</b>	<b>1</b>	<b>Definitions, numerical problems and short essays</b>	
<b>Unit 5</b>	<b>Time series : to familiarize students with the concept of trend and its analysis</b>	<b>6</b>		
1.	Concept of time series , components of time series, types of time series	2	Lecture	Question and answer
2.	Measurement of trend: graphical method, semi-average method,	4	Lecture and numerical problems	Question and answer; problems to be solved

	moving average method and method of least squares			
<b>Unit 6</b>	<b>Correlation and Regression : to familiarize students with the theory of correlation and regression and its applications</b>	<b>12</b>		
1.	Correlation: concept, types, degree of correlation, methods of calculating correlation coefficient - scatter diagram, Karl Pearson's method and Spearman's method, properties of correlation coefficient	6	Lecture and numerical problems	Question and answer; problems to be solved
2.	Regression : concept ,equations of regression line, formulae for calculating regression coefficients	6	Lecture and numerical problems	Question and answer; problems to be solved

PREPARED BY:

ESTA MARTIN

APPROVED BY: