**DIRECTORATE OF DISTANCE EDUCATION**

**INTEGRAL UNIVERSITY, LUCKNOW**

**Subject Name: Business Mathematics**

**Subject Code: B.COM- 104 Paper Code: BM/B**

**(W.e.f. JULY 2018 Session)**

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**UNIT-1 BASIC MATHEMATICS**

* + - Introduction
		- Mathematical operations and brackets
		- Different types of numbers
		- Rounding
		- Significant figures
		- Decimal places
		- Rounding up or rounding down
		- Powers and roots
		- Mathematical operations in excel
		- Rounding numbers in excel
		- Variables and functions
		- Quadratic equations with only one variable
		- Exponential numbers
		- Manipulating inequalities
		- Percentages and ratios
		- Accuracy and approximations
		- Errors form rounding
		- Accuracy and approximation

**UNIT-2 OBTAINING DATA**

* + Introduction
	+ Information and data
	+ Primacy data sampling
	+ Probability sampling methods
	+ Simple random sampling
	+ Stratified random sampling
	+ Other sampling methods
	+ Multistage sampling

**UNIT-3 Presentation of data**

* + Introduction
	+ Linear graphs
	+ Quadratic graphs
	+ Tallying frequency
	+ Discrete and continuous variables
	+ Cumulative frequency distributions
	+ Histograms and ogives
	+ Pei charts
	+ Bar charts
	+ Creating bar charts using excel
	+ Tabulation
	+ Pareto analysis
	+ Crating a histogram in excel
	+ Radings
	+ Gee whiz graph

**UNIT-4 DESCRIPTIVE STATISTICS**

* + Introduction
	+ Arithmetic mean
	+ The median
	+ Mode
	+ Measures of spread
	+ Range
	+ Deciles
	+ Standard deviation
	+ Coefficient of variation
	+ Measures of spread

**UNIT-5 INDEX NUMBERS**

* + Introductions
	+ Definitions
	+ Chain base index numbers
	+ Relative price indices
	+ Aggregative price indices
	+ Quantity indices
	+ Using the RPI

**UNIT-6 FINANCIAL MATHEMATICS**

* + Introduction
	+ Simple interest
	+ Compound interest
	+ Equivalent rates of interest
	+ Depreciation
	+ Geometric progression
	+ Present values
	+ Net present values
	+ PV of a perpetuity
	+ Loans and montages
	+ Internal rate of return

**UNIT-7 CORRELATION AND REGRESSION**

* + Introduction
	+ Correlation
	+ Pearson’s correlation coefficient
	+ Interpreting correlation coefficients
	+ Rack correlation spearman coefficient
	+ Which correlation coefficient
	+ Regression
	+ Least squares criterion
	+ Forecasting
	+ Judging the validity of forecasts

**UNIT-8 TIME SERIES**

* + Introduction
	+ Components and models of time series
	+ Forecasting linear trends
	+ Producing the final forecast
	+ Seasonal adjustment
	+ Moving average trends
	+ Types of data
	+ Judging the validity of forecasts
	+ Computations involving the additive model

**UNIT-9 PROBABILITY**

* + Introduction
	+ Definitions of probability
	+ Addition rules of probability
	+ Multiplication rules of probability
	+ Discrete probability distributions
	+ Expectation and decision making
	+ Limitations of this approach
	+ Characteristics of the distribution normal
	+ Venn diagrams
	+ Uncertainty and risk
	+ Marketing risks

**UNIT-10 SPREADSHEET SKILLS USING EXCEL**

* + Introduction
	+ Spreadsheet terminology
	+ Workbooks and worksheets
	+ Workbooks of files
	+ Worksheets
	+ Scroll bards
	+ Status bar
	+ Toolbar
	+ Good spreadsheet design
	+ Getting started
	+ Problems with this spreadsheet
	+ Positive aspects of this spreadsheet
	+ Ownership and version
	+ Problems with this spreadsheet
	+ Positive aspects of this spreadsheet
	+ Formatting
	+ Positive aspects of this spreadsheet
	+ Documentation
	+ Charts
	+ Templates
	+ Data input forms