

Subject Code: 2CM1010322	Subject Title: Fundamentals Of Business Statistics - 3
	COURSE TYPE : SUBJECT ELECTIVE

Course Objective: To make the students aware about different fundamentals statistical approaches which are applicable in various field of commerce.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)		
Lecture	Tutorial	Practical	Credit	University Assessment	Institutional Assessment	Total
3	-	-	3	70	30	100

Subject Contents			
Sr. No	Topic	Total Hours	Weight (%)
1	Limit and Continuity of Function : Concept of Function of one variable (Linear, Quadratic and Exponential function). Domain, Co-domain and Range of the function. (Theoretical explanation with illustration and without examples) Limit of a function, Rules of limit (without proof), Formulae for limit of standard function, $\frac{x^n - a^n}{x - a}$, $\frac{a^x - 1}{x}$ and $\frac{e^x - 1}{x}$. Sums of limit function $y = f(x)$ where $f(x)$ a polynomial function of x or a rational function showing the ratio of two polynomial function on the basis of standard form. Meaning of continuity (including the concept of left hand limit and right hand limit). Sums of continuity of function $y = f(x)$ where $f(x)$ a polynomial function or a rational function is.	9	25%
2	Probability: Random experiment, Sample space, Event and Definition of various events. Mathematical, Statistical and Axiomatic definition of probability. Addition and Multiplication rule and sub rules of the probability (without proof). Simple examples of probability and conditional probability. Bayes' theorem (without proof) and sums showing use of it up to three events.	9	25%
3	Mathematical Expectation and Moments: Meaning of discrete random variable, concept of probability function of discrete random variable. Definition of expected value (mathematical expectation) of random variable and its properties (without proof). Definition of variance and covariance and their formulae. Simple mathematical and applied examples of on it. Central and Raw Moments (First four) of discrete random variable, Formulae showing the relation between central moments and raw moments (without proof). Concept of Skewness and Kurtosis and their interpretations. Simple examples based on unclassified data, classified data (frequency distribution) and probability distribution.	9	25%
4	Permutations and Combinations: (A) Permutations: Meaning of Permutations, Formula of Permutations, Permutations of similar things, Permutations when things are repeated, Circular Permutations, Restricted Permutations and related examples. (B) Combinations: Meaning of Combinations, Formula of Combinations, Some Restricted combinations, Combinations of things taken some or all at a time and related examples.	9	25%

Reference Books:

1. Goon. Gupta, Dasgupta, An outline of Statistical Theory, Vol -1 and II World Press, Calcutta.
2. Sancheti & Kapoor, Business Statistics. Sultan Chand & Sons, New Delhi.
3. David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Statistics For Business and Economics, South - Western Cengage Learning India Pvt. Ltd. New Delhi.
4. Levin and Rubin, Statistics for Management, Prentice Hall of India Pvt. Ltd. New Delhi.
5. Parimal Mukhopadhyay : Theory and Methods of Survey Sampling, Perntice Hall of India, New Delhi.
6. Trivedi and Trivedi: Business Mathematics, Pearson India Ltd. New Delhi.
7. Business Mathematics, B.S. Shah Prakashan.