NON MAJOR –II - FUNCTIONAL STATISTICS

Semester	Subject Code	Category	Lecture		Theory		Practical	Credit
IV		Non Major –II	Hrs/week	Hrs/Sem	Hrs/week	Hrs/Sem	-	2
			2	30	2	30		

COURSE OBJECTIVES:

The students will be able to

- Understand the fundamental concepts in Statistics and develop the skills in computing the statistical measures for the undergraduate students of other departments.
- Concentrate on pertinent and concrete examples.

COURSE OUTCOMES:

On the successful completion of the course, the students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Learn about types of sets and the operations	K1
CO2	Understand permutation and combination	K2
CO3	Acquire basic knowledge of probability	K2
CO4	Calculate various statistical measures	K3
CO5	Apply statistical tools in various fields	K3

Knowledge Level: K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze.

MAPPING OF PROGRAM OUTCOMES

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	M	S	S	M	S	S
CO2	S	M	S	S	S	S
CO3	S	S	S	S	S	S
CO4	S	M	S	S	S	S

CO5	S	M	S	S	S	S

S- Strong; M-Medium; L-Low

UNIT -I: SET THEORY **6 Hours**

Definition - Subsets - Power sets - Equality of sets - Finite and Infinite sets - Set operations - De-Morgan's laws(without proof) - Distributive tables - Cartesian products – Simple problems. (Text Book 1: Chapter 1)

UNIT –II PERMUTATION AND COMBINATION **6 Hours**

Properties of nPr and nCr (no derivation), Cyclic permutation – problems based on these types.

UNIT –III: PROBABILITY THEORY **6 Hours**

Definition of Mutually Exclusive events, Exhaustive events, Equally likely events, Independent events, Sample Space, Probability, Axioms of Probability – Addition theorem(without proof) – Multiplication theorem on probability(without proof), Conditional probability (No derivation) – Simple Problems.

UNIT – IV: MEASURES OF AVERAGES **6 Hours**

Arithmetic Mean - Median – Mode – Simple problems.

Unit – V: MEASURES OF DISPERSION **6 Hours**

Range, Quartile Deviation, Variance, Standard Deviation – problems.

DISTRIBUTION OF MARKS: THEORY 10% AND PROBLEMS: 90%

TEXT BOOKS

S.NO	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1.	P.R. Vittal (Unit I to V)	Business Mathematics and Statistics	Margham Publishers	2011
2.	P.A. Navnitham (Unit II to V)	Business Mathematics and Statistics	Jai Publishers, Trichy	2003

REFERENCE BOOKS

S.NO	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1.	S.P.Gupta & P.K.Gupta	Business Mathematics and Statistics	Sultan Chand & Sons	2013
2.	S.S.Chadha,	Business Mathematics	S.Chand&	1996

	R.N.Agarwal		Company Ltd, Ram Nagar, New Delhi	
3.	Sundaresan and Jayseelan	An introduction to Business Mathematics	Sultan Chand & Company, New Delhi	1988
4.	S.P.Gupta	Elementary Statistical Methods	Sultan Chand & Sons, New Delhi	2005
5.	S.C.Gupta and V.K.Kapoor	Fundamentals of Statistics	Sultan Chand & Sons, New Delhi	2007

WEB RESOURCES

1.https://nptel.ac.in/courses/111/107/111107058/

2. https://nptel.ac.in/courses/111/105/111105041/

3. https://www.khanacademy.org/math/statistics-probability

TEACHING METHODOLOGY

1. Class room Teaching
2. Assignments
3. Seminars
4. Discussions
5. PPT Presentation