M. G. Science Institute, Ahmedabad

Autonomous | Affiliated to Gujarat University, Ahmedabad

(Managed by The Ahmedabad Education Society)

Department of Statistics

Bachelor of Science (Hons.) in Statistics B.Sc. (Hons.) Statistics 4 Year, 8 Semester Full-Time Programme Choice Based Credit System (CBCS) & Grading System Outcome-Based Education Pattern (Effective from Academic Year 2024-25)



B. Sc. Sem II Statistics

Detailed Syllabus for STM122 Statistics Practical-II

Semester: II	Course Title: STM122 Statistics Practical-II	Credit: 4
Course No.: STM122		Hours: 8/week

Course Outcomes: On successful completion of the course the learner will be able to

CO	COGNITIVE	COURSE OUTCOMES	
	ABILITIES		
CO 1	REMEMBERING	Recall the principle of counting, describe random and non-random	
		experiment.	
CO 2	UNDERSTANDING	Explain basic concepts of probability. Create sample space for	
		some random experiment and identify the events and their types.	
		Understand the types of random variables.	
CO 3	APPLYING	Apply the theory of probability to various real-life situations to	
		find the probability of different types of events.	
CO 4	ANALYSING	Explain definition of independence of events, concept of	
		conditional probability, Bayes' theorem.	
CO 5	EVALUATING	Justify the random variables in given situation and find the	
		mathematical expectation and moment generating function.	
CO 6	CREATING		

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	1		
CO 2	1	1		2	
CO 3	1	2	3		
CO 4	2	1	2	2	1
CO 5	1	1		1	
CO 6					

Part A (Manual)

Sr.	Title of the Practical	No. of Hours of
No.		Teaching
1	Computation of probability and conditional probability.	60
2	Mutual and Pairwise independence of events.	
3	Applications of Bayes' Theorem in different area of applications	
4	Construction of univariate and Bivariate probability distributions.	
	Computation of measures of central tendency and dispersion.	
5	Construction of marginal and conditional probability distributions.	
6	Conditional mean and variance for Bivariate Probability distribution.	
7	Problems on mathematical expectation (univariate)	
8	Problems on mathematical expectation (bivariate)	
9	Problems on conditional mathematical expectation	

Part B (Using MS Excel)

Sr. No.	Title of the Practical	No. of Hours of Teaching
1	Computation of probability and conditional probability.	60

2	Mutual and Pairwise independence of events.
3	Applications of Bayes' Theorem in different area of applications
4	Construction of univariate and Bivariate probability distributions.
	Computation of measures of central tendency and dispersion.
5	Construction of marginal and conditional probability distributions.
6	Conditional mean and variance for Bivariate Probability distribution.
7	Problems on mathematical expectation (univariate)
8	Problems on mathematical expectation (bivariate)
9	Problems on conditional mathematical expectation