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)

STM363(P) Statistics Practical

Semester: IV	Course Title: Statistics Practical (Based on STM361 and STM362	Credit: 4
Course No.: STM363(P)		Hours: 8/week

Part A (Manual)

Sr. No.	Title of the Practical	No. of Hours of Teaching
1	Statistical analysis of One – way classification.	60
2	Statistical analysis of Two – way classification	
3	Statistical analysis of Completely Randomized Design, comparison of two treatments.	
4	Randomised Block and Latin Square Designs: Statistical Analysis and comparison of treatments, Tukey's test, Bonferroni's test for critical difference among treatments.	
5	Estimation of missing yields (up to two missing yields) in Randomised Block and Latin Square Designs, Efficiency of these design.	
6	Statistical Analysis of 2^2 and 2^3 factorial experiments	
7	Confounding – total and partial	
8	Determination of required sample size under Simple Random Sampling.	
9	Estimation of population mean, total, and proportion using Simple Random Sampling	
10	Comparison of efficiency of Stratified Random Sampling with Simple Random Sampling.	
11	Estimation of population mean and total in Stratified Random Sampling.	
12	Estimation of standard error of estimators in Stratified Random Sampling.	
13	Allocation of sample size in Stratified Random Sampling – Proportional, Neyman, and Optimum allocations	
14	Comparison of systematic sampling with SRSWOR and stratified sampling.	
15	Estimation of population mean and its standard error using Two-Stage Sampling	

Part B (Using MS Excel)

Sr. No.	Title of the Practical	No. of Hours of Teaching
1	Statistical analysis of One – way classification	60
2	Statistical analysis of Two – way classification	
3	Statistical analysis of Completely Randomized Design, comparison of two treatments	

4	Randomised Block and Latin Square Designs: Statistical Analysis and comparison of treatments, Tukey's test, Bonferroni's test for critical difference among treatments	
5	Estimation of missing yields (upto two missing yields) in Randomised Block and Latin Square Designs, Efficiency of these designs.	
6	Statistical Analysis of 2^2 and 2^3 factorial experiments	
7	Determination of required sample size under Simple Random Sampling.	
8	Estimation of population mean, total, and proportion using Simple Random Sampling	
9	Comparison of efficiency of Stratified Random Sampling with Simple Random Sampling.	
10	Estimation of population mean and total in Stratified Random Sampling.	
11	Estimation of standard error of estimators in Stratified Random Sampling.	
12	Allocation of sample size in Stratified Random Sampling – Proportional, Neyman, and Optimum allocations	
13	Comparison of systematic sampling with SRSWOR and stratified sampling.	
14	Estimation of population mean and its standard error using Two-Stage Sampling	