(COMMON FOR THE FACULTIES OF ARTS & SCIENCE)

MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR

SECOND YEAR B. Sc.
STATISTICS
2016-17

Papers	Periods per week	Examination Hours	Maximum Marks	
Theory Papers			**B.A**	**B.Sc.**
Paper I	2	3	45	50
Paper II	2	3	45	50
Paper III	2	3	45	50
Practicals**	4	4	65	75
Total Marks			200	225

* 1 Period = 1 hours
** per batch

NOTE:
1. Common papers will be set for both the Faculties of Arts & Science.
2. Students are allowed to use simple electronic desk calculators (as per University guidelines).
3. Statistical Tables may be used (as per University guidelines)

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PAPER –I
PROBABILITY DISTRIBUTIONS

TIME: 3 hours   **Max. Marks 50**

UNIT I
Chebyshev's inequality, Weak law, of large numbers, Central limit theorem for i.i.d. random variables and simple problems on them.

UNIT II
Uni-variate Discrete Probability Distributions: Bernoulli, Binomial and Poisson distributions with their derivations, properties and simple applications. Fitting of Binomial and Poisson distributions.

UNIT III
Negative-Binomial and Hyper-geometric distributions with their derivations, properties and simple applications. Elementary idea of Geometric and Multinominal distributions.

UNIT IV
Univariate Continuous Probability Distributions: Rectangular, Normal and Cauchy distributions, with their derivations- properties and simple applications. Fitting of normal distribution.

UNIT V
Exponential, Beta type I, Beta type II and Gamma distributions with their derivations, properties and simple applications.

Recommended Books:

1. Gupta S.C. Kapoor V.K.   : Fundamentals of and Mathematical Statistics,
                                              Sultan Chand & Sons, New Delhi
2. Kapur, J.N.and Saxena H.C.   : Mathematical Statistics, S.Chand & Company
                                              Ltd New Delhi.
3. Goon A.M., Gupta & Das Gupta, B. : An outlines of Statistical Theory Vol. I & II,
                                              World Press, M. K. Calcutta