

signment and transportation problems and their optimum solutions.

References :

- C. E. Froberg : Introduction to Numerical Analysis.
- M.K.Jain, S.R.K.: Numerical methods : Problems & solutions.
Iyenger and R.K. Jain
- G. Hadley : Linear Programming
- Kanti Swaroop, : Operation Research
P.K.Gupta and Man Mohan
- H.C. Saxena : Numerical Analysis
- Goyal, Mittal : Numerical Analysis
- Bansal, Ojha : Numerical Analysis (Hindi ed.)
- Gokhroo, Saini : Numerical Analysis (Hindi ed.)
- Goyal, Mittal : Operations Research
- O. S.D.Sharma : Operations Research
1. Gokhroo, Saini : Operations Research (Hindi ed.)
Jain
2. Bhargava, Bhati,: Linear Programming (Hindi ed.)
Sharma
3. Gokhroo, Saini, : Linear Programming (Hindi ed.)
Jain

**B.A./B.Sc. FINAL YEAR
EXAMINATIONS, 2009-2010**

STATISTICS

(Common for the Faculties of Arts & Science)

Papers	Periods* per week	Examination Hours	Maximum Marks	
			B.A.	B.Sc.
Theory Papers				
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

N.B.

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).
4. Visit to Local Governments/Organizations, Semi Governments Departments/Organizations, Government Undertaking Organizations, Statistical Institute of repute, Private sector. Statistical Organization and Research Stations within State of Rajasthan may be organized to familiarize students with the practical work done at these centers.

PAPER-I
STATISTICAL INFERENCE

The question paper will be divided into three sections A, B and C as follows:

Section A: In this section, ten questions will be set. Two questions will be set from each unit. Each question will be of short answer type not exceeding 20 words. Each question will carry 1/2 mark. The candidate will be required to attempt all the questions (aggregating 5 marks).

Section B In this section, ten questions will be set. Two questions will be set from each unit. The answer of each question will not exceed 250 words or two and a half pages. Each question will be of 5 marks. The candidate will be required to attempt five questions in all taking one question from each unit (aggregating 25 marks).

Section C In this section, four questions will be set covering all the five units and whose answers will not exceed 500 words or five pages each. Each question may have sub parts in it and will carry 1.0 mark. The candidate will be required to attempt any two questions (aggregating 20 marks).

UNIT - I

Testing of Hypothesis Null, Alternative, Simple and Composite hypotheses, Two types of errors, Power, of a test, Power curves in simple cases, critical region and best critical region (BCR). Most powerful and uniformly most powerful tests. Neyman-Pearson's lemma, Determination of BCR for testing simple v/s simple hypothesis in uniform and normal populations.

UNIT-II

General theory of test of significance for large samples for testing of means and proportions, Determination of Sample size, Test of significance based on 't' distribution.

UNIT-III

Tests of significance based on Chi-square and F-sampling distributions.

UNIT-IV

Methods of estimation: Method of moments, Method of least squares and Method of maximum likelihood estimation with their properties (without proof).

Elements, of Non-parametric Inference: Sign, Median and run test.

UNIT-V

Elements of Sequential Analysis Construction of sequential probability ratio tests (SPRT), O.C. and A.S.N. functions. Applications of SPRT for testing simple v/s simple hypothesis in case of Bernoulli and Normal populations.

Recommended Books :

1. Gupta, S.C. and Kapoor V.K. : Fundamentals of Mathematical Statistics, Sultan Chand & Sons, New Delhi