

Indian Administration. Corruption & Administrative Reforms with special reference to Administrative Reforms Commission and Sarkaria Commission.

Books Recommended :

- . S. R. Maheshwari : Indian Administration
- . C. P. Bhambhri : Public Administration in India
- . P. Sharan : Public Administration in India
- . D.D. Basu : An Introduction to the Constitution of India
- . K.V. Rao : Parliamentary Democracy in India
- . Laxmi Narain : Principles and Practice of Public Enterprises Managements
- . B.B. Mishra : Administrative History of India
- . Ramesh Arora : Indian Public Administration
- . V.M. Sinha : Personnel Administration
- . P.D. Sharma & B. M. Sharma : Bhartiya Prashashan
- . Saroj Chopra : Bharat mein Lok Prashashan
- . R. S. Darda : Bharat mein Lok Prashashan
- . B.L. Fadia : Bharat mein Lok Prashashan
- . Avasthi & Avasthi : Indian Administration (In Hindi also)

B.A./B.Sc. FIRST YEAR EXAMINATIONS, 2007-2008

MATHEMATICS

(Common for the Faculties of Arts & Science)

Papers	Teaching hours/ week	Examination Hours	Maximum Marks	
			B.A.	B.Sc.
Theory Papers				
Paper-I	3	3	70	75
Paper-II	3	3	65	75
Paper-III	3	3	65	75
Total Marks			200	225

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).
- Mathematical/ Log Tables may be used (as per University guidelines).

PAPER-I ALGEBRA

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. The candidate will be required to attempt all the questions (aggregating 7.5 marks).

Section B : In this section, ten questions will be set. The candidate will be required to attempt five questions (aggregating 7.5 marks).

Section C : In this section, four questions will be set. The candidate will be required to attempt any two questions (aggregating 30 marks).

UNIT-I

Symmetric, Skew Symmetric, Hermitian and skew Hermitian matrices. Linear independence of row and column matrices. Row rank, column rank, and rank of a matrix. Equivalence of column and row ranks.

Eigen values, Eigen vectors and characteristic equation of a matrix. Cayley-Hamilton theorem and its use in finding inverse of a matrix. Theorems and examples of consistency of a system of linear equations.

UNIT-II

Groups and their defining theorems. Various examples, order of an element and related theorems, Permutation Groups, even and odd permutations, cyclic groups, subgroups, union, intersection of two and finite subgroups and various examples, product of two subgroups. Left and right cosets and their properties, Lagrange's theorem, index of a subgroup.

UNIT-III

Group homomorphism and isomorphism with elementary basic properties, Cayley's theorem for finite groups, normal subgroups their examples and elementary basic theorems, Quotient group, fundamental theorem of homomorphism in groups.

UNIT-IV

Rings, definition and examples of various kinds of rings, integral domain, division ring, field, characteristic of a ring and of integral domain, subring and subfield with examples. Left and right ideals with examples and properties, Principal ideal, principal ideal ring.