

2009-10
Physics

M.Sc. Program

1. The examination shall be consists of five theory papers and a practical.
2. There shall be a practical course for each group.

The distribution of marks shall be as follows—

Dept of Physics

Theory papers—

1. Mathematical Physics.	100 Marks
2. Electromagnetic Theory & Plasma Physics	1000 Marks
3. Quantum Mechanics	100 Marks
4. Atomic & Molecular Spectroscopy	100 Marks
5. Electronics	100 Marks

Practicals

A candidate has to perform two experiments during examination one from each group. Time allotted for each experiments will be four hours. There will be some sessional work also. The distribution of marks will be as follows—

	Regular Candidate	Ex-Student
1. Experiment -I (Group A)	60	90
2. Experiment -II (Group B)	60	90
3. Viva	70	70
4. Record	30	
5. Sessional work	30	
	<hr/> Total = 250	<hr/> 250

3/1/2010

dictate

Dr. S. C. S.

Dr. P. S.



M.Sc. Physics (Previous)

I Paper
MATHEMATICAL PHYSICS

2009-10

UNIT-I:

Numerical Analysis: -

Interpolation: Finite differences, operators, interpolation with equal and unequal intervals of arguments, Central difference interpolation formula, Inverse interpolation formula

Numerical Differentiation: -

Derivatives using Newton's forward interpolation formula, Derivative using Newton's backward interpolation formula, Derivative using Stirling formula.

Numerical Integration: -

General quadrature formula for equidistant ordinates, Trapezoidal rule, Simpson-one third and ~~that~~ ^{one} eight rule. Euler-Maclaurin summation formula.

Numerical Solution of ordinary differential equations: -

By Taylor's series method; by Euler's method & by Runge-Kutta method.

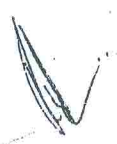
~~Solution of Algebraic & transcendental equations.~~

~~Newton-Raphson or Newton iteration method,~~

~~Regula Falsi method~~

20/12/23
30/01/24

Kejriwal



20/12/23

J.A. Singh

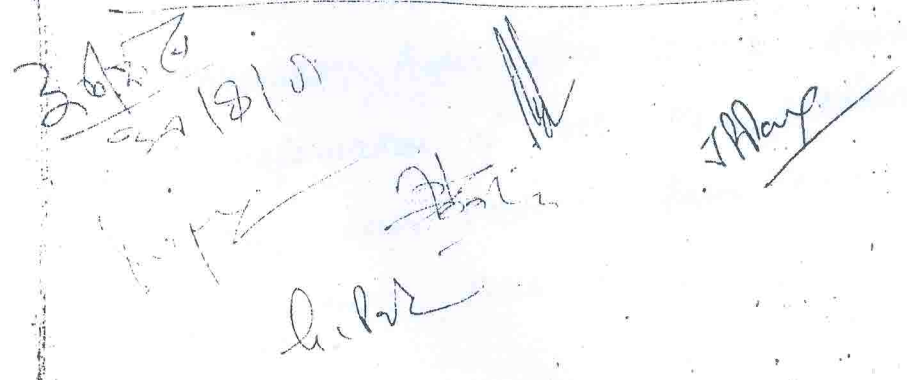
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precision, Introduction to C language.

Text and Reference Books—

1. Mathematical methods for Physicists by Murray & Morgan
2. Special functions by E.D. Rainville
3. Special Functions by W.W. Bell
4. Mathematical for physicists by Mary L. Boas
5. Mathematical Physics B. S. Rajput - Pragati Prakashan

Meerut.


 A collection of handwritten signatures and scribbles at the bottom of the page. On the left, there is a signature that appears to be 'S. S. S.' with some additional marks. In the center, there is a signature that looks like 'S. S. S.' with a large, stylized flourish above it. On the right, there is a signature that appears to be 'S. S. S.' with a diagonal line through it.

