

UNIT - V

Series solutions of linear differential equations : Power series method, Bessel, Legendre and Hypergeometric equations.

References :

- Differential equation by Ray and Sharma
- Differential equation (Vol. II) by Bansal, Dhama
- Advanced differential equations by M.D. Raisinghania.
- Differential equation by Murray A. Daniel
- A Treatise on Differential equation by A.R. Forsyth.
- Elements of Partial differential equations. by Ian N. Sneddon, Mc Graw - Hill Book Company.
- Avkal Samikaran by Gokhroo, Saini, Kumbhat
- Partial differential equations by Gokhroo, Saini, Ojha
- An introduction to ordinary differential equation by E.A. Codrington, Prenticehall of India.

PAPER - III MECHANICS

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

Section A : In this section, questions will be set taking two questions from each unit. Each question will be of short answer type not exceeding 20 words and will carry 3/4 mark. The candidate will be required to attempt all the questions (aggregating 7.5 marks).

Section B : In this section, ten questions will be set taking two questions from each unit. The answer of each will not exceed 250 words or two and a half page~. Each question will be of 7.5 marks. The candidate will be required to attempt five questions, in all taking one question from each unit (aggregating 37.5 marks).

Section C : In this section, four questions will be set covering all the five units and whose answers shall not exceed 500 words or five pages each. Each question may have sub-parts in it and will carry 15 marks. The candidate will be required to, attempt any two questions. (aggregating 30 marks).

UNIT - I

Equilibrium of. bodies under three or more forces, Friction, common catenary.

UNIT - II

Virtual work, Projectile on inclined plane and Impact.

UNIT - III

ocity and Accelerations (Tangential, normal, radial, transversal), Rectilinear motion, Hooke's law and tension of horizontal and vertical strings.

UNIT - IV

strained motion (circular and cycloidal), motion in a fluid medium (resistance varies as velocity and square of velocity).

UNIT - V

fluid pressure and thrust on immersed plane surfaces. Center of pressure.

References :

- S. L. Loney : Statics, Macmillan and Company, London.
- C.S. Verma : A Text book of Statics (Pothishala)
- Ray & Sharma : A Text book of Hydrostatics
- P. Sharma : A Text book of Dynamics.
- H. Ray : A Text book of Dynamics.
- Margava & Grawal : Gati Vigyan
- Chokhroo, Saini : Uchch Gati Vigyan
- Chokhroo & : Hydrostatics (Hindi Ed.)
- Chokhroo : Statics (Hindi Ed.)
- Margava & : Hydrostatics (Hindi Ed.)
- Margava & : Statics (Hindi Ed.)

B.A./B.Sc. SECOND YEAR EXAMINATIONS, 2008-2009

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 Udaipur Division may be organized to familiarize students with the practical work done at these centers.