

MOYNA COLLEGE
DEPARTMENT OF MATHEMATICS(HONOURS)
SESSION 2016-2017

UNIT DISTRIBUTION(S.R)
PAPER-1

Linear Algebra

Unit-1 Matrix

Unit-2 Determinant

Unit-3 Matrix2

Unit-4 Vector Space

PAPER-2

Several variable &Application

Unit-1 Function of several variable

Unit-2 Tangent,Normal

Unit-3 Curvature,Asymptotes

Unit-4 Envelope,Singular points,curve tracing

PAPER-2

Differential Equation

Unit-1 First order linear & non-linear differential equation.

Unit-2 Second order linear differential equation with constant coefficient.

Unit-3 Linear homogeneous differential equation.

Unit-4 simple eigen value problem.

PAPER-3

Vector Analysis

Unit-1 Scalar,vector products&Application in mechanics

Unit-2 Application of vector

Unit-3 Gradient,divergence&curl of a vector

Unit-4 Vector Integral Calculus

PAPER-4

Dynamics

Unit-1 Motion of a particle in a plane

Unit-2 Central force&constrained motion

Unit-3 Motion in resisting medium&motion in varying mass

Unit-4 Work,Power&Energy

PAPER-4

Differential Equation-2

Unit-1 Simultaneous differential equation

Unit-2 Partial differential equation

Unit-3 Power series solution

Unit-4 Laplace transform

Paper-6

Hydrostatics

Unit-1 Various definition of fluid & their application

Unit-2 Application about centre of pressure

Unit-3 Equilibrium of fluids in given fluid of force & rotating fluids

Unit-4 Thrust on curved surface & the stability of the equilibrium of floating bodies

Paper-6

Mathematical Modelling

Unit-1 Basic steps of Mathematical modeling & its utility

Unit-2 Mathematical models with their formulation, solution, interpretation, limitation

Unit-3 Simple epidemic (SI) model

Paper-7

Probability

Unit-1 Concept of mathematical probability

Unit-2 Probability distribution

Unit-3 Expectation, Correlation & regression

Unit-4 Special distribution

Paper-8

Linear Algebra-2

Unit-1 Linear transformation on vector space

Unit-2 Non-singular linear transformation

Unit-3 Inverse of linear transformation

Unit-4 $A_n(m,n)$ real matrices as a linear transformation

➤ Teaching Plans

PART I

Year	Hons/Pas s	Paper	Subject	Subject Content	Duration of Teaching	No of Classe s	Teachin g Methods	Reference Books
1 st	HONS	I	Linear Algebra	Unit-1	12.07.16- 16.08.16	9	Recappi tulation &Lectur e Method, Board work	1.Hadley. 2.K.B.Datta
				Unit-2	17.08.16- 07.09.16	9		
				Unit-3	02.11.16- 16.11.16	9		
				Unit-4	29.11.16- 16.12.16	11		
		II	Several Variable&Ap plication	Unit-1	08.09.16- 22.09.16	9	Recappi tulation &Lectur e Method, Board work	1.Maity&Ghos h 2.Shanti Narayan
				Unit-2	23.09.16- 06.10.16	6		
				Unit-3	03.01.17- 18.01.17	9		
				Unit-4	24.01.17- 10.02.17	6		
			Differential Equation 1	Unit-1	14.02.17- 28.02.17	5	Recappi tulation &Lectur e Method, Board work	1.I.Murray 2.Piaggio
				Unit-2	01.03.17- 07.03.17	4		
				Unit-3	08.03.17- 15.03.17	5		
				Unit-4	16.03.17- 24.03.17	6		

PART II

Year	Hons/Pas s	Paper	Subject	Subject Content	Duration of Teaching	No of Classe s	Teachin g Methods	Reference Books
2 nd	HONS	III	Vector Analysis	Unit-1	12.08.16- 29.08.16	12	Recappi tulation &Lectur e Method, Board work	1.M.R.Speizel 2.M.C.Chaki
				Unit-2	30.08.16- 13.09.16	11		
				Unit-3	02.11.16- 18.11.16	13		
				Unit-4	28.11.16- 09.12.16	12		
		IV	Partical Dynamics	Unit-1	25.01.17- 13.02.17	10	Recappi tulation &Lectur e Method, Board work	1.A.S.Ramsey 2.N.Datta&R.N .Jana
				Unit-2	14.02.17- 03.03.17	9		
				Unit-3	06.03.17- 20.03.17	12		
				Unit-4	21.03.17- 24.03.17	5		
			Differential Equation-2	Unit-1	14.09.16- 27.09.16	10	Recappi tulation &Lectur e Method, Board work	1.Murray 2.S.L.Ross 3.Maity&Ghos h 4.Chakraborty &Ghosh
				Unit-2	28.09.16- 06.10.16	6		
				Unit-3	12.12.16- 23.12.16	8		
				Unit-4	03.01.17- 24.01.17	13		

PART III

Year	Hons/Pas s	Paper	Subject	Subject Content	Duration of Teaching	No of Classe s	Teachin g Methods	Reference Books		
3 rd	HONS	VI	Hydrostatics	Unit-1	15.11.16- 25.11.16	5	Recappi tulation &Lectur e Method, Board work	1.J.M.Kar 2.A.S.Ramsey		
				Unit-2	28.11.16- 02.12.16	5				
				Unit-3	05.12.16- 12.12.16	7				
				Unit-4	14.12.16- 23.12.16	6				
			Mathematical Modelling	Unit-1	03.01.17- 11.01.17	7			Recappi tulation &Lectur e Method, Board work	1.Mollah 2.Chakraborty &Ghosh
				Unit-2	16.01.17- 31.01.17	8				
				Unit-3	03.02.17- 03.03.17	10				
			VII	Probability	Unit-1	09.08.16- 19.08.16			6	Recappi tulation &Lectur e Method, Board work
		Unit-2			22.08.16- 26.08.16	6				
		Unit-3			29.08.16- 02.09.16	5				
		Unit-4			05.09.16- 09.09.16	5				
		VIII	Linear Algebra-2	Unit-1	13.09.16- 19.09.16	5	Recappi tulation &Lectur e Method, Board work	1.S.K.Mapa 2.Hadley 3.K.B.Datta		
				Unit-2	20.09.16- 28.09.16	5				
				Unit-3	03.10.16- 05.10.16	4				
				Unit-4	04.11.16- 11.11.16	6				

MOYNA COLLEGE
DEPARTMENT OF MATHEMATICS(PASS)
SESSION 2016-2017

UNIT DISTRIBUTION(S.R)

1st Paper

Classical Algebra

Unit-1 Complex Number

Unit-2 Theory Of Equation

Unit-3 Determinant

Unit-4 Matrices Of Real numbers

2nd Paper

Differential Equation

Unit-1 First order linear & non-linear differential equation.

Unit-2 Second order linear differential equation with constant coefficient.

Unit-3 Linear homogeneous differential equation.

Unit-4 Simultaneous linear differential equation & simple eigen value problem

3rd Paper

Analytical Dynamics

Unit-1 Impulse&Impulsive Forces.

Unit-2- Motion Under Inverse Square Law.

Unit-3 Constrained Motion.

Unit-4 Motion in a Plane.

4th Paper

Probability

Unit-1 Event Space&Fundamental Axioms.

Unit-2 Probability Distribution.

Unit-3 Expectation&Variance.

Unit-4 Joint,Marginal & conditional distribution.

➤ TEACHING PLANS

Paper	Topics	Year	Honours /Pass	Subject Content	Duration of teaching	No. of classes	Teaching Method	Reference Book
1st	Classical Algebra	1st	Pass	Unit-1	14.07.16-15.09.16	7	Recapitulation & Lecture Method, Board work	Ghosh & Chakraborty
				Unit-2	22.09.16-01.12.16	8		
				Unit-3	08.12.16-19.01.17	7		
				Unit-4	09.02.17-23.03.17	6		
2nd	Differential Equation	2nd	Pass	Unit-1	14.07.16-18.08.16	3	Lecture Method, Board work	1. Piaggio 2. S.L. Ross
				Unit-2	01.09.16-15.09.16	4		
				Unit-3	22.09.16-10.11.16	3		
				Unit-4	17.11.16-08.12.16	3		
3rd	Analytical Dynamics	2nd	Pass	Unit-1	15.12.16-05.01.17	3	Lecture Method, Board work	1. A.S. Ramsey 2. N. Datta & R.N. Jana
				Unit-2	12.01.17-09.02.17	4		
				Unit-3	16.02.17-02.03.17	4		
				Unit-4	09.03.17-23.03.17	3		
4th	Probability	3rd	Pass	Unit-1	05.08.16-09.09.16	7	Lecture Method, Board work	1. Rossi 2. J.V. Uspensky
				Unit-2	16.09.16-09.12.16	6		
				Unit-3	16.12.16-03.02.17	5		
				Unit-4	10.02.17-03.03.17	5		