RPS Degree College, Balana (Mahendergarh)

Lesson Plan
2020-21 (Even Semester)

Class and Section: B.Sc(HM) 4th Sem

Subject: Sequence and Series

Name of the Faculty : Dr. Dushyant

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	UNIT-1 Boundedness of set of real numbers
2	5	27/01/20 to 31/01/20	Open Set,Closed Set,Isolated Points,Closure of Set
3	5	03/02/20 to 07/02/20	Open Cover,Heine Borel Throrem,Bozano Weistrass theorem,Compact Set
4	5	10/02/20 to 14/02/20	UNIT-2 Real Sequence and their Convergence,Monotonic Sequence
5	5	17/02/20 to 21/02/20	Cauchy Sequence and Cauchy General Principle of convergence,Subsequence
6			1st Class Test
7	5	24/02/20 to 28/02/20	Convergence and Divergence Of Infinite Series,Limit Form Test,Comparasion Test ,p-test
8	5	02/03/20 to 06/03/20	UNIT-3 Ratio Test,Rabbes test,Gauss Test,Logarathmic test
9	5	09/03/20 to 13/03/20	Cauchy Root test,Cauchy integral test ,Cauchy Condensation test,DMorgans test
10			2nd Class Test
11	5	16/03/20 to 20/03/20	UNIT-4 Alternating Series,Leibnitz Test,
12	5	23/03/20 to 27/03/20	Absolute and Conditionally Convergent Series
13	5	06/04/20 to 10/04/20	Arbitrary Series,Abels Lemma,Abels test
14	5	30/03/20 to 03/04/20	Dirchlet test,Riemann Rearrangement theorem
15	5	13/04/20 to 17/04/20	Important Question and Revision
16			Final Sessional Test

RPS Degree College, Balana (Mahendergarh)

Lesson Plan
2020-21 (Even Semester)

Class and Section: Honors Mathematics 4th sem
Subject: Hydrostatics
Name of the Faculty : Ajay

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Pressure equation. Condition of equilibrium. Lines of force.
2	5	27/01/20 to 31/01/20	Homogeneous and heterogeneous fluids. Elastic fluids. Surface of equal pressure.
3	5	03/02/20 to 07/02/20	Fluid at rest under action of gravity. Rotating fluids.
4	5	10/02/20 to 14/02/20	Fluid pressure on plane surfaces. Centre of pressure.
5	5	17/02/20 to 21/02/20	Resultant pressure on curved surfaces. Equilibrium of floating bodies.
6			1st Class Test
7	5	24/02/20 to 28/02/20	Curves of buoyancy. Surface of buoyancy.
8	5	02/03/20 to 06/03/20	Stability of equilibrium of floating bodies.
9	5	09/03/20 to 13/03/20	Metacentre. Work done in producing a displacement.
10			2nd Class Test
11	5	16/03/20 to 20/03/20	Vessels containing liquid.
12	5	23/03/20 to 27/03/20	Gas laws. Mixture of gases. Internal energy.
13	5	06/04/20 to 10/04/20	Adiabatic expansion. Work done in compressing a gas
14	5	30/03/20 to 03/04/20	Isothermal atmosphere. Connective equilibrium.
15	5	13/04/20 to 17/04/20	Assignment of whole syllabuss
16			Final Sessional Test

RPS Degree College, Balana (Mahendergarh)

Class and Section:B.Sc(H.M.) 4nd semester

Subject: Elementary Inference

Name of the Faculty : Mr. Satyender Singh

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Parameter and statistic, sampling distribution and standard error of estimate. Point and interval estimation
2	5	27/01/20 to 31/01/20	Unbiasedness, Efficiency, Consistency and Sufficiency.
3	5	03/02/20 to 07/02/20	Method of maximum likelihood estimation. Null and alternative hypotheses, Simple and composite hypotheses, Critical region,
4	5	10/02/20 to 14/02/20	Level of significance, One tailed and two tailed tests, Types of errors, Neyman-Pearson Lemma.
5	5	17/02/20 to 21/02/20	Revision of section 1 and 2
6			1st Class Test
7	5	24/02/20 to 28/02/20	Level of significance, One tailed and two tailed tests, Types of errors, Neyman-Pearson Lemma.
8	5	02/03/20 to 06/03/20	Testing and interval estimation of a single mean, single proportion
9	5	09/03/20 to 13/03/20	Difference between two means and two proportions. Fisher's Z transformation.
10			2nd Class Test
11	5	16/03/20 to 20/03/20	Definition of Chi-square statistic, Chi-square tests for goodness of fit and independence of attributes.
12	5	23/03/20 to 27/03/20	Definition of Student's 't' and Snedcor's F-statistics.
13	5	06/04/20 to 10/04/20	Testing for the mean and variance of univariate normal distributions, Testing of equality of two means and two variances of two univariate normal distributions.
14	5	30/03/20 to 03/04/20	Related confidence intervals. Analysis of variance(ANOVA) for one-way and two-way classified data.
15	5	13/04/20 to 17/04/20	Revision of complete syllabus
16			Final Sessional Test

RPS Degree College, Balana (Mahendergarh)

Lesson Plan
2020-21 (Even Semester)

Class and Section: Honors Mathematics 4th sem

Subject: Numerical Methods

Name of the Faculty : Hansraj

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Solution of Algebraic equations
2	5	27/01/20 to 31/01/20	Solution of Transcendental equations
3	5	03/02/20 to 07/02/20	Bisection method, Regula-Falsi method
4	5	10/02/20 to 14/02/20	Secant method, Newton-Raphson's method
5	5	17/02/20 to 21/02/20	Newton's iterative method for finding pth root of a number,
6			1st Class Test
7	5	24/02/20 to 28/02/20	Newton's iterative method for finding pth root of a number,
8	5	02/03/20 to 06/03/20	Simultaneous linear algebraic equations
9	5	09/03/20 to 13/03/20	Gauss-elimination method
10			2nd Class Test
11	5	16/03/20 to 20/03/20	Gauss-Jordan method,
12	5	23/03/20 to 27/03/20	Triangularization method (LU decomposition method)
13	5	06/04/20 to 10/04/20	Crout's method, Cholesky Decomposition method.
14	5	30/03/20 to 03/04/20	Iterative method, Jacobi's method
15	5	13/04/20 to 17/04/20	Gauss-Seidal's method, Relaxation method.
16			Final Sessional Test

RPS Degree College, Balana (Mahendergarh)

Class and Section:B.Sc Hons. Maths 4th
Subject: Special functions and integral transforms
Name of the Faculty :Ms. Ananta Thakur

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Basic concept related to power series
2	5	27/01/20 to 31/01/20	power series solution of differential equation
3	5	03/02/20 to 07/02/20	series solution of differential equation around singularity
4	5	10/02/20 to 14/02/20	Laplace transforms numerical practice
5	5	17/02/20 to 21/02/20	Theorems and results of laplace
6			1st Class Test
7	5	24/02/20 to 28/02/20	Inverse laplace transforms
8	5	02/03/20 to 06/03/20	Use of laplace transform in integral equations
9	5	09/03/20 to 13/03/20	Fourier transforms
10			2nd Class Test
11	5	16/03/20 to 20/03/20	Solution of differential equations by fourier transform
12	5	23/03/20 to 27/03/20	Hermite Equation and numerical practice
13	5	06/04/20 to 10/04/20	Bessel's equation and function
14	5	30/03/20 to 03/04/20	Legendre's Equation
15	5	13/04/20 to 17/04/20	Doubt session
16			Final Sessional Test

RPS Degree College, Balana (Mahendergarh)
Lesson Plan
2019-20 (Even Semester)

Class and Section: Hons. Maths 4th semester
Subject: Data Structures using C
Name of the Faculty : Ms. Meenakshi

Week	Lecture	Date	Topics
1	2	16/01/20 - 17/01/20	Data Structures and its essence, data structure types
2	3	21/01/20 - 23/01/20	Arrays, Multidimensional arrays , stack , queue, sequential allocation, address calculations
3	4	28/01/20 - 31/01/20	Linked list, circular list, doubly linked list
4	4	04/02/2 - 07/02/20	Inverted list, threaded lists, operations and applications on these
5	4	11/02/20 - 14/02/20	Trees structures, binary trees, binary search trees, implementation of binary trees
6			Class Test1
7	4	25/02/20 - 28/02/20	Tree traversal algorithm, threaded trees, trees in search algorithm and AVL trees
8	4	03/03/20 - 6/03/20	Graph data structuresand their applications
9	3	11/03/20 - 13/03/20	Spanning trees and related algorithms
10	4	17/03/20 - 20/03/20	B-Trees, B*-Trees, B+Trees
11			Class Test 2
12	3	31/03/20 - 3/04/20	Sorting Techniques
13	4	7/04/20 - 10/04/20	Searching Techniques and merging algorithms
14	4	14/04/20 - 17/04/20	Revision
15	4	21/04/20 - 24/04/20	Revision
16			Final Sessional Test
17			

RPS Degree College, Balana (Mahendergarh)
Lesson Plan
2019-20 (Even Semester)

Class and Section: Hons. Maths 4th semester
Subject: Programming in C & Numerical Method
Name of the Faculty : Ms. Meenakshi

Week	Lecture	Date	Topics
1	1	17-Jan-20	Inroduction to C language
2	1	20-Jan-20	Programmer's model of computer
3	2	27/01/20, 31/01/20	Algorithm, flowchart, datatypesand opeartors
4	2	03/02/20, 07/02/20	Expression and input/output functions
5	2	10/02/20, 14/02/20	Decision control statements
6	**1**		**Class Test1**
7	2	24/02/20 , 28/02/20	Logical and conditional statement, Implementation of loops
8	2	02/03/20 , 6/03/20	Switch and case control
9	2	9/03/20 , 13/03/20	Function , preprocessor, arrays
10	2	16/03/20 , 20/03/20	Character datatypes, standard string handling functions
11			**Class Test 2**
12	2	30/03/20 , 3/04/20	Arithemetic operations on characters, structures
13	2	6/04/20 , 10/04/20	Pointers
14	2	13/04/20 , 17/04/20	Revision
15			**Final Sessional Test**
16			

Lesson plan

Name of the Assistant Professor: Balram
Class and Section: B.Sc Honors Math 4th sem
Subject: Opt(ii) : Physics - IV   Sub. Code- BHM 246

Week	Day No.	Topics	Remarks
1	Day 1	**Introduction**	
	Day 2	Statistical Mechanics :Probability	
	Day 3	Some Probability consideration, Combination Possessing Maximum Probability	
2	Day 4	Distribution of Molecules in Two Boxes, Case with Weightage(General)	
	Day 5	Phase Space, Microstate and Macrostate,Statistical Fluctuations constraints	
	Day 6	accessible states,thermodynamical probability	
3	Day 7	postulates of statistical Physics,division of phase space into cells	
	Day 8	condition of equilibrium between two system	
	Day 9	Boltz mann law	
4	Day 10	B.E. statistics	
	Day 11	derivation of Planck's-Radiation law	
	Day 12	B.E. Gas	
5	Day 13	class test	
	Day 14	Test distribution and test solution	
	Day 15	introduction of quantum mechanics	
6	Day 16	Failure of classical mechanics, old quantum theory	
	Day 17	photoelectric effect,einstein photoelectric effect equation	
	Day 18	Compton effect	
7	Day 19	result of Compton effect	
	Day 20	Major revision and assignment	
	Day 21	Continue…	
8	Day 22	Davision & Germer experiment	
	Day 23	G.P. Thomsan Experiment, Phase & Group velocity	
	Day 24	Heisenberg's uncertainty principle,Time Energy and angular momentum	
9	Day 25	Position Uncertainity,Uncertainty Principle from De-	

		broglie	
	Day 26	Duality Nature	
	Day 27	Gama Ray Microscope,Electron Diffraction From a Slit	
10	Day 28	Derivation of Time dependent Schrodinger wave Equation	
	Day 29	Unit Test	
	Day 30	**Introduction of computer programming**	
11	Day 31	Computer Programming	
	Day 32	**Computer Organisation,Binary Representation**	
	Day 33	Executable & Non-Executable Statements	
12	Day 34	Input & Output Statements,Formats	
	Day 35	I.F. DO and GO TO Statements,Dimesion Arrays	
	Day 36	Statement function	
13	Day 37	Function Subprogram,Problem Discussion	
	Day 38	Revision	
	Day 39	Test	
14	Day 40	Test distribution and discussion	
	Day 41	(Revision)& discussion of previous paper (Unit I)	
	Day 42	(Revision)& discussion of previous paper (Unit II)	