

**Academic Year 2019-20**

**B.P.H.E. Society's  
Ahmednagar College, Ahmednagar  
Internal Quality Assurance Cell  
CO, PO, and PSO Attainment Sheet**

<b>Department Name</b>	<b>Mathematics</b>
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<b>Program Name</b>	<b>B.Sc.</b>
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<b>Program Outcomes(PO)</b>
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<b>PO1</b>	Promotion of thinking
<b>PO2</b>	Confidence
<b>PO3</b>	Problem solving
<b>PO4</b>	Understanding Concepts
<b>PO5</b>	Development of writing, listening skills
<b>PO6</b>	Group Discussion
<b>PO7</b>	Learning values from teachers
<b>PO8</b>	Skill of team work.
<b>PO9</b>	
<b>PO10</b>	
<b>PO11</b>	
<b>PO12</b>	

<b>Program Specific Outcome(PSO)</b>
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<b>PSO1</b>	To enable the students to cultivate a mathematical way of thinking, that is making conjectures, verifying them with
<b>PSO2</b>	To enable the students to quantify their experiences in other subjects they study.
<b>PSO3</b>	To enable the students to study mathematics for themselves.

<b>Academic Year :</b>	<b>2019-20</b>
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Class		F.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs			
Subject Code	Subject Name	Semester No		Teacher Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
MT-112	Calculus-I	1	Mr.S.A.Ghule	CO1	1	2	1	1	2	1	1	2	2	1	2
				CO2	1	2	2	1	2	1	1	2	2	1	1
				CO3	1	2	1	1	2	1	2	1	1	2	1
				CO4											
				CO5											
				Average	1.00	2.00	1.33	1.00	2.00	1.00	1.33	1.67	1.67	1.33	1.33
				CO1	Be able to recognize odd, even, periodic, increasing, decreasing functions										
				CO2	Understand the operation of composition of functions										
				CO3	Be able to calculate limits by substitution and by eliminating zero denominators										
				CO4											
				CO5											

Class		F.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs			
Subject Code	Subject Name	Semester No		Teacher Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
MT-111	Algebra	1	Mr.A.E.Lagad	CO1	1	2	1	2	2	1	2	2	1	1	2
				CO2	1	1	2	1	2	1	1	1	2	2	1
				CO3	1	2	1	1	2	1	2	1	1	1	2
				CO4	1	1	2	1	2	1	1	1	1	2	1
				CO5											
				Average	1.00	1.50	1.50	1.25	2.00	1.00	1.50	1.25	1.25	1.50	1.50
				CO1	Prove results involving divisibility and greatest common divisors										
				CO2	To learn applications of Modular Arithmetics										
				CO3	Apply Euler-Fermat's Theorem to prove relations involving prime numbers										
				CO4	To learn polynomial addition, subtraction, division, multiplication, roots of polynomials										
				CO5											

Class		F.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-122			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Calculus-II		CO1	2	2	1	1	2	1	1	2	1	2	1
Semester No	2		CO2	1	1	1	1	2	2	1	2	2	1	1
Teacher Name	Mr. S.A. Ghule		CO3	1	1	1	1	2	1	2	1	1	2	1
Course Outcomes			CO4	2	1	1	2	1	1	2	1	2	1	0
	CO1	Be able to calculate limits at infinity of rational functions	CO5											
	CO2	Be able to calculate limits in indeterminate forms by a repeated use of l'Hôpital's rule	Average	1.50	1.25	1.00	1.25	1.75	1.25	1.50	1.50	1.50	1.50	0.75
	CO3	Be able to use derivatives to find intervals on which the given function is increasing or decreasing												
	CO4	Be able to calculate limits at infinity of rational functions												
	CO5													

Class		F.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-121			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Analytical Geometry		CO1	1	1	1	1	2	1	1	2	2	1	2
Semester No	2		CO2	1	1	2	1	2	1	1	1	2	1	2
Teacher Name	Mr. A.E.Lagad		CO3	1	2	1	1	2	1	1	1	2	2	2
Course Outcomes			CO4	2	1	1	2	1	2	1	2	1	2	1
	CO1	To learn the concept of Transformation, translation and reflection	CO5											
	CO2	Used cut-out shapes as a means to develop the mental transformation of geometric shapes.	Average	1.25	1.25	1.25	1.25	1.75	1.25	1.00	1.50	1.75	1.50	1.75
	CO3	Perform translations and rotations of the coordinate axes to eliminate certain terms from equations.												
	CO4	Students will be able to find nature of general conics												
	CO5													

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Class		S.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-211			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Multivariable Calculus-I		CO1	1	2	1	2	2	1	1	2	1	2	1
Semester No	3		CO2	2	2	1	0	2	1	1	2	2	1	1
Teacher Name	Mr.S.S.Munot		CO3	2	1	2	1	2	1	0	2	1	1	1
Course Outcomes			CO4	2	1	2	2	1	2	1	2	2	2	1
	CO1	Identify trigonometric functions and their features	CO5											
	CO2	Interpret the epsilon-delta definition of a limit	Average	1.75	1.50	1.50	1.25	1.75	1.25	0.75	2.00	1.50	1.50	1.00
	CO3	Interpret the derivative of a function at a point												
	CO4	Identify extrema and critical points of a function												
	CO5													

Class		S.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-212(B)			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Laplace Transform and Fourier series		CO1	1	2	1	2	2	1	1	1	1	2	1
Semester No	3		CO2	1	2	1	1	2	1	1	2	2	1	1
Teacher Name	Mr.S.B.Gandhale		CO3	1	1	2	1	1	1	1	1	1	1	1
Course Outcomes			CO4											
	CO1	Have deep knowledge of Laplace Transformation and its real life application.	CO5											
	CO2	Solve initial value problem and boundary value problem using Laplace Transform.	Average	1.00	1.67	1.33	1.33	1.67	1.00	1.00	1.33	1.33	1.33	1.00
	CO3	Understand Fourier series and its properties and will be able to solve the examples based on it.												
	CO4													
	CO5													

Class		S.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-221			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Linear Algebra		CO1	1	2	1	2	2	2	1	1	1	2	1
Semester No	4		CO2	2	2	2	1	2	1	2	1	2	1	1
Teacher Name	Mr.A.E.Lagad		CO3	1	1	2	1	2	1	1	2	1	1	1
Course Outcomes			CO4	2	1	1	2	1	2	1	1	2	2	1
	CO1	Provide an axiomatic description of an abstract vector space	CO5											
	CO2	Given a linear transformation and bases, find a matrix representation for the linear transformation	Average	1.50	1.50	1.50	1.50	1.75	1.50	1.25	1.25	1.50	1.50	1.00
	CO3	Understand rank-nullity theorem and its application												
	CO4	Find the eigenvalues and eigenvectors of a matrix												
	CO5													

Class		S.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT222(A)			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Multivariable Caculus-II		CO1	1	2	1	2	1	1	1	1	1	2	1
Semester No	4		CO2	2	2	1	1	2	1	1	2	2	1	1
Teacher Name	Mr.S.B.Gandhale		CO3	2	1	1	1	2	1	1	1	1	1	1
Course Outcomes			CO4											
	CO1	Calculate areas and volumes using double and triple integrals.	CO5											
	CO2	Compute curve and surface integrals, and use them to calculate lengths, areas and volumes.	Average	1.67	1.67	1.00	1.33	1.67	1.00	1.00	1.33	1.33	1.33	1.00
	CO3	Use differential calculus for computing tangential plane and normal on surface and in optimization problems of (local) extremes of multivariable functions.												
	CO4													
	CO5													

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Class		T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	Subject Name	Semester No		Teacher Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
MT-331	Metric Spaces	5	Mr.S.S. Munot	2	1	2	2	1	2	1	2	2	1	2
Course Outcomes			CO1	2	1	2	1	2	2	2	1	1	1	1
	CO1	To deal with various examples of metric spaces	CO2	2	1	2	1	2	2	2	1	1	1	1
	CO2	Have some familiarity with continuous maps	CO3	2	1	1	2	1	2	1	1	1	2	1
	CO3	To work with compact sets in Euclidean space	CO4	1	1	2	1	2	1	2	1	2	1	0
	CO4	To work with completeness	Average	1.75	1.00	1.75	1.50	1.50	1.75	1.50	1.25	1.50	1.25	1.00
	CO5													

Class		T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	Subject Name	Semester No		Teacher Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
MT-332	Real Analysis-I	5	Mrs.Deshpande D.S.	2	1	1	2	1	2	1	2	1	1	1
Course Outcomes			CO1	1	2	2	1	2	1	2	1	2	2	1
	CO1	To explain the completeness of a system of real numbers: a least upper bound, a greatest lower bound	CO2	2	1	2	2	1	2	1	2	1	2	1
	CO2	To elaborate on the topological concepts of the real numbers: open sets, closed sets, accumulation points, closure, open covers, compact sets.	CO3	1	2	2	1	2	1	2	1	2	2	1
	CO3	To Justify the convergence/divergence of a given number series	CO4	2	1	2	2	1	2	1	2	1	2	1
	CO4		CO5											
	CO5		Average	1.67	1.33	1.67	1.67	1.33	1.67	1.33	1.67	1.33	1.67	1.00

Class	T.Y.B.Sc.	Course	Program Outcomes	PSOs
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Subject Code	MT-334	Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Group Theory	CO1	1	1	2	2	1	2	1	2	2	2	2
Semester No	5	CO2	2	2	2	1	2	2	2	1	1	1	2
Teacher Name	Mr.S.S.Munot	CO3	2	1	1	2	1	2	1	1	1	1	1
Course Outcomes		CO4	2	2	2	1	2	1	2	1	1	1	1
	CO1	To demonstrate when a binary algebraic structure forms a group	CO5										
	CO2	To determine possible subgroups of a group	Average	1.75	1.50	1.75	1.50	1.50	1.75	1.50	1.25	1.25	1.50
	CO3	To Identify cyclic subgroups and their generators											
	CO4	Explain group and subgroup orders using Lagrange's theorem											
	CO5												

Class	T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-335	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Ordinary differential equations	CO1	2	1	2	2	1	2	1	2	1	1	1
Semester No	5	CO2	2	1	2	1	2	2	2	1	1	2	2
Teacher Name	Mr.S.A.Ghule	CO3	2	1	1	2	1	2	1	1	2	2	1
Course Outcomes		CO4	1	1	2	1	2	1	2	1	1	1	1
	CO1	Distinguish between linear, nonlinear, partial and ordinary differential equations.	CO5										
	CO2	State the basic existence theorem for 1st order ODE's and use the theorem to determine a solution interval.	Average	1.75	1.00	1.75	1.50	1.50	1.75	1.50	1.25	1.25	1.50
	CO3	Recognize and solve a linear differential equation by use of an integrating factor											
	CO4	To find particular solutions to initial value problems											
	CO5												

Class	T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-337(A)	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Operation reseach	CO1	1	2	2	2	1	1	1	2	2	1	2
Semester No	5	CO2	1	2	2	1	2	2	2	1	1	1	1
Teacher Name	Mr.R.R.Devadhe	CO3	2	1	2	2	2	2	2	2	1	2	1
Course Outcomes		CO4											
	CO1	Apply the techniques used in operations research to solve real life problem in minimization	CO5										
	CO2	Industry select an optimum solution with profit maximization	Average	1.33	1.67	2.00	1.67	1.67	1.67	1.67	1.33	1.33	1.33

	CO3	Have complete understand of the significant role operation research play in mining
	CO4	
	CO5	

Class		T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-337(F)			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Number Theory		CO1	2	1	2	2	1	1	1	2	2	1	2
Semester No	5		CO2	2	1	1	2	2	2	2	1	1	1	1
Teacher Name	Mr.S.B.Gandhale		CO3	1	2	1	1	2	2	2	2	1	2	1
Course Outcomes			CO4											
	CO1	To Define and interpret the concepts of divisibility, congruence, greatest common divisor, prime, and prime-factorization	CO5											
	CO2	Apply the Law of Quadratic Reciprocity and other methods to classify numbers as primitive roots, quadratic residues, and quadratic non-residues.	Average	1.67	1.33	1.33	1.67	1.67	1.67	1.67	1.67	1.33	1.33	1.33
	CO3	Formulate and prove conjectures about numeric patterns												
	CO4													
	CO5													

Class		T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-341			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
Subject Name	Complex Analysis		CO1	2	1	2	1	1	2	1	2	2	1	2
Semester No	6		CO2	1	2	1	1	2	2	2	1	1	1	1
Teacher Name	Mr S.A.Ghule		CO3	2	1	2	2	1	2	2	2	1	2	1
Course Outcomes			CO4											
	CO1	Students will able to represent complex numbers algebraically and geometrically	CO5											
	CO2	Students will able to apply the concept and consequences of analyticity and the Cauchy-Riemann equations and of results on harmonic and entire functions including the fundamental theorem of algebra	Average	1.67	1.33	1.67	1.33	1.33	2.00	1.67	1.67	1.33	1.33	1.33
	CO3	To analyze sequences and series of analytic functions and types of convergence												
	CO4													
	CO5													



Class		T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-342	PO1		PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	
Subject Name	Real Analysis-II	CO1	1	1	2	2	1	2	1	2	1	1	2	
Semester No	6	CO2	2	2	1	2	2	2	1	1	1	2	1	
Teacher Name	Mrs Deshpande D.S	CO3	1	1	1	2	2	1	1	1	1	2	2	
Course Outcomes		CO4												
	CO1	Students will able to learn Riemann integrable and Riemann sums	CO5											
	CO2	To Prove a theorem about Riemann sums and Riemann integrals	Average	1.33	1.33	1.33	2.00	1.67	1.67	1.00	1.33	1.00	1.67	1.67
	CO3	Knowledge of some simple techniques for testing the convergence of sequences and series of functions, and confidence in applying them.												
	CO4													
	CO5													

Class		T.Y.B.Sc	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-344	PO1		PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	
Subject Name	Ring Theory	CO1	1	2	2	1	2	1	1	2	2	1	2	
Semester No	6	CO2	1	2	1	1	2	2	2	2	1	1	1	
Teacher Name	Mr. A.E.Lagad	CO3	1	1	2	2	1	2	2	1	2	2	2	
Course Outcomes		CO4												
	CO1	Students will able To write precise and accurate mathematical objects in ring theory	CO5											
	CO2	students will ableto understand the concepts like ideals and quotient rings	Average	1.00	1.67	1.67	1.33	1.67	1.67	1.67	1.67	1.33	1.67	
	CO3	Students will able to understand the concept of ring homomorphism.												
	CO4													
	CO5													

Class		T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs		
Subject Code	MT-345	PO1		PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	
Subject Name	Partial Differentail equation Equations	CO1	1	1	2	1	1	2	1	2	2	1	2	
Semester No	6	CO2	2	1	1	1	2	1	2	1	2	1	1	
Teacher Name	Mr.S.A.Ghule	CO3	2	1	1	2	1	2	1	1	1	2	1	
Course Outcomes		CO4	1	1	2	1	2	1	2	2	0	1	1	

	CO1	To explain the concepts and language of partial differential equations	CO5											
	CO2	To understand the difference between ordinary & partial differential equation	Average	1.50	1.00	1.50	1.25	1.50	1.50	1.50	1.50	1.25	1.25	1.25
	CO3	To classify the partial differential equations												
	CO4	Solve the partial differential equation using charpits method, Jacobis method												
	CO5													

Class	T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs			
Subject Code	MT-347(A)		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	
Subject Name	Optimization Technique	CO1	2	2	1	2	1	1	1	1	2	1	2	
Semester No	6	CO2	2	1	2	2	2	2	1	2	1	1	1	
Teacher Name	Mrs.S.B.Gandhale	CO3	2	1	1	2	2	1	1	1	1	2	1	
Course Outcomes		CO4	1	2	1	1	2	1	2	2	2	1	0	
	CO1	Students will able to formulate optimization problems												
	CO2	To Understand and apply the concept of optimality criteria for various type of optimization problems	Average	1.75	1.50	1.25	1.75	1.75	1.25	1.25	1.50	1.50	1.25	1.00
	CO3	To solve various constrained and unconstrained problems in single variable as well as multivariable												
	CO4	To apply the methods of optimization in real life situation												
	CO5													

Class	T.Y.B.Sc.	Course Outcomes	Program Outcomes								PSOs			
Subject Code	MT-347(F)		PO1	PO2	PO3	PO4	PO5	1	PO7	PO8	PSO1	PSO2	PSO3	
Subject Name	Graph Theory	CO1	2	1	1	2	1	2	1	2	2	1	2	
Semester No	6	CO2	1	2	2	1	2	1	2	2	1	1	1	
Teacher Name	Mr.R.R.Devadhe	CO3	2	1	1	1	1	2	2	1	1	2	1	
Course Outcomes		CO4												
	CO1	Be familiar with the definitions and basic theory of graphs												
	CO2	Be able to implement many of the standard algorithms of graph theory	Average	1.67	1.33	1.33	1.33	1.33	1.67	1.67	1.67	1.33	1.33	1.33
	CO3	Dijkstra's algorithm to find a shortest path spanning tree in a graph or digraph.												
	CO4													

	CO5	
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<b>CO-PO Mapping</b>
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		Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
FY	FY	1 MT-112	1.00	2.00	1.33	1.00	2.00	1.00	1.33	1.67
		2 MT-111	1.00	1.50	1.50	1.25	2.00	1.00	1.50	1.25
		3 MT-122	1.50	1.25	1.00	1.25	1.75	1.25	1.50	1.50
		4 MT-121	1.25	1.25	1.25	1.25	1.75	1.25	1.00	1.50
SY	SY	1 MT-211	1.75	1.50	1.50	1.25	1.75	1.25	0.75	2.00
		2 MT-212(B)	1.00	1.67	1.33	1.33	1.67	1.00	1.00	1.33
		3 MT-221	1.50	1.50	1.50	1.50	1.75	1.50	1.25	1.25
		4 MT222(A)	1.67	1.67	1.00	1.33	1.67	1.00	1.00	1.33
TY	TY	1 MT-331	1.75	1.00	1.75	1.50	1.50	1.75	1.50	1.25
		2 MT-332	1.67	1.33	1.67	1.67	1.33	1.67	1.33	1.67
		3 MT-334	1.75	1.50	1.75	1.50	1.50	1.75	1.50	1.25
		4 MT-335	1.75	1.00	1.75	1.50	1.50	1.75	1.50	1.25
		5 MT-337(A)	1.33	1.67	2.00	1.67	1.67	1.67	1.67	1.67
		6 MT-337(F)	1.67	1.33	1.33	1.67	1.67	1.67	1.67	1.67
		7 MT-341	1.67	1.33	1.67	1.33	1.33	2.00	1.67	1.67
		8 MT-342	1.33	1.33	1.33	2.00	1.67	1.67	1.00	1.33
		9 MT-344	1.00	1.67	1.67	1.33	1.67	1.67	1.67	1.67
		10 MT-345	1.50	1.00	1.50	1.25	1.50	1.50	1.50	1.50
		11 MT-347(A)	1.75	1.50	1.25	1.75	1.75	1.25	1.25	1.50
		12 MT-347(F)	1.67	1.33	1.33	1.33	1.33	1.67	1.67	1.67

**CO-PO ATTAINMENT**

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
0.306667	0.613333	0.408888889	0.306667	0.613333	0.306667	0.408889	0.511111
0.413333	0.62	0.62	0.516667	0.826667	0.413333	0.62	0.516667
1.02	0.85	0.68	0.85	1.19	0.85	1.02	1.02
0.583333	0.583333	0.583333333	0.583333	0.816667	0.583333	0.466667	0.7
0.91	0.78	0.78	0.65	0.91	0.65	0.39	1.04
0.52	0.866667	0.693333333	0.693333	0.866667	0.52	0.52	0.693333
1.5	1.5	1.5	1.5	1.75	1.5	1.25	1.25
1.666667	1.666667	1	1.333333	1.666667	1	1	1.333333
0.91	0.52	0.91	0.78	0.78	0.91	0.78	0.65
0.866667	0.693333	0.866666667	0.866667	0.693333	0.866667	0.693333	0.866667
0.91	0.78	0.91	0.78	0.78	0.91	0.78	0.65
1.19	0.68	1.19	1.02	1.02	1.19	1.02	0.85
0.693333	0.866667	1.04	0.866667	0.866667	0.866667	0.866667	0.866667
1.133333	0.906667	0.906666667	1.133333	1.133333	1.133333	1.133333	1.133333
1.4	1.12	1.4	1.12	1.12	1.68	1.4	1.4
1.333333	1.333333	1.333333333	2	1.666667	1.666667	1	1.333333
1	1.666667	1.666666667	1.333333	1.666667	1.666667	1.666667	1.666667
1.5	1	1.5	1.25	1.5	1.5	1.5	1.5
0.91	0.78	0.65	0.91	0.91	0.65	0.65	0.78
1.666667	1.333333	1.333333333	1.333333	1.333333	1.666667	1.666667	1.666667

**Percentage CO-PO ATTAINMENT**

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
30.66667	30.66667	30.66667	30.66667	30.66667	30.66667	30.66667	30.66667
41.33333	41.33333	41.33333	41.33333	41.33333	41.33333	41.33333	41.33333
68	68	68	68	68	68	68	68
46.66667	46.66667	46.66667	46.66667	46.66667	46.66667	46.66667	46.66667
52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52
100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100
52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52
68	68	68	68	68	68	68	68
52	52	52	52	52	52	52	52
68	68	68	68	68	68	68	68
84	84	84	84	84	84	84	84
100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100
52	52	52	52	52	52	52	52
100	100	100	100	100	100	100	100

FY
SY
TY

**CO-PSO MAPPING**

	Course	PSO1	PSO2	PSO3
1	MT-112	1.67	1.33	1.33
2	MT-111	1.25	1.50	1.50
3	MT-122	1.50	1.50	0.75
4	MT-121	1.75	1.50	1.75
1	MT-211	1.50	1.50	1.00
2	MT-212(B)	1.33	1.33	1.00
3	MT-221	1.50	1.50	1.00
4	MT222(A)	1.33	1.33	1.00
1	MT-331	1.50	1.25	1.00
2	MT-332	1.33	1.67	1.00
3	MT-334	1.25	1.25	1.50
4	MT-335	1.25	1.50	1.25
5	MT-337(A)	1.33	1.33	1.33
6	MT-337(F)	1.33	1.33	1.33
7	MT-341	1.33	1.33	1.33
8	MT-342	1.00	1.67	1.67
9	MT-344	1.67	1.33	1.67
10	MT-345	1.25	1.25	1.25
11	MT-347(A)	1.50	1.25	1.00
12	MT-347(F)	1.33	1.33	1.33

**CO-PSO ATTAINMENT**

	Course	PSO1	PSO2	PSO3
	MT-112	0.511111	0.408889	0.408889
	MT-111	0.516667	0.62	0.62
	MT-122	1.02	1.02	0.51
	MT-121	0.816667	0.7	0.816667
	MT-211	0.78	0.78	0.52
	MT-212(B)	0.693333	0.693333	0.52
	MT-221	1.5	1.5	1
	MT222(A)	1.333333	1.333333	1
	MT-331	0.78	0.65	0.52
	MT-332	0.693333	0.866667	0.52
	MT-334	0.65	0.65	0.78
	MT-335	0.85	1.02	0.85
	MT-337(A)	0.693333	0.693333	0.693333
	MT-337(F)	0.906667	0.906667	0.906667
	MT-341	1.12	1.12	1.12
	MT-342	1	1.666667	1.666667
	MT-344	1.666667	1.333333	1.666667
	MT-345	1.25	1.25	1.25
	MT-347(A)	0.78	0.65	0.52
	MT-347(F)	1.333333	1.333333	1.333333

**Percentage CO-PSO ATTAINMENT**

	Course	PSO1	PSO2	PSO3
	MT-112	30.66667	30.66667	30.66667
	MT-111	41.33333	41.33333	41.33333
	MT-122	68	68	68
	MT-121	46.66667	46.66667	46.66667
	MT-211	52	52	52
	MT-212(B)	52	52	52
	MT-221	100	100	100
	MT222(A)	100	100	100
	MT-331	52	52	52
	MT-332	52	52	52
	MT-334	52	52	52
	MT-335	68	68	68
	MT-337(A)	52	52	52
	MT-337(F)	68	68	68
	MT-341	84	84	84
	MT-342	100	100	100
	MT-344	100	100	100
	MT-345	100	100	100
	MT-347(A)	52	52	52
	MT-347(F)	100	100	100