Academic Year	2018-19

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

Department Name	Computer Science

Program Name	B.Sc.

Program Outcomes(PO)

PO1	Develop ability to analyze a problem, identify and define the computing requirements, which may be appropriate to its solution.
PO2	To build the necessary skill set and analytical abilities for developing computer based solutions for real life problems.
PO3	To train students in professional skills related to Software Industry.
PO4	To prepare necessary knowledge base for research and development in Computer Science.
PO5	Graduates should have a strong understanding of the fundamental concepts of computer science
PO6	They should be effective communicators, both in writing and orally, and be able to document and present their work effectively.
PO7	To train students to be proficient in data analysis and statistical techniques with proficiency in Excel
PO8	To apply mathematical and statistical concepts to solve real world problems.
PO9	Describe the mathematics fundamentals,including discrete structures ,statistics and calculus
PO10	To be able to apply Mathematical techniques to find the optimum solution of complex real world Problems
PO11	communication engineering applications
PO12	and arrive at valid conclusions

Program Specific Outcome(PSO)

PSO1	Proficiency in programming languages, data management and software development.
PSO2	Develop problem-solving abilities using technology.
PSO3	Be well-prepared for careers in computer science and related fields, with skills that are in demand by industry.

Academic Year :	**2018-19**

Class	FYBSC(CS)
Subject Code	CS 101
Subject Name	PROBLEM SOLVING USING COMPUTER AND 'C' PROGRAMMING
Semester No	1
Teacher Name	BAHETI PRITI
Course Outcomes	
CO1	To develop Problem Solving abilities using computers
CO2	To teach basic principles of programming
CO3	To develop skills for writing programs using C
CO4	Describe the algorithms using the 'C' language, debug and execute programs.
CO5	Illustrate the ability to analyse a problem and devise an algorithm to solve it.

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	2	3	2	2	2	2	2	3	3	3
CO2	3	3	3	3	2	1	2	2	2	2	2	1	2	3	3
CO3	3	3	3	3	2	1	2	1	1	2	2	1	3	2	3
CO4	2	3	3	2	2	1	1	2	1	2	1	2	2	2	2
CO5	3	3	3	3	3	1	3	2	2	2	2	2	2	3	3
Average	2.80	3.00	3.00	2.80	2.40	1.20	2.20	1.80	1.60	2.00	1.80	1.60	2.40	2.60	2.80

Class	FYBSC(CS)
Subject Code	CS 102
Subject Name	FILE ORGANIZATION AND FUNDAMENTALS OF DATABASES
Semester No	1
Teacher Name	KHANDAGALE PRIYANKA
Course Outcomes	
CO1	To understand data processing using computers
CO2	To teach basic organization of data

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	3	3	3	3	2	1	2	2	2	2	2	3	2	3
CO2	3	2	2	2	3	2	2	1	1	2	2	2	2	3	3
CO3	2	3	3	2	2	1	2	1	2	2	2	1	3	3	3
CO4	3	2	2	2	2	1	2	1	1	1	1	1	3	3	2
CO5	2	2	2	2	2	1	0	1	1	1	1	1	3	2	3
Average	2.40	2.40	2.40	2.20	2.40	1.40	1.40	1.20	1.40	1.60	1.60	1.40	2.80	2.60	2.80

	CO3	To understand creations ,manupulations and querying of data in databases
	CO4	Interpret the fundamental concepts of DBMS
	CO5	Understand the data security methods for database protection.

Class	FYBSC(CS)	Course Outcomes	Program Outcomes											PSOs		
Subject Code	CS 103		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	COMPUTER SCIENCE PRACTICAL PAPER -1	CO1	3	2	2	3	3	1	3	3	3	3	3	3	3	3	2
Semester No	1	CO2	3	2	3	3	2	1	2	2	2	2	1	2	2	3	3
Teacher Name	JADHAV PRIYANKA	CO3	3	2	2	2	2	0	1	2	2	1	1	2	2	2	3
Course Outcomes		CO4	2	2	2	2	2	1	2	2	2	3	3	3	2	2	3
CO1	Design and implement a 'C' program for algebraic problems	CO5															
CO2	Understand appropriate use of datatypes and array structures	Average	2.75	2.00	2.25	2.50	2.25	0.75	2.00	2.25	2.25	2.25	2.00	2.50	2.25	2.50	2.75
CO3	Understand use of appropriate control structures																
CO4	Solve simple computational problems using modular design and basic features of the ‘C’ language.																
CO5																	

Class	FYBSC(CS)	Course Outcomes	Program Outcomes											PSOs		
Subject Code	CS 104		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	COMPUTER SCIENCE PRACTICAL PAPER -2	CO1	3	2	2	2	2	0	1	1	1	1	1	1	3	2	3
Semester No	1	CO2	3	3	3	3	3	1	2	2	1	1	1	1	3	3	3
Teacher Name	KULKARNI SARIKA	CO3	2	3	3	3	2	1	2	2	2	1	1	1	3	3	3
Course Outcomes		CO4	2	3	2	3	2	1	3	2	2	2	1	1	2	3	3
CO1	Understand basic HTML designing	CO5															
CO2	Writing 'C' programs using complex data structures such as pointers ,structures ,etc .	Average	2.50	2.75	2.50	2.75	2.25	0.75	2.00	1.75	1.50	1.25	1.00	1.00	2.75	2.75	3.00
CO3	Implement various data structures viz. Stack, Queues and Linked Lists																

	CO4	Use different searching and sorting methods for basic data structures programs.
	CO5	

Class	FYBSC(CS)
Subject Code	MTC 101
Subject Name	DISCRETE MATHEMATICS
Semester No	1
Teacher Name	MAHANKALE NAMRATA

Course Outcomes		
	CO1	A student should be able to able to work with graphs and identify certain parameters and properties, of the given graphs
	CO2	A student should be able to perform algorithms,justify why these algorithms work and give some , estimates of the running times of these algorithms .
	CO3	Determine properties of relations, identify equivalence and partial order relations, sketch relations.
	CO4	Construct a solid foundation in some of the new and different branches of Mathematics like Logic, Set Theory and Lattices.
	CO5	Distinguish among various counting principles and apply them accordingly.

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	3	3	1	2	1	2	3	3	3	1	1	2	3	2
CO2	3	3	2	3	2	0	2	3	3	3	2	2	2	2	3
CO3	2	2	2	2	2	0	2	2	2	3	1	2	3	3	2
CO4	2	2	1	3	2	1	3	2	2	3	2	2	2	3	3
CO5	2	1	1	2	2	0	3	3	3	3	1	1	2	3	3
Average	2.20	2.20	1.80	2.20	2.00	0.40	2.40	2.60	2.60	3.00	1.40	1.60	2.20	2.80	2.60

Class	FYBSC(CS)
Subject Code	MTC 102
Subject Name	ALGEBRA AND CALCULUS
Semester No	1
Teacher Name	SALVE SHRADDHA

Course Outcomes		
	CO1	Understand algebraic and geometric representations of vectors in R^n and their operations, including addition, scalar multiplication and dot product.

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	2	2	1	1	2	2	3	1	1	2	3	2
CO2	2	1	1	2	1	0	1	2	2	2	1	2	2	2	3
CO3	1	1	1	2	1	0	1	2	2	3	2	1	3	2	3
CO4	2	2	1	2	2	0	1	2	3	3	1	1	2	2	2
CO5	1	2	2	2	2	0	1	2	2	2	1	1	2	3	2

	CO2	Solve systems of linear equations using Gauss-Jordan elimination to reduce to echelon form	Average	1.60	1.60	1.40	2.00	1.60	0.20	1.00	2.00	2.20	2.60	1.20	1.20	2.20	2.40	2.40
	CO3	Compute the orthogonal projection of a vector onto a subspace, given a basis for the subspace																
	CO4	Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.																
	CO5	Provide an axiomatic description of an abstract vector space																

Class	FYBSC(CS)	Course Outcomes	Program Outcomes											PSOs		
Subject Code	MTC 103		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	MATHEMATICS PRACTICAL	CO1	3	3	3	3	3	3	2	3	2	3	1	1	2	2	3
Semester No	1	CO2	2	3	2	3	2	1	2	3	3	3	1	1	2	2	3
Teacher Name	MAHANKALE NAMRATA	CO3	3	2	3	2	2	0	1	3	3	3	1	2	3	2	2
Course Outcomes		CO4	2	3	3	2	2	3	2	2	3	3	2	1	2	3	2
	CO1	A student should be able to apply their skills and knowledge ,that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.	CO5														
	CO2	Perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.	Average	2.50	2.75	2.75	2.50	2.25	1.75	1.75	2.75	2.75	3.00	1.25	1.25	2.25	2.25	2.50
	CO3	To write cohesive and comprehensive solutions to exercises .																
	CO4	To achieve proficiency in writing proofs, including those using basic graph theory proof techniques.																
	CO5																	

Class	FYBSC(CS)		Course Outcomes	Program Outcomes												PSOs		
Subject Code	ELC 101			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	PRINCIPLES OF ANALOG ELECTRONICS		CO1	1	2	2	3	3	1	0	0	0	1	3	3	2	3	3
Semester No	1		CO2	2	2	2	3	2	0	0	1	1	2	3	3	3	2	2
Teacher Name	SAYYED AMRIN		CO3	2	3	2	2	2	1	0	1	1	1	3	3	2	2	2
Course Outcomes			CO4	2	2	2	2	2	0	1	1	0	1	3	3	2	2	2
	CO1	To get familiar with basic circuit elements and passive components	CO5	2	2	2	2	2	0	1	0	0	1	3	3	2	2	2
	CO2	To identify different parameters/functions/specifications of components used in electronic circuits	Average	1.80	2.20	2.00	2.40	2.20	0.40	0.40	0.60	0.40	1.20	3.00	3.00	2.20	2.20	2.20
	CO3	To solve problems based on network theorems.																
	CO4	To study elementary electronic circuits and applications																
	CO5	Understand basics of logic families																

Class	FYBSC(CS)		Course Outcomes	Program Outcomes												PSOs		
Subject Code	ELC 102			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	PRINCIPLES OF DIGITAL ELECTRONICS		CO1	2	2	2	2	2	0	0	0	0	1	3	3	2	2	3
Semester No	1		CO2	1	1	1	2	2	0	0	1	1	1	3	3	3	2	2
Teacher Name	HIRE SANDHYA		CO3	1	2	1	2	2	0	0	1	1	1	3	3	3	3	2
Course Outcomes			CO4	1	2	2	2	2	1	0	1	0	2	3	3	3	2	2
	CO1	To get familiar with concepts of digital electronics	CO5															
	CO2	To understand DC circuit theorems and their use in circuit analysis	Average	1.25	1.75	1.50	2.00	2.00	0.25	0.00	0.75	0.50	1.25	3.00	3.00	2.75	2.25	2.25
	CO3	To study characteristic festures of semiconductor devices																
	CO4	Understand Basics of operational amplifiers																
	CO5																	

Class	FYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	ELC 103		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3

Subject Name		ELECTRONICS PRACTICAL
Semester No		1
Teacher Name		HIRE SANDHYA
Course Outcomes		
	CO1	Understand the basic terminology/definitions of electrical and electronics engineering
	CO2	Apply the knowledge of theorems/laws to analyze the simple circuits
	CO3	Basic organization, design, and programming of a simple digital computer and introduces simple register transfer language to specify various computer operations.
	CO4	Apply the techniques ,analyse and use engineering tools required for electronics and communication applications
	CO5	

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	3	2	2	2	1	0	2	2	1	3	3	2	2	3
CO2	2	3	2	3	2	0	1	2	2	1	3	3	2	2	2
CO3	2	2	2	2	2	0	1	1	2	1	3	3	3	2	2
CO4	2	2	3	2	2	0	0	1	1	1	3	3	2	2	2
CO5															
Average	2.00	2.50	2.25	2.25	2.00	0.25	0.50	1.50	1.75	1.00	3.00	3.00	2.25	2.00	2.25

Class		FYBSC(CS)
Subject Code		CSST 101
Subject Name		STATISTICAL METHODS -I
Semester No		1
Teacher Name		SHINDE SNEHAL
Course Outcomes		
	CO1	To understand the relationship between two variables using scatter plot .
	CO2	To compute coefficient of correlation of regression
	CO3	To fit various regression models and to find best fit .
	CO4	To fit the Normal distribution
	CO5	Explain in detail the relationships between a response variable and a covariate or covariates.

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	2	2	3	1	3	3	3	2	1	0	2	3	3
CO2	2	2	2	2	2	0	3	3	3	2	1	1	2	2	2
CO3	1	2	2	2	2	0	3	3	3	2	1	1	2	2	2
CO4	1	2	2	2	2	0	3	2	3	2	0	1	2	2	2
CO5	2	2	1	2	2	0	3	3	3	2	1	1	2	2	2
Average	1.40	2.00	1.80	2.00	2.20	0.20	3.00	2.80	3.00	2.00	0.80	0.80	2.00	2.20	2.20

Class		FYBSC(CS)
Subject Code		CSST 102
Subject Name		STATISTICAL METHODS -II

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	3	3	2	3	0	3	3	3	2	1	0	2	3	2

Semester No		1
Teacher Name		SHINDE SNEHAL
Course Outcomes		
	CO1	Learn random variables and continuous probability distributions
	CO2	Learn about the large and small sample test and non parametric test .
	CO3	To compute multiple, partial and correlation coefficients.
	CO4	To fit probability distributions such as Negative binomial, Normal, to carry out large sample and small sample tests of significance
	CO5	Use the normal probability distribution including standard normal curve calculations of appropriate areas.

CO2	1	3	3	2	2	0	2	3	3	1	1	0	3	2	3
CO3	1	2	2	1	2	0	3	3	3	2	0	0	2	3	2
CO4	2	2	2	2	2	0	3	3	3	2	0	0	2	2	2
CO5	2	2	2	2	2	0	3	3	2	1	0	0	2	2	3
Average	1.60	2.40	2.40	1.80	2.20	0.00	2.80	3.00	2.80	1.60	0.40	0.00	2.20	2.40	2.40

Class		FYBSC(CS)
Subject Code		CSST 103
Subject Name		STATISTICS PRACTICAL
Semester No		1
Teacher Name		SHINDE SNEHAL
Course Outcomes		
	CO1	To understand the relationship between two variables using scatter plot.
	CO2	To fit various regression models and to find best fit. To fit the Normal distribution.
	CO3	To understand the trend in time series and how to remove it. To apply inferential methods for real data sets.
	CO4	To understandthe importance and functions of different statistical organizations in the development of nation.
	CO5	To compute coefficient of correlation, coefficient of regression.

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	3	2	3	0	3	3	3	2	2	2	2	2	2
CO2	2	3	2	2	2	0	3	2	3	2	2	2	3	2	2
CO3	2	2	2	2	2	0	3	2	3	2	1	1	2	3	3
CO4	1	2	2	2	2	0	3	2	3	2	1	1	3	3	2
CO5	1	2	2	2	2	0	2	3	3	2	0	0	2	3	3
Average	1.60	2.20	2.20	2.00	2.20	0.00	2.80	2.40	3.00	2.00	1.20	1.20	2.40	2.60	2.40

Academic Year : 2018-19

Class	S.Y.B.Sc.(Computer Science)
Subject Code	CS- 211
Subject Name	Data Structures using 'C'
Semester No	1
Teacher Name	Nikita Munot

Course Outcomes

	CO1	1. To learn the systematic way of solving problem
	CO2	2. To understand the different methods of organizing large amount of data
	CO3	3. To efficiently implement the different data structures
	CO4	4. To efficiently implement solutions for specific problems
	CO5	

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	0	0	0	2	2	1	1	3	3	3
CO2	3	3	3	3	3	0	0	0	2	2	1	1	3	3	3
CO3	3	3	3	3	3	0	0	0	2	2	1	1	3	3	3
CO4	3	3	3	3	3	0	0	0	2	2	1	1	3	3	3
CO5															
Average	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	2.00	2.00	1.00	1.00	3.00	3.00	3.00

Class	S.Y.B.Sc.(Computer Science)
Subject Code	CS 212
Subject Name	Relational Database Management System
Semester No	1
Teacher Name	Sarika Kulkarni

Course Outcomes

	CO1	To teach fundamental concepts of RDBMS (PL/PgSQL)
	CO2	-To teach principles of databases

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	2	3	0	1	0	0	1	0	0	3	3	3
CO2	2	2	2	1	2	0	1	0	1	1	0	0	3	3	3
CO3	3	2	2	2	3	0	1	0	1	1	0	0	3	3	3
CO4	3	2	2	2	2	0	1	0	1	1	1	1	3	3	3
CO5	3	2	2	2	2	0	1	0	1	1	1	1	3	3	3
Average	2.60	2.00	2.00	1.80	2.40	0.00	1.00	0.00	0.80	1.00	0.40	0.40	3.00	3.00	3.00

	CO3	-To teach database management operations
	CO4	-To teach data security and its importance
	CO5	-To teach client server architecture

Class	S.Y.B.Sc.(Computer Science)
Subject Code	MTC: 211
Subject Name	Applied Algebra
Semester No	1
Teacher Name	Shraddha Salve

Course Outcomes

	CO1	Discuss the concepts of vector spaces and subspaces.
	CO2	Define linearly independent and dependent vectors.
	CO3	Determine eigenvalues and eigenvectors of a given matrix.
	CO4	Apply concept of diagonalization (factorization) of a matrix using eigenvalues and eigenvectors.
	CO5	

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	2	3	2	0	2	3	3	3	2	2	2	2	3
CO2	2	2	2	2	2	0	2	2	2	3	1	2	3	3	2
CO3	2	2	1	3	2	1	3	2	2	3	2	2	2	3	3
CO4	2	1	1	2	2	0	3	3	3	3	1	1	2	3	3
CO5															
Average	2.25	2.00	1.50	2.50	2.00	0.25	2.50	2.50	2.50	3.00	1.50	1.75	2.25	2.75	2.75

Class	S.Y.B.Sc.(Computer Science)
Subject Code	MTC: 212
Subject Name	Numerical Techniques
Semester No	1
Teacher Name	Namrata Mahankale

Course Outcomes

	CO1	Apply numerical methods to obtain approximate solutions to mathematical problems.
	CO2	Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.
	CO3	Analyse and evaluate the accuracy of common numerical methods.
	CO4	

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	1	2	1	0	0	1	1	3	3	0	0	1	3	2
CO2	1	2	1	1	0	0	2	2	3	3	0	0	2	2	2
CO3	2	2	1	1	1	1	1	2	3	3	0	0	1	2	2
CO4															
CO5															
Average	1.67	1.67	1.33	1.00	0.33	0.33	1.33	1.67	3.00	3.00	0.00	0.00	1.33	2.33	2.00

	CO5	

Class	S.Y.B.Sc.(Computer Science)
Subject Code	ELC 211
Subject Name	Digital System Hardware
Semester No	1
Teacher Name	Hire Sandhya

Course Outcomes		
	CO1	1. To study the applications of logic gates.
	CO2	2. To use K-maps for digital circuit design.
	CO3	3. To study and understand basics of microprocessors
	CO4	4. To understand fundamentals of multicore technology
	CO5	

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	2	2	0	2	2	2	3	3	3	2	3	3
CO2	2	2	2	2	2	0	2	2	2	2	3	3	2	3	3
CO3	2	2	1	2	1	0	0	2	2	2	3	3	2	3	3
CO4	2	1	2	2	2	0	2	2	2	2	3	3	2	3	3
CO5															
Average	2.00	1.75	1.75	2.00	1.75	0.00	1.50	2.00	2.00	2.25	3.00	3.00	2.00	3.00	3.00

Class	S.Y.B.Sc.(Computer Science)
Subject Code	ELC 212
Subject Name	Analog Systems
Semester No	1
Teacher Name	Sayyed Amarin

Course Outcomes		
	CO1	To understand basics of analog electronics
	CO2	2) To study different types of sensors
	CO3	3) To understand different types of signal conditioning circuits
	CO4	4) To learn data conversion techniques
	CO5	5) To apply knowledge of analog systems in different applications

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	2	2	0	2	2	2	2	3	3	2	3	3
CO2	2	2	2	2	2	0	2	2	2	2	3	3	2	3	3
CO3	3	2	1	2	1	0	0	2	2	2	3	3	2	3	3
CO4	2	1	2	2	2	0	2	2	2	2	3	3	2	3	3
CO5	2	1	2	1	2	0	2	2	2	2	3	3	2	3	3
Average	2.20	1.60	1.80	1.80	1.80	0.00	1.60	2.00	2.00	2.00	3.00	3.00	2.00	3.00	3.00

Class	S.Y.B.Sc.(Computer Science)
Subject Code	En 211
Subject Name	English
Semester No	1

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1

Teacher Name	Tejal Sonawane															
Course Outcomes																
	CO1	To expose students to the best examples of prose and poetry in English so that they realize the beauty and communicative power of English.														
	CO2	To enhance employability of the students by developing their linguistic competence and communicative skills.	Average	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	CO3															
	CO4															
	CO5															

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 221		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Object Oriented Concepts using C++	CO1	3	3	3	3	3	0	0	0	2	2	1	1	3	3	3
Semester No	2	CO2	3	3	3	3	3	0	0	0	2	2	1	1	3	3	3
Teacher Name	Nikita Munot	CO3															
Course Outcomes		CO4															
	CO1	Acquire an understanding of basic object oriented concepts and the issues involved in effective class design															
	CO2	C++ programs that use object oriented concepts such as informationhiding, constructors, destructors, inheritance etc	Average	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	2.00	2.00	1.00	1.00	3.00	3.00	3.00
	CO3																
	CO4																
	CO5																

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS - 222		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Software Engineering	CO1	2	2	2	2	3	1	1	0	0	1	0	0	3	3	3
Semester No	2	CO2	2	2	2	1	2	1	1	0	1	1	0	0	3	3	3
Teacher Name	Sarika Kulkarni	CO3	3	2	2	2	3	1	1	0	1	1	0	0	3	3	3
Course Outcomes		CO4	3	2	2	2	2	1	1	0	1	1	1	1	3	3	3

	CO1	To teach basics of System Analysis and Design.	CO5	3	2	2	2	2	1	1	0	1	1	1	1	3	3	3
	CO2	To teach principles of Software Engineering	Average	2.60	2.00	2.00	1.80	2.40	1.00	1.00	0.00	0.80	1.00	0.40	0.40	3.00	3.00	3.00
	CO3	To teach various process models used in practice																
	CO4	To know about the system engineering and requirement engineering																
	CO5	To build analysis model																

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes											PSOs		
Subject Code	CS-223		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Data structures Practicals and C++ Practicals	CO1	3	3	3	3	3	0	0	0	2	2	1	1	3	3	3
Semester No	2	CO2	3	3	3	3	3	0	0	0	2	2	1	1	3	3	3
Teacher Name	Nikita Munot	CO3															
Course Outcomes		CO4															
	CO1	1. Design and implement Data structures and related algorithms	CO5														
	CO2	2. Understand several ways of solving the same problem.	Average	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	2.00	2.00	1.00	1.00	3.00	3.00	3.00
	CO3																	
	CO4																	
	CO5																	

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes											PSOs		
Subject Code	CS-224		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Database Practicals & Mini Project using Software Engineering techniques	CO1	2	2	2	2	3	0	1	0	0	1	0	0	3	3	3
Semester No	2	CO2	2	2	2	1	2	0	1	0	1	1	0	0	3	3	3
Teacher Name	Sarika Kulkarni, Khandagale Priyanka	CO3	2	2	2	2	3	0	1	0	0	1	0	0	3	3	3
Course Outcomes		CO4	2	2	2	1	2	0	1	0	1	1	0	0	3	3	3
	CO1	Understanding the use of cursors, triggers, views and stored procedures	CO5	2	2	2	2	3	0	1	0	0	1	0	0	3	3	3

	CO2	Understanding the steps of system analysis and design	Average	2.00	2.00	2.00	1.60	2.60	0.00	1.00	0.00	0.40	1.00	0.00	0.00	3.00	3.00	3.00
	CO3	Understanding Data requirements for a specific problem domain																
	CO4	Designing Data base as per the Data requirements																
	CO5	Designing queries as per the functional requirements																

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	MTC:221		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Computational Geometry	CO1	2	0	2	2	2	0	1	2	2	2	0	0	1	2	2
Semester No	2	CO2	1	2	2	2	2	0	1	1	3	2	1	0	2	3	1
Teacher Name	Shraddha Salve	CO3	1	1	1	1	2	0	2	1	2	3	1	0	2	3	1
Course Outcomes		CO4	2	2	1	1	2	0	1	2	2	2	0	1	1	2	1
	CO1	State different types of projections on an object.	CO5	1	1	2	1	2	0	2	2	2	2	0	0	1	3	2
	CO2	Compute points of standard curves using recursive formulae.	Average	1.40	1.20	1.60	1.40	2.00	0.00	1.40	1.60	2.20	2.20	0.40	0.20	1.40	2.60	1.40
	CO3	Demonstrate knowledge of key notions and principles related to 2 dimensional transformations.																
	CO4	Explain and implement the basic principles and theory of geometric algorithms.																
	CO5	Evaluate 3D transformations and construct Bezier curves of order 2 and order 3.																

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	MTC:222		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Operations Research	CO1	1	2	2	1	1	0	1	1	3	2	1	1	1	2	3
Semester No	2	CO2	1	1	1	1	2	0	2	1	3	2	1	0	2	2	2
Teacher Name	Namrata Mahankale	CO3	1	1	1	1	1	0	2	1	3	3	1	0	2	3	2
Course Outcomes		CO4	2	1	2	1	1	0	1	2	3	3	0	1	2	2	2
	CO1	Apply operations research techniques and algorithms to solve these Network problems	CO5														

	CO2	Determine optimal strategy for Minimization of Cost of shipping of products from source to Destination. Finding initial basic feasible and optimal solution of the Transportation problems	Average	1.25	1.25	1.50	1.00	1.25	0.00	1.50	1.25	3.00	2.50	0.75	0.50	1.75	2.25	2.25
	CO3	Model competitive real-world phenomena using concepts from game theory. Analyse pure and mixed strategy games																
	CO4	Solve linear programming problems using appropriate techniques and optimization solvers, interpret the results obtained.																
	CO5																	

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	MTC:223		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Mathematics practical	CO1	2	0	2	2	1	0	1	2	2	2	0	0	2	2	3
Semester No	2	CO2	0	0	1	0	1	0	2	2	3	2	1	0	3	2	3
Teacher Name	Shraddha Salve	CO3	1	0	0	1	1	0	2	1	2	3	0	1	3	3	2
Course Outcomes		CO4	0	0	0	1	1	0	3	2	2	1	0	0	2	2	2
CO1	Recall basic facts about mathematics.	CO5	0	1	0	0	1	0	2	2	2	2	1	0	2	2	3
CO2	Should be able to display knowlege of convention such as notations, terminology and recognize basic geomertical figures, graphical display.	Average	0.60	0.20	0.60	0.80	1.00	0.00	2.00	1.80	2.20	2.00	0.40	0.20	2.40	2.20	2.60
CO3	State important facts resulting from their studies.																
CO4	A relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns.																
CO5	Should get adequte explosure to global and local concerns that explore them many aspects of mathematical science.																

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	ELC 221		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	The 8051 Architecture, Interfacing & Programming	CO1	2	3	3	3	2	0	1	3	2	3	3	3	2	3	3
Semester No	2	CO2	2	2	2	3	2	0	1	2	2	2	3	3	2	3	3
Teacher Name	Hire Sandhya	CO3	3	3	1	2	1	0	0	2	2	2	3	3	2	3	3

Course Outcomes			CO4	2	1	2	2	2	0	1	2	2	2	3	3	2	3	3
	CO1	1. To study the basics of 8051 microcontroller	CO5															
	CO2	2. To study the Programming and interfacing techniques of 8051	Average	2.25	2.25	2.00	2.50	1.75	0.00	0.75	2.25	2.00	2.25	3.00	3.00	2.00	3.00	3.00
	CO3	3. To apply knowledge of 8051 to design different application circuits																
	CO4	4. To introduce the basic concepts of advanced Microcontrollers																
	CO5																	

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	ELC 222		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Communication Principles	CO1	2	3	3	3	2	0	1	3	2	3	3	3	2	3	3
Semester No	2	CO2	2	2	2	3	2	0	1	2	2	2	3	3	2	3	3
Teacher Name	Amrin Sayyed	CO3	3	3	1	2	1	0	0	2	2	2	3	3	2	3	3
Course Outcomes		CO4	2	1	2	2	2	0	1	2	2	2	3	3	2	3	3
	CO1	1. To understand basics of communication systems.	CO5														
	CO2	2. To understand modulation, demodulation and multiplexing of signals.	Average	2.25	2.25	2.00	2.50	1.75	0.00	0.75	2.25	2.00	2.25	3.00	3.00	2.00	3.00	3.00
	CO3	3. To understand digital communication techniques															
	CO4	4. To introduce concepts in advanced wireless communication.															
	CO5																

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	ELC-223		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	Practical Course	CO1	2	2	2	2	2	0	2	3	2	3	3	3	2	3	3
Semester No	2	CO2	2	2	2	2	2	0	2	2	2	2	3	3	2	3	3
Teacher Name	Sayyed Amarin	CO3	2	2	1	2	1	0	0	2	2	2	3	3	2	3	3
Course Outcomes		CO4	2	1	2	2	2	0	2	2	2	2	3	3	2	3	3
	CO1	1. To use basic concepts for building various applications in electronics.	CO5														

	CO2	2. To understand design procedures of different electronic circuits as per requirement.	Average	2.00	1.75	1.75	2.00	1.75	0.00	1.50	2.25	2.00	2.25	3.00	3.00	2.00	3.00	3.00
	CO3	3. To build experimental setup and test the circuits.																
	CO4	4. To develop skills of analyzing test results of given experiments.																
	CO5																	

Class	S.Y.B.Sc.(Computer Science)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	EN 221		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	English	CO1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1
Semester No	2	CO2	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1
Teacher Name	Tejal Sonawane	CO3															
Course Outcomes		CO4															
	CO1	To expose students to the best examples of prose and poetry in English so that they realize the beauty and communicative power of English.	CO5														
	CO2	To enhance employability of the students by developing their linguistic competence and communicative skills.	Average	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	CO3																	
	CO4																	
	CO5																	

Academic Year :	2018-19

Class	TYBSC(CS)
Subject Code	CS 331
Subject Name	SYSTEM PROGRAMMING
Semester No	3
Teacher Name	SHEETAL AWATE
Course Outcomes	
CO1	To understand the design structure of a simple editor
CO2	To understand the design structure of Assembler and macro processor for an hypothetical simulated computer.
CO3	To understand the working of linkers and loaders and other development utilities
CO4	To understand Complexity of Operating system as a software.
CO5	

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	3	3	2	0	0	0	0	0	1	1	1	3	2
CO2	2	2	3	3	3	0	0	0	0	0	0	0	1	3	3
CO3	2	3	2	2	2	0	1	1	1	1	0	0	2	3	3
CO4	3	3	3	2	2	0	1	1	0	0	1	0	3	2	3
CO5															
Average	2.50	2.50	2.75	2.50	2.25	0.00	0.50	0.50	0.25	0.25	0.50	0.25	1.75	2.75	2.75

Class	TYBSC(CS)
Subject Code	CS 332
Subject Name	THEORETICAL COMPUTER SCIENCE
Semester No	3
Teacher Name	RAHUL GHODKE
Course Outcomes	

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	2	2	3	1	0	0	0	1	0	0	2	2	1
CO2	2	1	2	3	2	1	0	0	0	0	0	0	1	1	1
CO3	2	2	1	2	2	1	0	0	0	1	0	0	2	2	2
CO4	2	2	3	3	3	2	0	0	0	1	0	0	3	3	2

	CO1	To have an understanding of finite state and pushdown automata.	CO5													
	CO2	To have a knowledge of regular languages and context free languages.	Average	1.75	1.75	2.00	2.50	2.50	1.25	0.00	0.00	0.00	0.75	0.00	0.00	2.00	2.00	1.50
	CO3	To know the relation between regular language, context free language and corresponding recognizers.														
	CO4	To study the Turing machine and classes of problems.														
	CO5															

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 333		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	COMPUTER NETWORKS - I	CO1	3	1	2	2	2	0	0	0	0	0	1	0	2	1	2
Semester No	3	CO2	2	2	3	2	2	1	0	0	0	0	0	0	1	0	2
Teacher Name	KULSUM SAYYED	CO3	3	1	2	1	1	0	0	0	0	0	1	0	1	2	3
Course Outcomes		CO4	2	1	3	1	1	0	0	0	0	0	0	0	1	0	2
	CO1	Understand different types of networks, various topologies and application of networks.	CO5														
	CO2	Understand types of addresses, data communication.	Average	2.50	1.25	2.50	1.50	1.50	0.25	0.00	0.00	0.00	0.00	0.50	0.00	1.25	0.75	2.25
	CO3	Understand the concept of networking models, protocols, functionality of each layer.															
	CO4	Learn basic networking hardware and tools.															
	CO5																

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 334		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	INTERNET PROGRAMMING - I	CO1	2	3	3	3	3	1	2	0	0	1	0	0	3	2	2
Semester No	3	CO2	3	2	3	3	2	1	2	0	0	0	0	0	2	2	3

Teacher Name	PRACHI WALUNJKAR	CO3	3	2	2	2	3	1	1	0	1	0	0	0	3	3	3
Course Outcomes		CO4															
	CO1	Learn Core-PHP, Server Side Scripting Language	CO5															
	CO2	Learn PHP-Database handling.	Average	2.67	2.33	2.67	2.67	2.67	1.00	1.67	0.00	0.33	0.33	0.00	0.00	2.67	2.33	2.67
	CO3	Design dynamic and interactive Web pages.																
	CO4																	
	CO5																	

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 335		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	PROGRAMMING IN JAVA- I	CO1	3	3	2	3	3	1	1	0	0	2	0	0	3	2	3
Semester No	3	CO2	2	3	3	2	2	2	0	1	0	1	0	0	3	2	3
Teacher Name	ROOPALI KULKARNI	CO3	2	2	2	3	2	2	1	0	0	0	0	0	3	3	3
Course Outcomes		CO4	3	3	3	3	2	2	0	0	0	1	0	0	3	3	3
	CO1	To learn Object Oriented Programming language	CO5														
	CO2	To handle abnormal termination of a program using exception handling	Average	2.50	2.75	2.50	2.75	2.25	1.75	0.50	0.25	0.00	1.00	0.00	0.00	3.00	2.50	3.00
	CO3	To create flat files															
	CO4	To design User Interface using Swing and AWT															
	CO5																

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 336		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	OBJECT ORIENTED SOFTWARE ENGINEERING	CO1	3	3	2	3	3	1	1	0	1	0	0	0	3	3	3
Semester No	3	CO2	2	3	3	2	2	2	0	1	0	0	1	1	3	2	3
Teacher Name	PRIYANKA KHANDAGALE	CO3	2	2	3	2	3	1	1	0	0	0	0	0	2	3	2
Course Outcomes		CO4	3	3	2	3	3	2	1	0	1	0	0	0	3	2	3

	CO1	Understanding importance of Object Orientation in Software engineering	CO5	3	3	3	2	2	2	0	1	0	0	1	1	3	2	3
	CO2	Understand the components of Unified Modeling Language	Average	2.60	2.80	2.60	2.40	2.60	1.60	0.60	0.40	0.40	0.00	0.40	0.40	2.80	2.40	2.80
	CO3	Understand techniques and diagrams related to structural modeling																
	CO4	Understand techniques and diagrams related to behavioral modeling																
	CO5	Understand techniques of Object Oriented analysis, design and testing																

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 341		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	OPERATING SYSTEM	CO1	3	2	3	3	3	0	0	0	0	0	0	0	2	3	3
Semester No	4	CO2	2	3	2	2	2	0	1	1	1	1	0	0	2	3	3
Teacher Name	SHEETAL AWATE	CO3	3	3	3	2	3	0	1	1	2	2	1	0	3	2	3
Course Outcomes		CO4															
		CO5															
		Average	2.67	2.67	2.67	2.33	2.67	0.00	0.67	0.67	1.00	1.00	0.33	0.00	2.33	2.67	3.00

	CO1	To understand design issues related to process management and various related algorithms
	CO2	To understand design issues related to memory management and various related algorithms
	CO3	To understand design issues related to File management and various related algorithms
	CO4	
	CO5	

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 342		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	COMPLIER CONSTRUCTION	CO1	2	2	2	3	2	1	0	0	0	1	0	0	2	2	2
Semester No	4	CO2	2	1	2	2	3	2	0	0	0	0	0	0	2	1	1

Teacher Name	RAHUL GHODKE		CO3	3	2	1	3	3	1	0	0	0	2	0	0	3	2	3
Course Outcomes			CO4	3	2	3	3	2	2	0	0	0	2	0	0	3	3	3
	CO1	To understand design issues of a lexical analyzer and use of Lex tool	CO5															
	CO2	To understand design issues of a parser and use of Yacc tool	Average	2.50	1.75	2.00	2.75	2.50	1.50	0.00	0.00	0.00	1.25	0.00	0.00	2.50	2.00	2.25
	CO3	To understand issues related to memory allocation																
	CO4	To understand and design code generation schemes																
	CO5																	

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 343		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	COMPUTER NETWORKS - II	CO1	3	1	2	2	2	0	0	0	0	0	1	0	2	1	2
Semester No	4	CO2	2	2	3	1	1	0	0	0	0	0	0	0	1	2	2
Teacher Name	KULSUM SAYYED	CO3	3	1	2	2	1	0	0	0	0	0	1	0	1	2	3
Course Outcomes		CO4															
	CO1	Understand Basic networking concepts.	CO5														
	CO2	Understand wired and wireless networks, its types, functionality of layer.	Average	2.67	1.33	2.33	1.67	1.33	0.00	0.00	0.00	0.00	0.00	0.67	0.00	1.33	1.67	2.33
	CO3	Understand importance of network security and cryptography.															
	CO4																
	CO5																

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 344		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	INTERNET PROGRAMMING - II	CO1	3	3	2	3	2	2	1	0	0	0	0	0	3	3	2
Semester No	4	CO2	3	2	2	2	2	1	0	0	0	0	0	0	2	2	2

Teacher Name	PRACHI WALUNJKAR	CO3	2	2	2	2	2	1	1	0	1	0	0	0	3	3	3
Course Outcomes		CO4	2	2	1	2	3	2	0	0	0	2	0	0	3	2	3
	CO1 Learn different technologies used at client Side Scripting Language	CO5	3	2	3	3	2	1	0	0	0	2	0	0	3	3	3
	CO2 Learn XML,CSS and XML parsers.	Average	2.60	2.20	2.00	2.40	2.20	1.40	0.40	0.00	0.20	0.80	0.00	0.00	2.80	2.60	2.60
	CO3 One PHP framework for effective design of web application.																
	CO4 Learn JavaScript to program the behavior of web pages.																
	CO5 Learn AJAX to make our application more dynamic.																

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 345		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	PROGRAMMING IN JAVA - II	CO1	3	3	2	3	3	2	1	0	1	2	0	0	3	1	3
Semester No	4	CO2	3	3	3	2	2	3	0	1	0	1	1	1	3	2	3
Teacher Name	ROOPALI KULKARNI	CO3	3	2	3	3	3	2	1	0	0	1	0	0	3	3	3
Course Outcomes		CO4	3	2	3	3	2	3	0	0	0	1	0	0	3	3	3
	CO1 To learn database programming using Java	CO5															
	CO2 To study web development concept using Servlet and JSP	Average	3.00	2.50	2.75	2.75	2.50	2.50	0.50	0.25	0.25	1.25	0.25	0.25	3.00	2.25	3.00
	CO3 To develop a game application using multithreading																
	CO4 To learn socket programming concept																
	CO5																

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 346		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	COMPUTER GRAPHICS	CO1	3	3	2	3	3	2	1	0	1	2	0	0	3	1	3
Semester No	4	CO2	3	2	2	2	2	1	0	0	0	0	0	0	2	2	2
Teacher Name	SHEETAL CHUDHARI	CO3	2	2	2	2	2	1	1	0	1	0	0	0	3	3	3

Course Outcomes			CO4	3	2	3	3	2	3	0	0	0	1	0	0	3	3	3
	CO1	To study how graphics objects are represented in Computer	CO5	3	3	2	3	2	2	1	0	0	0	0	0	3	3	2
	CO2	To study how graphics system in a computer supports presentation of graphics information	Average	2.80	2.40	2.20	2.60	2.20	1.80	0.60	0.00	0.40	0.60	0.00	0.00	2.80	2.40	2.60
	CO3	To study how interaction is handled in a graphics system																
	CO4	To study how to manipulate graphics object by applying different transformations																
	CO5	To provide the programmer's perspective of working of computer graphics																

Class	TYBSC(CS)	Course Outcomes	Program Outcomes												PSOs		
Subject Code	CS 347		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Subject Name	LAB COURSE I SYSTEM PROG.& O.S	CO1	3	2	3	3	3	2	0	0	0	0	1	1	2	3	3
Semester No	4	CO2	3	2	2	2	3	1	0	0	0	0	0	0	3	2	3
Teacher Name	SHEETAL AWATE & REXITA	CO3	2	1	2	3	3	2	1	1	1	1	0	0	2	3	3
Course Outcomes		CO4															
	CO1	Design and implement System programs with minimal features to understand their complexity.	CO5														
	CO2	Design and implement simulations of operating system level procedures.	Average	2.67	1.67	2.33	2.67	3.00	1.67	0.33	0.33	0.33	0.33	0.33	0.33	2.33	2.67	3.00
	CO3	To understand the process of designing and implementing System programs and operating system components.															
	CO4																
	CO5																

Class	TYBSC(CS)
Subject Code	CS 348
Subject Name	LAB COURSE II PROG.IN JAVA I & II & COMP. GRAPHICS
Semester No	4
Teacher Name	ROOPALI KULKARNI & SANA SHAIKH

Course Outcomes		
	CO1	Implement core Java programs to solve simple problems
	CO2	Implement Client and Server end Java programs
	CO3	Understand the process of designing and implementing Core and Advanced Java programs
	CO4	
	CO5	

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	3	2	1	0	1	0	0	0	3	3	3
CO2	3	2	3	3	2	3	0	0	0	1	0	0	3	3	3
CO3	3	3	2	3	3	3	1	0	0	0	0	0	3	3	2
CO4															
CO5															
Average	3.00	2.67	2.67	2.67	2.67	2.67	0.67	0.00	0.33	0.33	0.00	0.00	3.00	3.00	2.67

Class	TYBSC(CS)
Subject Code	CS 349
Subject Name	LAB COURSE III INTERNET PROG.III & PROJECT
Semester No	4
Teacher Name	RAHUL GHODKE & PRACHI WALUNJKAR

Course Outcomes		
	CO1	Implement Simple PHP programs to solve simple problems
	CO2	To understand the process of designing Web applications, using PHP.
	CO3	To understand the process of implementing Web applications, using PHP.
	CO4	
	CO5	

Course Outcomes	Program Outcomes												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	2	3	3	1	1	1	1	0	0	0	2	2	3
CO2	2	2	3	3	2	1	0	0	0	0	0	0	3	2	3
CO3	3	3	2	3	3	1	1	0	1	0	0	0	3	1	3
CO4															
CO5															
Average	2.67	2.33	2.33	3.00	2.67	1.00	0.67	0.33	0.67	0.00	0.00	0.00	2.67	1.67	3.00

	CO4	
	CO5	

CO-PO Mapping

			Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
		1	CS 101	2.80	3.00	3.00	2.80	2.40	1.20	2.20	1.80	1.60	2.00	1.80	1.60
		2	CS 102	2.40	2.40	2.40	2.20	2.40	1.40	1.40	1.20	1.40	1.60	1.60	1.40
		3	CS 103	2.75	2.00	2.25	2.50	2.25	0.75	2.00	2.25	2.25	2.25	2.00	2.50
		4	#REF!	2.50	2.75	2.50	2.75	2.25	0.75	2.00	1.75	1.50	1.25	1.00	1.00
		5	MTC 101	2.20	2.20	1.80	2.20	2.00	0.40	2.40	2.60	2.60	3.00	1.40	1.60
		6	MTC 102	1.60	1.60	1.40	2.00	1.60	0.20	1.00	2.00	2.20	2.60	1.20	1.20
		7	MTC 103	2.50	2.75	2.75	2.50	2.25	1.75	1.75	2.75	2.75	3.00	1.25	1.25
		8	ELC 101	1.80	2.20	2.00	2.40	2.20	0.40	0.40	0.60	0.40	1.20	3.00	3.00
		9	ELC 102	1.25	1.75	1.50	2.00	2.00	0.25	0.00	0.75	0.50	1.25	3.00	3.00
		10	ELC 103	2.00	2.50	2.25	2.25	2.00	0.25	0.50	1.50	1.75	1.00	3.00	3.00
		11	CSST 101	1.40	2.00	1.80	2.00	2.20	0.20	3.00	2.80	3.00	2.00	0.80	0.80
		12	CSST 102	1.60	2.40	2.40	1.80	2.20	0.00	2.80	3.00	2.80	1.60	0.40	0.00
FY	FY	13	CSST 103	1.60	2.20	2.20	2.00	2.20	0.00	2.80	2.40	3.00	2.00	1.20	1.20
		1	CS- 211	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	2.00	2.00	1.00	1.00
		2	CS 212	2.60	2.00	2.00	1.80	2.40	0.00	1.00	0.00	0.80	1.00	0.40	0.40
		3	MTC: 211	2.25	2.00	1.50	2.50	2.00	0.25	2.50	2.50	2.50	3.00	1.50	1.75
		4	MTC: 212	1.67	1.67	1.33	1.00	0.33	0.33	1.33	1.67	3.00	3.00	0.00	0.00
		5	ELC 211	2.00	1.75	1.75	2.00	1.75	0.00	1.50	2.00	2.00	2.25	3.00	3.00
		6	ELC 212	2.20	1.60	1.80	1.80	1.80	0.00	1.60	2.00	2.00	2.00	3.00	3.00
		7	En 211	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00
		8	CS 221	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	2.00	2.00	1.00	1.00
		9	CS - 222	2.60	2.00	2.00	1.80	2.40	1.00	1.00	0.00	0.80	1.00	0.40	0.40
		10	CS-223	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	2.00	2.00	1.00	1.00
		11	CS-224	2.00	2.00	2.00	1.60	2.60	0.00	1.00	0.00	0.40	1.00	0.00	0.00
SY		12	MTC:221	1.40	1.20	1.60	1.40	2.00	0.00	1.40	1.60	2.20	2.20	0.40	0.20
		13	MTC:222	1.25	1.25	1.50	1.00	1.25	0.00	1.50	1.25	3.00	2.50	0.75	0.50
		14	MTC:223	0.60	0.20	0.60	0.80	1.00	0.00	2.00	1.80	2.20	2.00	0.40	0.20
		15	ELC 221	2.25	2.25	2.00	2.50	1.75	0.00	0.75	2.25	2.00	2.25	3.00	3.00
		16	ELC 222	2.25	2.25	2.00	2.50	1.75	0.00	0.75	2.25	2.00	2.25	3.00	3.00
		17	ELC-223	2.00	1.75	1.75	2.00	1.75	0.00	1.50	2.25	2.00	2.25	3.00	3.00
	SY	18	EN 221	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00
		1	CS 331	2.50	2.50	2.75	2.50	2.25	0.00	0.50	0.50	0.25	0.25	0.50	0.25
		2	CS 332	1.75	1.75	2.00	2.50	2.50	1.25	0.00	0.00	0.00	0.75	0.00	0.00
		3	CS 333	2.50	1.25	2.50	1.50	1.50	0.25	0.00	0.00	0.00	0.00	0.50	0.00
		4	CS 334	2.67	2.33	2.67	2.67	2.67	1.00	1.67	0.00	0.33	0.33	0.00	0.00
		5	CS 335	2.50	2.75	2.50	2.75	2.25	1.75	0.50	0.25	0.00	1.00	0.00	0.00
		6	CS 336	2.60	2.80	2.60	2.40	2.60	1.60	0.60	0.40	0.40	0.00	0.40	0.40
		7	CS 341	2.67	2.67	2.67	2.33	2.67	0.00	0.67	0.67	1.00	1.00	0.33	0.00
		8	CS 342	2.50	1.75	2.00	2.75	2.50	1.50	0.00	0.00	0.00	1.25	0.00	0.00

		9	CS 343	2.67	1.33	2.33	1.67	1.33	0.00	0.00	0.00	0.00	0.00	0.67	0.00
		10	CS 344	2.60	2.20	2.00	2.40	2.20	1.40	0.40	0.00	0.20	0.80	0.00	0.00
		11	CS 345	3.00	2.50	2.75	2.75	2.50	2.50	0.50	0.25	0.25	1.25	0.25	0.25
		12	CS 346	2.80	2.40	2.20	2.60	2.20	1.80	0.60	0.00	0.40	0.60	0.00	0.00
		13	CS 347	2.67	1.67	2.33	2.67	3.00	1.67	0.33	0.33	0.33	0.33	0.33	0.33
		14	CS 348	3.00	2.67	2.67	2.67	2.67	2.67	0.67	0.00	0.33	0.33	0.00	0.00
TY	TY	15	CS 349	2.67	2.33	2.33	3.00	2.67	1.00	0.67	0.33	0.67	0.00	0.00	0.00

CO-PO ATTAINMENT

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
0.56	0.6	0.6	0.56	0.48	0.24	0.44	0.36	0.32	0.4	0.36	0.32
0.48	0.48	0.48	0.44	0.48	0.28	0.28	0.24	0.28	0.32	0.32	0.28
2.75	2	2.25	2.5	2.25	0.75	2	2.25	2.25	2.25	2	2.5
0.5	0.55	0.5	0.55	0.45	0.15	0.4	0.35	0.3	0.25	0.2	0.2
1.144	1.144	0.936	1.144	1.04	0.208	1.248	1.352	1.352	1.56	0.728	0.832
1.088	1.088	0.952	1.36	1.088	0.136	0.68	1.36	1.496	1.768	0.816	0.816
1.3	1.43	1.43	1.3	1.17	0.91	0.91	1.43	1.43	1.56	0.65	0.65
0.744	0.909333	0.826667	0.992	0.909333	0.165333	0.165333	0.248	0.165333	0.496	1.24	1.24
0.25	0.35	0.3	0.4	0.4	0.05	0	0.15	0.1	0.25	0.6	0.6
1.68	2.1	1.89	1.89	1.68	0.21	0.42	1.26	1.47	0.84	2.52	2.52
0.728	1.04	0.936	1.04	1.144	0.104	1.56	1.456	1.56	1.04	0.416	0.416
0.661333	0.992	0.992	0.744	0.909333	0	1.157333	1.24	1.157333	0.661333	0.165333	0
0.832	1.144	1.144	1.04	1.144	0	1.456	1.248	1.56	1.04	0.624	0.624
1.24	1.24	1.24	1.24	1.24	0	0	0	0.826667	0.826667	0.413333	0.413333
1.352	1.04	1.04	0.936	1.248	0	0.52	0	0.416	0.52	0.208	0.208
1.17	1.04	0.78	1.3	1.04	0.13	1.3	1.3	1.3	1.56	0.78	0.91
0.866667	0.866667	0.693333	0.52	0.173333	0.173333	0.693333	0.866667	1.56	1.56	0	0
1.04	0.91	0.91	1.04	0.91	0	0.78	1.04	1.04	1.17	1.56	1.56
0.909333	0.661333	0.744	0.744	0.744	0	0.661333	0.826667	0.826667	0.826667	1.24	1.24
0.52	0.52	0.52	0.52	0.52	1.56	0.52	0.52	0.52	0.52	0.52	0.52
1.56	1.56	1.56	1.56	1.56	0	0	0	1.04	1.04	0.52	0.52
1.352	1.04	1.04	0.936	1.248	0.52	0.52	0	0.416	0.52	0.208	0.208
1.56	1.56	1.56	1.56	1.56	0	0	0	1.04	1.04	0.52	0.52
0.4	0.4	0.4	0.32	0.52	0	0.2	0	0.08	0.2	0	0
0.578667	0.496	0.661333	0.578666667	0.826667	0	0.578667	0.661333	0.909333	0.909333	0.165333	0.082667
0.25	0.25	0.3	0.2	0.25	0	0.3	0.25	0.6	0.5	0.15	0.1
0.312	0.104	0.312	0.416	0.52	0	1.04	0.936	1.144	1.04	0.208	0.104
0.45	0.45	0.4	0.5	0.35	0	0.15	0.45	0.4	0.45	0.6	0.6
0.69	0.69	0.613333	0.766666667	0.536667	0	0.23	0.69	0.613333	0.69	0.92	0.92
2	1.75	1.75	2	1.75	0	1.5	2.25	2	2.25	3	3
0.413333	0.413333	0.413333	0.413333333	0.413333	1.24	0.413333	0.413333	0.413333	0.413333	0.413333	0.413333
1.3	1.3	1.43	1.3	1.17	0	0.26	0.26	0.13	0.13	0.26	0.13
0.35	0.35	0.4	0.5	0.5	0.25	0	0	0	0.15	0	0
1.033333	0.516667	1.033333	0.62	0.62	0.103333	0	0	0	0	0.206667	0
1.386667	1.213333	1.386667	1.386666667	1.386667	0.52	0.866667	0	0.173333	0.173333	0	0
1.033333	1.136667	1.033333	1.136666667	0.93	0.723333	0.206667	0.103333	0	0.413333	0	0
0.52	0.56	0.52	0.48	0.52	0.32	0.12	0.08	0.08	0	0.08	0.08
1.102222	1.102222	1.102222	0.964444444	1.102222	0	0.275556	0.275556	0.413333	0.413333	0.137778	0

1.3	0.91	1.04	1.43	1.3	0.78	0	0	0	0.65	0	0
1.813333	0.906667	1.586667	1.133333333	0.906667	0	0	0	0	0	0.453333	0
2.184	1.848	1.68	2.016	1.848	1.176	0.336	0	0.168	0.672	0	0
2.52	2.1	2.31	2.31	2.1	2.1	0.42	0.21	0.21	1.05	0.21	0.21
1.456	1.248	1.144	1.352	1.144	0.936	0.312	0	0.208	0.312	0	0
1.813333	1.133333	1.586667	1.813333333	2.04	1.133333	0.226667	0.226667	0.226667	0.226667	0.226667	0.226667
2.52	2.24	2.24	2.24	2.24	2.24	0.56	0	0.28	0.28	0	0
2.24	1.96	1.96	2.52	2.24	0.84	0.56	0.28	0.56	0	0	0

Percentage CO-PO ATTAINMENT

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
0.112	0.12	0.12	0.112	0.096	0.048	0.088	0.072	0.064	0.08	0.072	0.064
0.096	0.096	0.096	0.088	0.096	0.056	0.056	0.048	0.056	0.064	0.064	0.056
2.75	2	2.25	2.5	2.25	0.75	2	2.25	2.25	2.25	2	2.5
0.1	0.11	0.1	0.11	0.09	0.03	0.08	0.07	0.06	0.05	0.04	0.04
0.59488	0.59488	0.48672	0.59488	0.5408	0.10816	0.64896	0.70304	0.70304	0.8112	0.37856	0.43264
0.73984	0.73984	0.64736	0.9248	0.73984	0.09248	0.4624	0.9248	1.01728	1.20224	0.55488	0.55488
0.676	0.7436	0.7436	0.676	0.6084	0.4732	0.4732	0.7436	0.7436	0.8112	0.338	0.338
0.30752	0.375858	0.341689	0.410026667	0.375858	0.068338	0.068338	0.102507	0.068338	0.205013	0.512533	0.512533
0.05	0.07	0.06	0.08	0.08	0.01	0	0.03	0.02	0.05	0.12	0.12
1.4112	1.764	1.5876	1.5876	1.4112	0.1764	0.3528	1.0584	1.2348	0.7056	2.1168	2.1168
0.37856	0.5408	0.48672	0.5408	0.59488	0.05408	0.8112	0.75712	0.8112	0.5408	0.21632	0.21632
0.273351	0.410027	0.410027	0.30752	0.375858	0	0.478364	0.512533	0.478364	0.273351	0.068338	0
0.43264	0.59488	0.59488	0.5408	0.59488	0	0.75712	0.64896	0.8112	0.5408	0.32448	0.32448
0.512533	0.512533	0.512533	0.512533333	0.512533	0	0	0	0.341689	0.341689	0.170844	0.170844
0.70304	0.5408	0.5408	0.48672	0.64896	0	0.2704	0	0.21632	0.2704	0.10816	0.10816
0.6084	0.5408	0.4056	0.676	0.5408	0.0676	0.676	0.676	0.676	0.8112	0.4056	0.4732
0.450667	0.450667	0.360533	0.2704	0.090133	0.090133	0.360533	0.450667	0.8112	0.8112	0	0
0.5408	0.4732	0.4732	0.5408	0.4732	0	0.4056	0.5408	0.5408	0.6084	0.8112	0.8112
0.375858	0.273351	0.30752	0.30752	0.30752	0	0.273351	0.341689	0.341689	0.341689	0.512533	0.512533
0.2704	0.2704	0.2704	0.2704	0.2704	0.8112	0.2704	0.2704	0.2704	0.2704	0.2704	0.2704
0.8112	0.8112	0.8112	0.8112	0.8112	0	0	0	0.5408	0.5408	0.2704	0.2704
0.70304	0.5408	0.5408	0.48672	0.64896	0.2704	0.2704	0	0.21632	0.2704	0.10816	0.10816
0.8112	0.8112	0.8112	0.8112	0.8112	0	0	0	0.5408	0.5408	0.2704	0.2704
0.08	0.08	0.08	0.064	0.104	0	0.04	0	0.016	0.04	0	0
0.239182	0.205013	0.273351	0.239182222	0.341689	0	0.239182	0.273351	0.375858	0.375858	0.068338	0.034169
0.05	0.05	0.06	0.04	0.05	0	0.06	0.05	0.12	0.1	0.03	0.02
0.16224	0.05408	0.16224	0.21632	0.2704	0	0.5408	0.48672	0.59488	0.5408	0.10816	0.05408
0.09	0.09	0.08	0.1	0.07	0	0.03	0.09	0.08	0.09	0.12	0.12
0.2116	0.2116	0.188089	0.235111111	0.164578	0	0.070533	0.2116	0.188089	0.2116	0.282133	0.282133
2	1.75	1.75	2	1.75	0	1.5	2.25	2	2.25	3	3
0.170844	0.170844	0.170844	0.170844444	0.170844	0.512533	0.170844	0.170844	0.170844	0.170844	0.170844	0.170844
0.676	0.676	0.7436	0.676	0.6084	0	0.1352	0.1352	0.0676	0.0676	0.1352	0.0676
0.07	0.07	0.08	0.1	0.1	0.05	0	0	0	0.03	0	0
0.427111	0.213556	0.427111	0.256266667	0.256267	0.042711	0	0	0	0	0.085422	0
0.721067	0.630933	0.721067	0.721066667	0.721067	0.2704	0.450667	0	0.090133	0.090133	0	0
0.427111	0.469822	0.427111	0.469822222	0.3844	0.298978	0.085422	0.042711	0	0.170844	0	0
0.104	0.112	0.104	0.096	0.104	0.064	0.024	0.016	0.016	0	0.016	0.016
0.455585	0.455585	0.455585	0.398637037	0.455585	0	0.113896	0.113896	0.170844	0.170844	0.056948	0

0.676	0.4732	0.5408	0.7436	0.676	0.4056	0	0	0	0.338	0	0
1.233067	0.616533	1.078933	0.770666667	0.616533	0	0	0	0	0	0.308267	0
1.83456	1.55232	1.4112	1.69344	1.55232	0.98784	0.28224	0	0.14112	0.56448	0	0
2.1168	1.764	1.9404	1.9404	1.764	1.764	0.3528	0.1764	0.1764	0.882	0.1764	0.1764
0.75712	0.64896	0.59488	0.70304	0.59488	0.48672	0.16224	0	0.10816	0.16224	0	0
1.233067	0.770667	1.078933	1.233066667	1.3872	0.770667	0.154133	0.154133	0.154133	0.154133	0.154133	0.154133
2.1168	1.8816	1.8816	1.8816	1.8816	1.8816	0.4704	0	0.2352	0.2352	0	0
1.8816	1.6464	1.6464	2.1168	1.8816	0.7056	0.4704	0.2352	0.4704	0	0	0

CO-PSO MAPPING

		Course	PSO1	PSO2	PSO3
	1	CS 101	2.40	2.60	2.80
	2	CS 102	2.80	2.60	2.80
	3	CS 103	2.25	2.50	2.75
	4	CS 103	2.75	2.75	3.00
	5	MTC 101	2.20	2.80	2.60
	6	MTC 102	2.20	2.40	2.40
	7	MTC 103	2.25	2.25	2.50
	8	ELC 101	2.20	2.20	2.20
	9	ELC 102	2.75	2.25	2.25
	10	ELC 103	2.25	2.00	2.25
	11	CSST 101	2.00	2.20	2.20
	12	CSST 102	2.20	2.40	2.40
FY	13	CSST 103	2.40	2.60	2.40
	1	CS- 211	3.00	3.00	3.00
	2	CS 212	3.00	3.00	3.00
	3	MTC: 211	2.25	2.75	2.75
	4	MTC: 212	1.33	2.33	2.00
	5	ELC 211	2.00	3.00	3.00
	6	ELC 212	2.00	3.00	3.00
	7	En 211	1.00	1.00	1.00
	8	CS 221	3.00	3.00	3.00
	9	CS - 222	3.00	3.00	3.00
	10	CS-223	3.00	3.00	3.00
	11	CS-224	3.00	3.00	3.00
	12	MTC:221	1.40	2.60	1.40
	13	MTC:222	1.75	2.25	2.25
	14	MTC:223	2.40	2.20	2.60
	15	ELC 221	2.00	3.00	3.00
	16	ELC 222	2.00	3.00	3.00
	17	ELC-223	2.00	3.00	3.00
SY	18	EN 221	1.00	1.00	1.00
	1	CS 331	1.75	2.75	2.75
	2	CS 332	2.00	2.00	1.50
	3	CS 333	1.25	0.75	2.25
	4	CS 334	2.67	2.33	2.67
	5	CS 335	3.00	2.50	3.00
	6	CS 336	2.80	2.40	2.80
	7	CS 341	2.33	2.67	3.00
	8	CS 342	2.50	2.00	2.25
	9	CS 343	1.33	1.67	2.33
	10	CS 344	2.80	2.60	2.60
	11	CS 345	3.00	2.25	3.00

CO-PSO ATTAINMENT

Course	PSO1	PSO2	PSO3
CS 101	0.48	0.52	0.56
CS 102	0.56	0.52	0.56
CS 103	2.25	2.5	2.75
CS 103	0.55	0.55	0.6
MTC 101	1.144	1.456	1.352
MTC 102	1.496	1.632	1.632
MTC 103	1.17	1.17	1.3
ELC 101	0.909333	0.909333	0.909333
ELC 102	0.55	0.45	0.45
ELC 103	1.89	1.68	1.89
CSST 101	1.04	1.144	1.144
CSST 102	0.909333	0.992	0.992
CSST 103	1.248	1.352	1.248
CS- 211	1.24	1.24	1.24
CS 212	1.56	1.56	1.56
MTC: 211	1.17	1.43	1.43
MTC: 212	0.693333	1.213333	1.04
ELC 211	1.04	1.56	1.56
ELC 212	0.826667	1.24	1.24
En 211	0.52	0.52	0.52
CS 221	1.56	1.56	1.56
CS - 222	1.56	1.56	1.56
CS-223	1.56	1.56	1.56
CS-224	0.6	0.6	0.6
MTC:221	0.578667	1.074667	0.578667
MTC:222	0.35	0.45	0.45
MTC:223	1.248	1.144	1.352
ELC 221	0.4	0.6	0.6
ELC 222	0.613333	0.92	0.92
ELC-223	2	3	3
EN 221	0.413333	0.413333	0.413333
CS 331	0.723333	1.136667	1.136667
CS 332	1.04	1.04	0.78
CS 333	0.516667	0.31	0.93
CS 334	0.533333	0.466667	0.533333
CS 335	1.56	1.3	1.56
CS 336	0.56	0.48	0.56
CS 341	0.964444	1.102222	1.24
CS 342	1.3	1.04	1.17
CS 343	0.551111	0.688889	0.964444
CS 344	0.56	0.52	0.52
CS 345	1.24	0.93	1.24

Percentage CO-PSO ATTAINMENT

Course	PSO1	PSO2	PSO3
CS 101	20	20	20
CS 102	20	20	20
CS 103	100	100	100
CS 103	20	20	20
MTC 101	52	52	52
MTC 102	68	68	68
MTC 103	52	52	52
ELC 101	41.33333	41.33333	41.33333
ELC 102	20	20	20
ELC 103	84	84	84
CSST 101	52	52	52
CSST 102	41.33333	41.33333	41.33333
CSST 103	52	52	52
CS- 211	41.33333	41.33333	41.33333
CS 212	52	52	52
MTC: 211	52	52	52
MTC: 212	52	52	52
ELC 211	52	52	52
ELC 212	41.33333	41.33333	41.33333
En 211	52	52	52
CS 221	52	52	52
CS - 222	52	52	52
CS-223	52	52	52
CS-224	20	20	20
MTC:221	41.33333	41.33333	41.33333
MTC:222	20	20	20
MTC:223	52	52	52
ELC 221	20	20	20
ELC 222	30.66667	30.66667	30.66667
ELC-223	100	100	100
EN 221	41.33333	41.33333	41.33333
CS 331	41.33333	41.33333	41.33333
CS 332	52	52	52
CS 333	41.33333	41.33333	41.33333
CS 334	20	20	20
CS 335	52	52	52
CS 336	20	20	20
CS 341	41.33333	41.33333	41.33333
CS 342	52	52	52
CS 343	41.33333	41.33333	41.33333
CS 344	20	20	20
CS 345	41.33333	41.33333	41.33333

	12	CS 346	2.80	2.40	2.60
	13	CS 347	2.33	2.67	3.00
	14	CS 348	3.00	3.00	2.67
TY	15	CS 349	2.67	1.67	3.00

CS 346	1.456	1.248	1.352
CS 347	1.586667	1.813333	2.04
CS 348	2.52	2.52	2.24
CS 349	2.24	1.4	2.52

CS 346	52	52	52
CS 347	68	68	68
CS 348	84	84	84
CS 349	84	84	84