

Academic Year	2020-21
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**B.P.H.E. Society's
Ahmednagar College, Ahmednagar
Internal Quality Assurance Cell
CO, PO, and PSO Attainment Sheet**

Department Name	COMPUTER SCIENCE
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Program Name	BCA(SCIENCE)
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Program Outcomes(PO)

PO1	APPLY COMPUTER LITERACY OF STUDENTS AND BASIC UNDERSTANDING OF OPERATIVE SYSTEMS AND
PO2	UTILIZE KNOWLEDGE OF ORGANIZE INFORMATION EFFICIENTLY IN THE FORMS OF OUTLINES, CHARTS, ETC. BY
PO3	DEVELOP PROGRAMMING SKILLS TO PRESENT IDEAS EFFECTIVELY AND EFFICIENTLY IN ANDROID
PO4	DESIGNING AND DELIVERING AN EFFECTIVE PRESENTATION IN INTERNET OF THINGS(IoT)
PO5	APPLY SYSTEMS ANALYSIS DESIGN PARADIGM TO CRITICALLY ANALYZE A ERRORS RELATED TO SOFTWARE
PO6	SOLVE PROBLEMS(PROGRAMMING NETWORKING DATABASE AND WEB DESIGN) IN INFORMATION TECHNOLOGY
PO7	APPLY PROFESSIONAL BEHAVIOR IN PROFESSIONAL IT ENVIRONMENT RELATED TO EMPLOYABILITY.
PO8	APPLY NETWORKING TECHNOLOGIES IN INTEGRATED IT SYSTEMS IN AN IT ENVIRONMENT.
PO9	SYSTEMS AS WELL AS PROVIDE SUPPORT TO AUTOMATED SYSTEMS OR APPLICATIONS.
PO10	ENTERPRISES.
PO11	
PO12	

Program Specific Outcome(PSO)

PSO1	FUNDAMENTAL KNOWLEDGE OF COMPUTERS, COMPUTER ORGANIZATION AND C PROGRAMMING.
PSO2	SYSTEM.
PSO3	PROGRAMMING AND GO PROGRAMMING

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Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA111		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		FUNDAMENTALS OF COMPUTER	CO1	2	2	1	1	1	1	2	2	2	2	3	3	3
Semester No		I	CO2	3	3	3	2	3	2	3	2	3	2	3	3	3
Teacher Name		Rajpal Karishma	CO3	3	2	3	3	2	3	3	2	3	2	3	3	3
Course Outcomes			CO4	3	3	3	2	2	3	2	2	3	2	3	3	3
	CO1	DEFINE WORKING OF COMPUTERS AND PERIPHERALS, TYPES OF SOFTWARE AND LANGUAGE	CO5													
	CO2	TROUBLESHOOT THE COMPUTER SYSTEMS AND USE UTILITY SOFTWARE	Average	2.75	2.50	2.50	2.00	2.00	2.25	2.50	2.00	2.75	2.00	3.00	3.00	3.00
	CO3	CHOOSE COMMANDS AND FEATURES OF OPERATING SYSTEMS AND APPLICATION SOFTWARE														
	CO4	USE OPEN SOURCE SOFTWARE														
	CO5															

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA112		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		PROGRAMMING	CO1	3	3	3	3	3	3	2	2	3	3	3	3	3
Semester No		I	CO2	2	3	3	3	3	2	3	2	3	3	3	3	3
Teacher Name		Rajpal Karishma	CO3	3	3	3	3	3	3	3	3	3	3	3	3	3
Course Outcomes			CO4	2	2	2	3	3	3	2	2	2	2	3	3	3
	CO1	THEIR CHARACTERISTICS	CO5													
	CO2	DRAW FLOW CHART TO SOLVE A	Average	2.50	2.75	2.75	3.00	3.00	2.75	2.50	2.25	2.75	2.75	3.00	3.00	3.00
	CO3	DATA TYPES, CONTROL														

	CO4	DOWN PROGRAM DESIGN
	CO5	

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA113		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		APPLIED MATHEMATICS	CO1	2	2	2	2	3	3	2	2	2	2	3	3	3
Semester No		I	CO2	2	2	2	2	3	3	2	2	2	2	3	3	3
Name		Namrata Mahankale	CO3	2	2	2	2	3	3	2	2	2	2	3	3	3
Outcomes			CO4	1	1	1	1	3	3	1	1	1	1	0	0	0
	CO1	FOR CONSTRUCTING	CO5	2	2	2	1	1	1	2	2	3	3	0	0	0
	CO2	MODELS TO INTERPRET	Average	1.80	1.80	1.80	1.60	2.60	2.60	1.80	1.80	2.00	2.00	1.80	1.80	1.80
	CO3	TECHNIQUES AND USE PRINCIPLES														
	CO4	STATISTICAL MEASURES OF														
	CO5	TECHNIQUES														

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA114		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		BUSINESS COMMUNICATION	CO1	3	3	2	2	3	2	3	3	3	2	3	3	3
Semester No		I	CO2	2	2	3	3	3	2	3	3	3	2	3	3	3
Name		PORNIMA BEHERE	CO3	2	3	2	3	3	3	2	2	3	3	3	3	3
Outcomes			CO4	3	3	2	3	3	3	2	2	3	3	0	0	0
	CO1	STRATEGIES AND PRINCIPLES TO	CO5													
	CO2	CULTURAL, AND GLOBAL ISSUES	Average	2.50	2.75	2.25	2.75	3.00	2.50	2.50	2.50	3.00	2.50	2.25	2.25	2.25
	CO3	USING COLLABORATIVE WORK														
	CO4	MAIL, INTERNET, AND OTHER														
	CO5	BUSINESS PRESENTATION														

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA115		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		LABORATORY	CO1	3	3	3	3	2	2	2	2	2	2	3	3	3
Semester No		I	CO2	3	3	3	3	3	3	3	3	3	3	3	3	3
Name		Rajpal Karishma	CO3	3	3	3	3	3	3	2	2	2	2	3	3	3
Outcomes			CO4	3	3	3	3	2	2	3	2	3	2	0	0	0
	CO1	EXECUTE VARIOUS COMMANDS	CO5													
	CO2	FEATURES OF APPLICATION	Average	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.25	2.50	2.25	2.25	2.25	2.25
	CO3	EFFECTIVELY														
	CO4	PREPARE EFFECTIVE PRESENTATION														
	CO5															

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA116		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		C PROGRAMMING LABORATORY	CO1	3	3	3	3	2	2	2	2	3	3	3	3	3
Semester No		I	CO2	3	3	3	3	3	3	2	2	2	3	3	3	3
Name			CO3	3	3	3	3	3	3	2	2	2	2	3	3	3
Outcomes			CO4													
	CO1	DRAW FLOWCHAARAT FOR THE	CO5													
	CO2	IN C	Average	3.00	3.00	3.00	3.00	2.67	2.67	2.00	2.00	2.33	2.67	3.00	3.00	3.00
	CO3	APPROPRIATE DATA TYPES AND														
	CO4															
	CO5															

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA117		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		LABORATORY	CO1	2	2	3	3	3	3	2	2	3	3	2	2	2
Semester No		I	CO2	2	2	2	2	2	3	3	3	3	2	2	2	2
Name		Namarata Mahankale	CO3										3	3	3	3
Outcomes			CO4													
	CO1	STATISTICAL CONCEPTS TO SOLVE	CO5													
	CO2	OPERATIONS AND DATA	Average	2.00	2.00	2.50	2.50	2.50	3.00	2.50	2.50	3.00	3.00	2.33	2.33	2.33
	CO3															
	CO4															
	CO5															

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA118		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		LABORATORY	CO1	3	3	3	3	3	2	2	2	2	2	2	2	2
Semester No		I	CO2	2	3	2	3	2	3	2	2	2	2	2	2	2
Name		Tejal Sonawane	CO3	3	2	2	3	2	2	2	2	2	3	3	3	3
Outcomes			CO4	3	2	2	2	3	3	3	3	3	0	0	0	0
	CO1	PUBLIC ANNOUNCEMENTS AND	CO5	3	3	3	3	3	3	3	3	3	0	0	0	0
	CO2	CONVERSATION	Average	2.80	2.60	2.40	2.80	2.60	2.60	2.40	2.40	2.40	1.40	1.40	1.40	1.40
	CO3	ACCURATELY IN ENGLISH														
	CO4	VARIOUS PURPOSES														
	CO5	PREPARE DOCUMENTS USED IN														

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA121		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		COMPUTER ORGANIZATION	CO1	3	2	2	3	2	2	3	3	3	3	2	2	2
Semester No		II	CO2	2	3	2	2	2	2	3	3	3	3	2	2	2
Name		Priyanka Harba	CO3	3	3	3	3	3	3	2	2	2	2	3	3	3
Outcomes			CO4													
	CO1	CIRCUITS	CO5													
	CO2	DESIGN OF SEQUENTIAL CIRCUITS	Average	2.67	2.67	2.33	2.67	2.33	2.33	2.67	2.67	2.67	2.67	2.33	2.33	2.33
	CO3	MEMORY AND TYPES OF I/O														
	CO4															
	CO5															

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA122		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		ADVANCED C PROGRAMMING	CO1	3	3	3	3	2	2	2	3	3	2	3	3	3
Semester No		II	CO2	2	3	3	3	3	3	2	2	2	3	3	3	3
Name		SUVARNA PARDESHI	CO3	3	2	2	3	3	3	2	3	2	3	3	3	3
Outcomes			CO4	3	3	3	3	3	3	3	2	2	3	0	0	0
	CO1	STRUCTURES AND UNIONS	CO5													
	CO2	USE PRE-PROCESSOR DIRECTIVES	Average	2.75	2.75	2.75	3.00	2.75	2.75	2.25	2.50	2.25	2.75	2.25	2.25	2.25
	CO3	LIBRARY FUNCTIONS														
	CO4	OPERATIONS ON FILES														
	CO5															

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA123		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		OPERATING SYSTEMS CONCEPTS	CO1	3	3	3	3	3	2	3	3	2	3	2	2	2
Semester No		II	CO2	2	2	2	2	2	3	3	2	3	2	2	2	2
Name		Avhad Sonali	CO3	3	3	3	3	2	3	3	2	2	3	3	3	3
Outcomes			CO4													
	CO1	OPERATING SYSTEM	CO5													
	CO2	LINUX DOCUMENTATION	Average	2.67	2.67	2.67	2.67	2.33	2.67	3.00	2.33	2.33	2.67	2.33	2.33	2.33
	CO3	WRITE SHELL SCRIPTS														
	CO4															
	CO5															

Class		FYBCA(SCIENCE)	Program Outcomes										PSOs		
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Code	BCA124	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	
Name	DATABASE MANAGEMENT SYSTEM	CO1	3	3	3	3	2	2	2	3	2	3	2	2	2	
Semester No	II	CO2	3	2	2	3	3	3	2	2	3	3	3	3	3	
Name	Ishita Gorwara	CO3	2	3	3	3	3	3	2	2	2	3	3	3	3	
Outcomes		CO4														
	CO1	REQUIREMENTS AND CONVERT THE	CO5													
	CO2	USING SQL	Average	2.67	2.67	2.67	3.00	2.67	2.67	2.00	2.33	2.33	3.00	2.67	2.67	2.67
	CO3	APPROPRIATE NORMAL FORM														
	CO4															
	CO5															

Class	FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code	BCA125	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name	LABORATORY	CO1	3	2	2	2	2	2	2	2	2	2	3	3	3
Semester No	II	CO2	3	3	3	3	3	3	3	3	3	3	3	3	3
Name	SANDHYA HIRE	CO3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outcomes		CO4													
	CO1	COMBINATIONAL CIRCUITS	CO5												
	CO2	SEQUENTIAL CIRCUITS	Average	3.00	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	3.00	3.00	3.00
	CO3	PROBLEMS INTO DIGITAL LOGIC													
	CO4														
	CO5														

Class	FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs			
Code	BCA126	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	
Name	LABORATORY	CO1	3	2	3	3	3	3	3	3	3	3	3	3	3	
Semester No	II	CO2	2	3	2	3	2	3	2	3	2	3	3	3	3	
Teacher Name	GANDHI DARSHANA	CO3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Outcomes		CO4	2	3	2	3	2	3	2	3	2	3	0	0	0	
	CO1	STRUCTURES AND UNIONS	CO5													
	CO2	USE PRE-PROCESSOR DIRECTIVES	Average	2.50	2.75	2.50	3.00	2.50	3.00	2.50	3.00	2.50	3.00	2.25	2.25	2.25
	CO3	LIBRARY FUNCTIONS														
	CO4	OPERATIONS ON FILES														
	CO5															

Class	FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code	BCA127	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3

Name		OPERATING SYSTEMS CONCEPTS	CO1	2	2	2	2	2	2	2	2	2	2	3	3	3
Semester No		II	CO2	3	3	3	3	3	3	3	3	3	3	3	3	3
Name		SONALI AVHAD	CO3	3	2	2	3	2	2	3	2	2	3	3	3	3
Outcomes			CO4													
	CO1	CONFIGURE ENVIROMENT	CO5													
	CO2	USE DOCUMENTATION	Average	2.67	2.33	2.33	2.67	2.33	2.33	2.67	2.33	2.33	2.67	3.00	3.00	3.00
	CO3	NETWORK ENVIRONMENT														
	CO4															
	CO5															

Class		FYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Code		BCA128		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Name		I LABORATORY	CO1	3	3	3	3	3	3	3	3	3	3	3	3	3
Semester No		II	CO2	3	2	3	2	3	2	3	2	3	3	3	3	3
Name		DARSHANA GANDHI	CO3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outcomes			CO4													
	CO1	GIVEN PROBLEM STATEMENT	CO5													
	CO2	QUERIES	Average	3.00	2.67	3.00	2.67	3.00	2.67	3.00	2.67	3.00	3.00	3.00	3.00	3.00
	CO3	QUERIES														
	CO4															
	CO5															

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Class		SYBCA(SCIENCE)	Course Outcome	Program Outcomes										PSOs		
Subject Code		BCA231		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Data Structures	CO1	3	3	3	3	3	3	3	3	3	3	3	3	3
Semester No		III	CO2	3	3	3	3	3	3	3	3	3	3	3	3	3
Teacher Name		Shaikh Shaheen	CO3	2	2	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes			CO4													
	CO1	Apply appropriate data structures for the given problem	CO5													
	CO2	Design an efficient algorithm for the given problem	Average	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
	CO3	Determine the time and space complexity of a given algorithm														
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA232		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Database Management Systems-II	CO1	3	2	2	2	2	2	2	2	2	2	2	2	2
Semester No		III	CO2	3	2	3	3	2	3	3	2	3	2	3	3	3
Teacher Name		Lasgare Priya	CO3	3	2	2	2	2	2	3	2	2	3	2	2	2
Course Outcomes			CO4	3	3	3	3	3	3	3	3	3	3	0	0	0
	CO1	Formulate SQL queries using advanced SQL features.	CO5	2	2	2	2	2	2	2	2	2	2	0	0	0
	CO2	Perform Database operations using PL/PostgreSQL	Average	2.80	2.20	2.40	2.40	2.20	2.40	2.60	2.20	2.40	2.40	1.40	1.40	1.40
	CO3	Compare and contrast different concurrency control and recovery techniques.														
	CO4	Apply mechanisms for database security														
	CO5	Analyze various database system architectures.														

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA233		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Computer Networks	CO1	3	2	3	2	3	2	3	2	3	2	3	3	3
Semester No		III	CO2	3	2	3	3	3	2	2	3	2	3	2	2	2
Teacher Name		NIVEDITA WAGHMARE	CO3	3	2	2	2	3	2	3	2	3	3	3	3	3
Course Outcomes			CO4	3	2	2	2	3	3	2	2	2	3	0	0	0
	CO1	Analyze the requirements for a given organization and select appropriate network architecture, topologies, transmission mediums and technologies	CO5													
	CO2	Analyze data flow between TCP/IP model using Application, Transport and Network Layer Protocols	Average	3.00	2.00	2.50	2.25	3.00	2.25	2.50	2.25	2.50	2.75	2.00	2.00	2.00
	CO3	Illustrate applications of Computer Network														
	CO4	Compare and contrast different routing and switching algorithms														
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA234		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Data Structures Laboratory	CO1	2	2	2	2	2	2	2	2	2	3	2	3	3
Semester No		III	CO2	3	3	3	3	3	3	2	2	2	3	3	3	3
Teacher Name		Shaikhh Shaheen	CO3	3	3	3	3	3	2	2	2	3	2	3	2	2
Course Outcomes			CO4													
	CO1	Apply appropriate data structures for the given problem	CO5													
	CO2	Design an efficient algorithm for the given problem and implement it using C Programming	Average	2.67	2.67	2.67	2.67	2.67	2.33	2.00	2.00	2.33	2.67	2.67	2.67	2.67
	CO3	Determine the time and space complexity of a given algorithm														
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA235		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Database Management Systems-II Laboratory	CO1	2	2	2	3	3	2	2	3	2	3	3	3	2
Semester No		III	CO2	3	3	3	3	2	2	3	2	3	3	2	2	3
Teacher Name		Lasgare Priya	CO3	2	2	2	3	3	3	2	2	2	2	3	3	3
Course Outcomes			CO4													
	CO1	Formulate SQL queries using advanced features	CO5													
	CO2	Write stored procedures, cursors and triggers using PL/Postgre SQL.	Average	2.33	2.33	2.33	3.00	2.67	2.33	2.33	2.33	2.33	2.67	2.67	2.67	2.67
	CO3	Design a database using database normalization technique														
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA236		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Computer Networks and Web Programming Laboratory	CO1	3	3	3	3	2	2	2	2	2	2	3	3	3
Semester No		III	CO2	2	2	2	2	3	2	2	2	2	3	3	2	2
Teacher Name		Avhad Sonali	CO3	3	3	3	3	2	2	3	3	3	3	3	3	3
Course Outcomes			CO4	2	2	2	2	2	3	3	3	3	3	0	0	0
	CO1	Use Networking commands, identify network devices and topology	CO5													
	CO2	Design a website using HTML and CSS.	Average	2.50	2.50	2.50	2.50	2.25	2.25	2.50	2.50	2.50	2.75	2.25	2.00	2.00
	CO3	Write java scripts														
	CO4	Interpret and formulate XML queries														
	CO5															

Class		SYBCA(SCIENCE)		Program Outcomes										PSOs		
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Subject Code		BCA237	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		EVS	CO1	3	3	2	3	3	2	3	2	3	3	2	2	2
Semester No		III	CO2	3	3	3	3	3	2	2	3	2	3	2	3	2
Teacher Name		BAWAKE SAGAR	CO3	3	3	3	3	3	3	3	3	3	3	3	3	3
Course Outcomes			CO4													
	CO1		CO5													
	CO2		Average	3.00	3.00	2.67	3.00	3.00	2.33	2.67	2.67	2.67	3.00	2.33	2.67	2.33
	CO3															
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA238	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		LANGUAGE COMMUNICATION	CO1	3	3	3	3	2	2	2	3	2	3	2	2	2
Semester No		III	CO2	3	3	3	3	3	2	2	3	3	2	3	3	3
Teacher Name		POORNIMA BEHERE	CO3	2	2	2	3	3	2	2	2	2	3	2	2	2
Course Outcomes			CO4													
	CO1		CO5													
	CO2		Average	2.67	2.67	2.67	3.00	2.67	2.00	2.00	2.67	2.33	2.67	2.33	2.33	2.33
	CO3															
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA241	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Object Oriented Programming and C++	CO1	3	3	2	3	3	2	3	2	3	3	2	2	2
Semester No		IV	CO2	3	3	3	3	3	2	2	3	2	3	2	3	2
Teacher Name		Gandhi Darshana	CO3	3	3	3	3	3	3	3	3	3	3	3	3	3

Course Outcomes			CO4													
	CO1	Compare and contrast procedural and object oriented programming	CO5													
	CO2	Apply principles of OOP	Average	3.00	3.00	2.67	3.00	3.00	2.33	2.67	2.67	2.67	3.00	2.33	2.67	2.33
	CO3	Design and develop applications using object oriented programming language C++														
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA242		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Web Technology	CO1	3	3	3	3	2	2	2	3	2	3	2	2	2
Semester No		IV	CO2	3	3	3	3	3	2	2	3	3	2	3	3	3
Teacher Name		SHAKIH SHAHEEN	CO3	2	2	2	3	3	2	2	2	2	3	2	2	2
Course Outcomes			CO4													
	CO1	Develop web based application using suitable client side and server side web technologies.	CO5													
	CO2	Build Dynamic web site using server side PHP Programming and Database connectivity.	Average	2.67	2.67	2.67	3.00	2.67	2.00	2.00	2.67	2.33	2.67	2.33	2.33	2.33
	CO3	Build applications using AJAX and XML														
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA243		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Software Engineering	CO1	3	3	3	3	3	3	2	3	2	3	3	3	3
Semester No		IV	CO2	2	3	3	3	2	3	3	3	3	3	2	2	2
Teacher Name		Ishita Gorwara	CO3	3.00	2.00	3.00	2.00	3.00	1.00	1.00	2.00	2.00	2.00	3.00	3.00	3.00
Course Outcomes			CO4	3.00	3.00	2.00	3.00	3.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00	3.00

	CO1	Compare and contrast various Software Engineering models	CO5	3	3	3	3	3	3	2	2	3	2	3	3	3
	CO2	Decide on appropriate process model for a developing a software project	Average	2.80	2.80	2.80	2.80	2.80	2.40	2.00	2.40	2.40	2.60	2.60	2.60	2.80
	CO3	Classify software applications and Identify unique features of various domains														
	CO4	Prepare System Requirement Specification (SRS) for the given problem														
	CO5	Design and analyze Data Flow diagrams														

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA244		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		C++ Programming Laboratory	CO1	3	2	3	2	3	2	2	1	2	3	3	3	3
Semester No		IV	CO2	3	3	2	3	2	2	3	2	3	2	2	3	3
Teacher Name		Gandhi Darshana	CO3	3.00	2.00	2.00	3.00	2.00	3.00	2.00	3.00	2.00	3.00	3.00	3.00	3.00
Course Outcomes			CO4													
	CO1	Compare and contrast procedural and object oriented programming	CO5													
	CO2	Apply principles of OOP	Average	3.00	2.33	2.33	2.67	2.33	2.33	2.33	2.00	2.33	2.67	2.67	3.00	3.00
	CO3	Design and develop applications using object oriented programming language C++														
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA245		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Web Technology Laboratory	CO1	3	2	3	3	3	3	2	2	2	1	3	3	3
Semester No		IV	CO2	3	3	3	2	2	3	3	3	3	2	3	3	3
Teacher Name		Shaikh Shaheen	CO3	3	3	3	2	3	3	3	3	3	3	3	3	3
Course Outcomes			CO4													

	CO1	Design and implement static and dynamic websites using appropriate client side and server side technologies.	CO5													
	CO2	Build Dynamic web site using PHP Programming and Database connectivity.	Average	3.00	2.67	3.00	2.33	2.67	3.00	2.67	2.67	2.67	2.00	3.00	3.00	3.00
	CO3	Build applications using AJAX and XML and web services.														
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA246		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Python Programming Laboratory	CO1	3	3	2	2	2	3	3	3	3	3	3	3	3
Semester No		IV	CO2	2	2	3	3	3	3	2	2	2	3	3	3	3
Teacher Name			CO3											3	3	3
Course Outcomes			CO4													
	CO1	Write programs using Python programming constructs	CO5													
	CO2	Develop applications using Python programming	Average	2.50	2.50	2.50	2.50	2.50	3.00	2.50	2.50	2.50	3.00	3.00	3.00	3.00
	CO3															
	CO4															
	CO5															

Class		SYBCA(SCIENCE)	Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA247		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		EVS II	CO1	3	3	2	3	3	2	3	2	3	3	2	2	2
Semester No		IV	CO2	3	3	3	3	3	2	2	3	2	3	2	3	2
Teacher Name		BAWAKE SAGAR	CO3	3	3	3	3	3	3	3	3	3	3	3	3	3
Course Outcomes			CO4													
	CO1	Write programs using Python programming constructs	CO5													

	CO2	Develop applications using Python programming	Average	3.00	3.00	2.67	3.00	3.00	2.33	2.67	2.67	2.67	3.00	2.33	2.67	2.33
	CO3															
	CO4															
	CO5															

Class	SYBCA(SCIENCE)		Course Outcomes	Program Outcomes										PSOs		
Subject Code		BCA248		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		LANGUAGE COMMUNICATION II	CO1	3	3	3	3	2	2	2	3	2	3	2	2	2
Semester No		IV	CO2	3	3	3	3	3	2	2	3	3	2	3	3	3
Teacher Name		POORNIMA BEHERE	CO3	2	2	2	3	3	2	2	2	2	3	2	2	2
Course Outcomes			CO4													
	CO1	Write programs using Python programming constructs	CO5													
	CO2	Develop applications using Python programming	Average	2.67	2.67	2.67	3.00	2.67	2.00	2.00	2.67	2.33	2.67	2.33	2.33	2.33
	CO3															
	CO4															
	CO5															

Academic Year :	2020-21
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Class		TYBCA	Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA 351	PO1		PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	
Subject Name	DSE I (Programming in java)	CO1	2	1	2	1	1	2	2	2	1	1	3	3	3	
Semester No	IV	CO2	0	2	1	1	1	1	2	1	2	1	3	3	3	
Teacher Name	SUVARNA PARDESHI	CO3	2	0	2	2	1	1	2	1	1	1	2	2	2	
Course Outcomes		CO4	1	1	0	1	1	2	1	1	1	1	0	0	0	
CO1	Identify classes object, class members and relationship for given problem	CO5	1	1	1	1	1	1	1	1	1	1	0	0	0	
CO2	Design end to end application using object oriented constructs	Average	1.20	1.00	1.20	1.20	1.00	1.40	1.60	1.20	1.20	1.00	1.60	1.60	1.60	
CO3	Apply collection classes for storing java objects															
CO4	Use java API for program development															
CO5	handle abnormal termination of a program using exception handling															

Class		TYBCA	Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA 352	PO1		PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	
Subject Name	DSE-II Data mining and Data science	CO1	2	1	2	1	1	2	2	2	1	1	3	3	3	
Semester No	IV	CO2	0	2	1	1	1	1	2	1	2	1	2	2	2	
Teacher Name		CO3	2	0	2	2	1	1	2	1	1	1	2	2	2	
Course Outcomes		CO4	1	1	0	1	1	2	1	1	1	1	0	0	0	
CO1	Identify the key process of the data mining, data warehousing and knowledge discovery	CO5	1	1	1	1	1	1	1	1	1	1	0	0	0	
CO2	Design data warehouse with dimensional modeling and apply OLAP operations	Average	1.20	1.00	1.20	1.20	1.00	1.40	1.60	1.20	1.20	1.00	1.40	1.40	1.40	
CO3	Identify appropriate data mining algorithms to solve real world problems															
CO4	Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining															
CO5	Choose an appropriate method to perform exploratory analysis.															

Class		TYBCA		Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA-353	PO1	PO2		PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3		
Subject Name	DSE III (Principles of Operating Systems)	CO1	2	2	2	2	2	2	2	2	2	2	3	3	3		
Semester No	V	CO2	3	3	3	3	3	3	3	3	3	3	3	3	3		
Teacher Name	Nivedita Waghmare	CO3	2	2	2	2	2	2	2	2	2	2	2	2	2		
Course Outcomes		CO4	3	3	3	3	3	3	3	3	3	3	0	0	0		
	CO1	Describe algorithms for process, memory and disk scheduling	CO5	2	2	2	2	2	2	2	2	2	0	0	0		
	CO2	Apply technique for inter-process communication and Multithreading	Average	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	1.60	1.60	1.60		
	CO3	Implement concept of critical-section															
	CO4	Compare and contrast deadlock avoidance and prevention															
	CO5	Use functions for file system management															

Class		TYBCA		Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA-354	PO1	PO2		PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3		
Subject Name	Artificial Intelligence	CO1	2	2	2	2	2	2	2	2	2	2	3	3	3		
Semester No	IV	CO2	3	3	3	3	3	3	3	3	3	3	3	3	3		
Teacher Name	Shaikh Shaheen	CO3	3	3	3	3	3	3	3	3	3	3	2	2	2		
Course Outcomes		CO4	2	2	2	3	2	2	2	2	2	2	0	0	0		
	CO1	Apply the suitable algorithms to solve AI problems	CO5														
	CO2	Identify and apply suitable Intelligent agents for various AI applications	Average	2.50	2.50	2.50	2.75	2.50	2.50	2.50	2.50	2.50	2.00	2.00	2.00		
	CO3	Build smart system using different informed search / uninformed search or heuristic approaches															
	CO4	Represent complex problems with expressive language of representation															
	CO5																

Class		TYBCA		Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA-354	PO1	PO2		PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3		
Subject Name	Cloud Computing	CO1	3	3	3	3	3	3	3	3	3	3	3	3	3		
Semester No	IV	CO2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Teacher Name		CO3	3	3	3	3	3	3	3	3	3	3	2	2	2		
Course Outcomes		CO4															

	CO1	Explain the core issues in cloud computing such as security, privacy, and interoperability	CO5													
	CO2	Choose the appropriate technologies, algorithms, and approaches for the given application	Average	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.33	2.33	2.33
	CO3	Compare and contrast various cloud services														
	CO4															
	CO5															

Class		TYBCA	Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA356			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	DSE I Laboratory (Programming in JAVA)		CO1	3	3	3	3	3	3	3	3	3	3	3	3	3
Semester No	V		CO2	2	2	2	2	2	2	2	2	2	2	3	3	3
Teacher Name	Suvarna Pardeshi		CO3	3	3	3	3	3	3	3	3	3	3	2	2	2
Course Outcomes			CO4	3	3	3	3	3	3	3	3	3	3	0	0	0
	CO1	Identify classes, objects, class members and relationships for a given problem	CO5	2	2	2	2	2	2	2	2	2	2	0	0	0
	CO2	Design end to end applications using object oriented constructs.	Average	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	1.60	1.60	1.60
	CO3	Apply collection classes for storing java objects.														
	CO4	Use Java APIs for program development.														
	CO5	Handle abnormal termination of a program using exception handling.														

Class		TYBCA	Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA357			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Laboratory (Data mining)		CO1	2	2	2	2	2	2	2	2	2	2	3	3	3
Semester No	V		CO2	2	2	2	2	2	2	2	2	2	2	2	2	2
Teacher Name			CO3	3	3	3	3	3	3	3	3	3	3	2	2	2
Course Outcomes			CO4													
	CO1	Implement data mining tasks using R	CO5													
	CO2	Use the python packages to carry out data mining tasks	Average	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33
	CO3	Perform data analysis and data visualization using python packages														
	CO4															
	CO5															

Class		TYBCA		Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA 358				PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Implement algorithms for Process scheduling and Memory management			CO1	2	2	2	2	2	2	2	2	2	2	3	3	3
Semester No	V			CO2	2	2	2	2	2	2	2	2	2	2	3	3	3
Teacher Name	Nivedita Waghmare			CO3	2	2	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes				CO4	2	2	2	2	2	2	2	2	2	2	0	0	0
	CO1	Implement algorithms for Process scheduling and Memory management		CO5	2	2	2	2	2	2	2	2	2	2	0	0	0
	CO2	Describe process synchronization and multithreading		Average	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.60	1.60	1.60
	CO3	Compare and contrast the algorithms for memory management and its allocation policies															
	CO4	Use searching algorithms															
	CO5	Design a simple Expert system															

Class		TYBCA		Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA-361				PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Android Programming			CO1	3	3	3	3	3	3	3	3	3	3	3	3	3
Semester No	VI			CO2	2	2	2	2	2	2	2	2	2	2	2	2	2
Teacher Name	Sonali Avhad			CO3	3	3	3	3	3	3	3	3	3	2	2	2	
Course Outcomes				CO4	3	3	3	3	3	3	3	3	3	3	0	0	0
	CO1	Describe the process of developing mobile applications.		CO5													
	CO2	Create mobile applications on the Android Platform		Average	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	1.75	1.75	1.75	
	CO3	Design and implement mobile applications involving data storage in SQLite database															
	CO4	Use location-based services while developing applications															
	CO5																

Class		TYBCA		Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA-362				PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Programming in Go			CO1	3	2	3	2	3	2	3	2	3	3	3	3	
Semester No	VI			CO2	2	3	2	3	2	3	2	3	3	3	3	3	
Teacher Name	Suvarna Pardeshi			CO3	3	2	3	2	3	2	3	2	3	2	2	2	
Course Outcomes				CO4	2	3	2	3	2	3	2	3	2	3	0	0	0

CO1	Describe the core features and concepts in Go	CO5	3	2	3	2	3	2	3	2	3	2	3	2	0	0	0
CO2	Write simple Go programs using functions	Average	2.60	2.40	2.60	2.40	2.60	2.40	2.60	2.40	2.60	2.40	2.60	2.40	1.60	1.60	1.60
CO3	Apply defining methods and Go Interfaces																
CO4	Use Go routines and Channels																
CO5	Explore Go Packages																

Class	TYBCA	Course Outcomes	Program Outcomes										PSOs			
Subject Code	BCA-363		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	
Subject Name	Software Project Management	CO1	3	2	3	2	3	2	3	2	3	2	3	3	3	3
Semester No	VI	CO2	2	3	2	3	2	3	2	3	2	3	3	3	3	
Teacher Name	Karishma Rajpal	CO3	3	2	3	2	3	2	3	2	3	2	2	2	2	
Course Outcomes		CO4	2	3	2	3	2	3	2	3	2	3	0	0	0	
CO1	Comprehend Software Project Management Concepts	CO5	3	2	3	2	3	2	3	2	3	2	0	0	0	
CO2	Use various tools for Software Project Management Schedule various activities in software projects	Average	2.60	2.40	2.60	2.40	2.60	2.40	2.60	2.40	2.60	2.40	1.60	1.60	1.60	
CO3	Track a project and manage changes															
CO4	Apply Agile Project Management concepts															
CO5	Analyze staffing process for team building and decision making															

Class	TYBCA	Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA-364		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Management Information System	CO1	2	3	2	3	2	3	3	2	3		3	3	3
Semester No	VI	CO2	2	3	2	2	3	2	2	3	2		3	3	3
Teacher Name	Nivedita Waghmare	CO3	2	3	2	3	2	3	3	2	3		2	2	2
Course Outcomes		CO4	2	3	2	2	3	2	2	3	2		0	0	0
CO1	Describe MIS, BPR, EMS	CO5	2	3	3	3	2	3	3	2	3		0	0	0
CO2	Compare MIS with BPR, DSS and EMS	Average	2.00	3.00	2.20	2.60	2.40	2.60	2.60	2.40	2.60	#DIV/0!	1.60	1.60	1.60
CO3	Identify various ERP modules for a given application														
CO4	List the applications of MIS in Manufacturing and service sectors														
CO5															

Class	TYBCA	Course	Program Outcomes										PSOs		
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Subject Code	BCA-365	Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Internet of Things (IoT)	CO1	2	2	2	2	2	2	2	2	2	2	3	3	3
Semester No	VI	CO2	2	2	2	2	2	2	2	2	2	2	2	2	2
Teacher Name	Shaikh Shaheen	CO3	2	3	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes		CO4	2	2	2	2	2	2	2	2	2	2	0	0	0
	CO1	Define Embedded Systems and the Internet of Things	CO5	2	3	3	3	3	3	3	3	3	0	0	0
	CO2	Apply enabling technologies for developing IoT systems	Average	2.00	2.40	2.20	2.20	2.20	2.20	2.20	2.20	2.20	1.40	1.40	1.40
	CO3	Design simple IoT applications													
	CO4	Analyze protocols for communication among IoT devices													
	CO5	Describe cloud-based IoT systems													

Class	TYBCA	Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA-366		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Laboratory (Android Programming)	CO1	3	3	3	3	3	3	3	3	3	3	3	3	3
Semester No	VI	CO2	3	3	3	3	3	3	3	3	3	3	2	2	2
Teacher Name	Sonali Avhad	CO3	2	2	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes		CO4	3	3	3	3	3	3	3	3	3	3	0	0	0
	CO1	Describe the process of developing mobile applications	CO5												
	CO2	Create mobile applications on the Android Platform	Average	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	1.75	1.75	1.75
	CO3	Design and implement mobile applications involving data storage in SQLite database													
	CO4	Use location-based services while developing applications													
	CO5														

Class	TYBCA	Course Outcomes	Program Outcomes										PSOs		
Subject Code	BCA-367		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Laboratory (Programming in GO and IoT)	CO1	2	2	2	2	2	2	2	2	2	2	3	3	3
Semester No	VI	CO2	3	3	3	3	3	3	3	3	3	3	3	3	3
Teacher Name	Suvarna Pardeshi	CO3	2	2	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes		CO4	3	3	3	3	3	3	3	3	3	3	0	0	0
	CO1	Write programs using features supported in GO	CO5	2	2	2	2	2	2	2	2	2	0	0	0
	CO2	Handle errors and utilize Goroutines and Channels	Average	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	1.60	1.60	1.60

	CO3	Write programs on File handling
	CO4	Compare and contrast features of GO with other object oriented language
	CO5	Design Simple IoT application

Class		TYBCA	Course Outcomes	Program Outcomes										PSOs			
Subject Code	Subject Name	Semester No		Teacher Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
BCA-368	Project Laboratory	VI	Nivedita Waghmare	CO1	2	2	2	2	2	2	2	2	2	2	3	3	3
				CO2	3	3	3	3	3	3	3	3	3	2	2	2	
				CO3	2	2	2	2	2	2	2	2	2	2	2	2	2
				CO4													
	CO1	Demonstrate a sound technical knowledge of selected project topic	CO5														
	CO2	Apply techniques for project management	Average		2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33
	CO3	Create various documents used during the development of the project and a project report															
	CO4																
	CO5																

CO-PO Mapping

		Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
		1 BCA111	2.75	2.50	2.50	2.00	2.00	2.25	2.50	2.00	2.75	2.00
		2 BCA112	2.50	2.75	2.75	3.00	3.00	2.75	2.50	2.25	2.75	2.75
		3 BCA113	1.80	1.80	1.80	1.60	2.60	2.60	1.80	1.80	2.00	2.00
		4 BCA114	2.50	2.75	2.25	2.75	3.00	2.50	2.50	2.50	3.00	2.50
		5 BCA115	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.25	2.50	2.25
		6 BCA116	3.00	3.00	3.00	3.00	2.67	2.67	2.00	2.00	2.33	2.67
		7 BCA117	2.00	2.00	2.50	2.50	2.50	3.00	2.50	2.50	3.00	3.00
		8 BCA118	2.80	2.60	2.40	2.80	2.60	2.60	2.40	2.40	2.40	2.40
		9 BCA121	2.67	2.67	2.33	2.67	2.33	2.33	2.67	2.67	2.67	2.67
		10 BCA122	2.75	2.75	2.75	3.00	2.75	2.75	2.25	2.50	2.25	2.75
		11 BCA123	2.67	2.67	2.67	2.67	2.33	2.67	3.00	2.33	2.33	2.67
		12 BCA124	2.67	2.67	2.67	3.00	2.67	2.67	2.00	2.33	2.33	3.00
		13 BCA125	3.00	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
		14 BCA126	2.50	2.75	2.50	3.00	2.50	3.00	2.50	3.00	2.50	3.00
		15 FYBCA(SCIENCE	2.75	2.50	2.50	2.00	2.00	2.25	2.50	2.00	2.75	2.00
FY	FY	16 0	2.50	2.75	2.75	3.00	3.00	2.75	2.50	2.25	2.75	2.75
		1 Data Structures	1.80	1.80	1.80	1.60	2.60	2.60	1.80	1.80	2.00	2.00
		2 Database Mana	2.50	2.75	2.25	2.75	3.00	2.50	2.50	2.50	3.00	2.50
		3 Computer Netw	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.25	2.50	2.25
		4 Data Structures	3.00	3.00	3.00	3.00	2.67	2.67	2.00	2.00	2.33	2.67
		5 Database Mana	2.00	2.00	2.50	2.50	2.50	3.00	2.50	2.50	3.00	3.00
		6 Computer Netw	2.80	2.60	2.40	2.80	2.60	2.60	2.40	2.40	2.40	2.40
		7 EVS	2.67	2.67	2.33	2.67	2.33	2.33	2.67	2.67	2.67	2.67
		8 SYBCA(SCIENCE	2.75	2.75	2.75	3.00	2.75	2.75	2.25	2.50	2.25	2.75
		9 BCA241	2.67	2.67	2.67	2.67	2.33	2.67	3.00	2.33	2.33	2.67
		10 BCA242	2.67	2.67	2.67	3.00	2.67	2.67	2.00	2.33	2.33	3.00
		11 0	3.00	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
		12 0	2.50	2.75	2.50	3.00	2.50	3.00	2.50	3.00	2.50	3.00
		13 BCA245	3.00	2.67	3.00	2.33	2.67	3.00	2.67	2.67	2.67	2.00
		14 Python Program	2.75	2.50	2.50	2.00	2.00	2.25	2.50	2.00	2.75	2.00
		15 EVS II	2.50	2.75	2.75	3.00	3.00	2.75	2.50	2.25	2.75	2.75
SY	SY	16 BCA248	1.80	1.80	1.80	1.60	2.60	2.60	1.80	1.80	2.00	2.00
		1 DSE I (Program	2.50	2.75	2.25	2.75	3.00	2.50	2.50	2.50	3.00	2.50
		2 DSE-II Data min	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.25	2.50	2.25
		3 DSE III (Princip	3.00	3.00	3.00	3.00	2.67	2.67	2.00	2.00	2.33	2.67
		4 Artificial Intellig	2.00	2.00	2.50	2.50	2.50	3.00	2.50	2.50	3.00	3.00
		5 Cloud Computin	2.80	2.60	2.40	2.80	2.60	2.60	2.40	2.40	2.40	2.40
		6 DSE I Laborator	2.67	2.67	2.33	2.67	2.33	2.33	2.67	2.67	2.67	2.67
		7 Laboratory (Da	2.75	2.75	2.75	3.00	2.75	2.75	2.25	2.50	2.25	2.75

		8	Implement algo	2.67	2.67	2.67	2.67	2.33	2.67	3.00	2.33	2.33	2.67
		9	Android Progra	2.67	2.67	2.67	3.00	2.67	2.67	2.00	2.33	2.33	3.00
		10	Programming in	3.00	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
		11	Software Projec	2.50	2.75	2.50	3.00	2.50	3.00	2.50	3.00	2.50	3.00
		12	Management In	2.67	2.67	2.67	2.67	2.33	2.67	3.00	2.33	2.33	2.67
		13	Internet of Thir	2.67	2.67	2.67	3.00	2.67	2.67	2.00	2.33	2.33	3.00
		14	Laboratory (An	3.00	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
		15	Laboratory (Pro	2.50	2.75	2.50	3.00	2.50	3.00	2.50	3.00	2.50	3.00
TY	TY	16	Project Laborat	2.50	2.75	2.50	3.00	2.50	3.00	2.50	3.00	2.50	3.00

CO-PO ATTAINMENT

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
0.843333	0.766667	0.766667	0.613333333	0.613333	0.69	0.766667	0.613333	0.843333	0.613333
1.3	1.43	1.43	1.56	1.56	1.43	1.3	1.17	1.43	1.43
0.936	0.936	0.936	0.832	1.352	1.352	0.936	0.936	1.04	1.04
0.5	0.55	0.45	0.55	0.6	0.5	0.5	0.5	0.6	0.5
2.52	2.52	2.52	2.52	2.1	2.1	2.1	1.89	2.1	1.89
2.2	2.2	2.2	2.2	1.955556	1.955556	1.466667	1.466667	1.711111	1.955556
1.36	1.36	1.7	1.7	1.7	2.04	1.7	1.7	2.04	2.04
2.8	2.6	2.4	2.8	2.6	2.6	2.4	2.4	2.4	2.4
1.386667	1.386667	1.213333	1.386666667	1.213333	1.213333	1.386667	1.386667	1.386667	1.386667
0.55	0.55	0.55	0.6	0.55	0.55	0.45	0.5	0.45	0.55
0.533333	0.533333	0.533333	0.533333333	0.466667	0.533333	0.6	0.466667	0.466667	0.533333
0.533333	0.533333	0.533333	0.6	0.533333	0.533333	0.4	0.466667	0.466667	0.6
1.386667	1.386667	1.386667	1.386666667	1.213333	1.386667	1.56	1.213333	1.213333	1.386667
1.386667	1.386667	1.386667	1.56	1.386667	1.386667	1.04	1.213333	1.213333	1.56
3	2.666667	2.666667	2.666666667	2.666667	2.666667	2.666667	2.666667	2.666667	2.666667
2.5	2.75	2.5	3	2.5	3	2.5	3	2.5	3
0.936	0.936	0.936	0.832	1.352	1.352	0.936	0.936	1.04	1.04
1.3	1.43	1.17	1.43	1.56	1.3	1.3	1.3	1.56	1.3
1.24	1.24	1.24	1.24	1.033333	1.033333	1.033333	0.93	1.033333	0.93
2.52	2.52	2.52	2.52	2.24	2.24	1.68	1.68	1.96	2.24
1.36	1.36	1.7	1.7	1.7	2.04	1.7	1.7	2.04	2.04
2.352	2.184	2.016	2.352	2.184	2.184	2.016	2.016	2.016	2.016
2.24	2.24	1.96	2.24	1.96	1.96	2.24	2.24	2.24	2.24
1.386667	1.386667	1.386667	1.386666667	1.213333	1.386667	1.56	1.213333	1.213333	1.386667
1.386667	1.386667	1.386667	1.56	1.386667	1.386667	1.04	1.213333	1.213333	1.56
3	2.666667	2.666667	2.666666667	2.666667	2.666667	2.666667	2.666667	2.666667	2.666667
2.5	2.75	2.5	3	2.5	3	2.5	3	2.5	3
2.1	2.31	2.1	2.52	2.1	2.52	2.1	2.52	2.1	2.52
1.386667	1.386667	1.386667	1.386666667	1.213333	1.386667	1.56	1.213333	1.213333	1.386667
1.386667	1.386667	1.386667	1.56	1.386667	1.386667	1.04	1.213333	1.213333	1.56
3	2.666667	2.666667	2.666666667	2.666667	2.666667	2.666667	2.666667	2.666667	2.666667
2.5	2.75	2.5	3	2.5	3	2.5	3	2.5	3
1.3	1.43	1.17	1.43	1.56	1.3	1.3	1.3	1.56	1.3
3	3	3	3	2.5	2.5	2.5	2.25	2.5	2.25
2.52	2.52	2.52	2.52	2.24	2.24	1.68	1.68	1.96	2.24
1.04	1.04	1.3	1.3	1.3	1.56	1.3	1.3	1.56	1.56
1.456	1.352	1.248	1.456	1.352	1.352	1.248	1.248	1.248	1.248
1.386667	1.386667	1.213333	1.386666667	1.213333	1.213333	1.386667	1.386667	1.386667	1.386667
1.43	1.43	1.43	1.56	1.43	1.43	1.17	1.3	1.17	1.43

1.386667	1.386667	1.386667	1.386666667	1.213333	1.386667	1.56	1.213333	1.213333	1.386667
1.386667	1.386667	1.386667	1.56	1.386667	1.386667	1.04	1.213333	1.213333	1.56
3	2.666667	2.666667	2.666666667	2.666667	2.666667	2.666667	2.666667	2.666667	2.666667
2.5	2.75	2.5	3	2.5	3	2.5	3	2.5	3
2.666667	2.666667	2.666667	2.666666667	2.333333	2.666667	3	2.333333	2.333333	2.666667
1.386667	1.386667	1.386667	1.386666667	1.213333	1.386667	1.56	1.213333	1.213333	1.386667
1.386667	1.386667	1.386667	1.56	1.386667	1.386667	1.04	1.213333	1.213333	1.56
3	2.666667	2.666667	2.666666667	2.666667	2.666667	2.666667	2.666667	2.666667	2.666667
2.5	2.75	2.5	3	2.5	3	2.5	3	2.5	3

Percentage CO-PO ATTAINMENT

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
30.66667	30.66667	30.66667	30.66666667	30.66667	30.66667	30.66667	30.66667	30.66667	30.66667
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
20	20	20	20	20	20	20	20	20	20
84	84	84	84	84	84	84	84	84	84
73.33333	73.33333	73.33333	73.33333333	73.33333	73.33333	73.33333	73.33333	73.33333	73.33333
68	68	68	68	68	68	68	68	68	68
100	100	100	100	100	100	100	100	100	100
52	52	52	52	52	52	52	52	52	52
20	20	20	20	20	20	20	20	20	20
20	20	20	20	20	20	20	20	20	20
20	20	20	20	20	20	20	20	20	20
46.22222	52	52	52	45.5	52	58.5	45.5	45.5	52
55.46667	50.42424	55.46667	52	55.46667	46.22222	41.6	40.44444	48.53333	52
109.0909	106.6667	106.6667	133.3333333	133.3333	118.5185	106.6667	133.3333	96.9697	133.3333
100	100	90.90909	100	83.33333	109.0909	100	133.3333	90.90909	109.0909
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
41.33333	41.33333	41.33333	41.33333333	41.33333	41.33333	41.33333	41.33333	41.33333	41.33333
84	84	84	84	84	84	84	84	84	84
68	68	68	68	68	68	68	68	68	68
84	84	84	84	84	84	84	84	84	84
84	84	84	84	84	84	84	84	84	84
50.42424	50.42424	50.42424	46.22222222	44.12121	50.42424	69.33333	48.53333	53.92593	50.42424
52	52	52	58.5	59.42857	52	34.66667	52	52	58.5
112.5	100	100	88.88888889	100	100	133.3333	114.2857	114.2857	88.88889
83.33333	103.125	93.75	112.5	93.75	112.5	93.75	112.5	93.75	112.5
84	84	84	84	84	84	84	84	84	84
46.22222	52	46.22222	59.42857143	45.5	46.22222	58.5	45.5	45.5	69.33333
50.42424	55.46667	55.46667	78	69.33333	61.62963	41.6	60.66667	44.12121	78
120	96.9697	96.9697	88.88888889	88.88889	96.9697	106.6667	118.5185	96.9697	96.9697
138.8889	152.7778	138.8889	187.5	96.15385	115.3846	138.8889	166.6667	125	150
52	52	52	52	52	52	52	52	52	52
100	100	100	100	100	100	100	100	100	100
84	84	84	84	84	84	84	84	84	84
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52

52	52	52	52	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	100	100	100	100
100	100	100	100	100	100	100	100	100	100
52	52	52	46.22222222	45.5	52	78	52	52	46.22222
46.22222	52	52	58.5	52	52	39	45.5	45.5	58.5
120	96.9697	106.6667	88.88888889	106.6667	88.88889	106.6667	88.88889	106.6667	88.88889
100	100	100	100	100	100	100	100	100	100

CO-PSO MAPPING

CO-PSO ATTAINMENT

Percentage CO-PSO ATTAINMENT

	Course	PSO1	PSO2	PSO3
FY	1 BCA111	3.00	3.00	3.00
	2 BCA112	3.00	3.00	3.00
	3 BCA113	1.80	1.80	1.80
	4 BCA114	2.25	2.25	2.25
	5 BCA115	2.25	2.25	2.25
	6 BCA116	3.00	3.00	3.00
	7 BCA117	2.33	2.33	2.33
	8 BCA118	1.40	1.40	1.40
	9 BCA121	2.33	2.33	2.33
	10 BCA122	2.25	2.25	2.25
	11 BCA123	2.33	2.33	2.33
	12 BCA124	2.67	2.67	2.67
	13 BCA125	3.00	3.00	3.00
	14 BCA126	2.25	2.25	2.25
	15 FYBCA(SCI	3.00	3.00	3.00
	16 0	3.00	3.00	3.00
SY	1 Data Struc	1.80	1.80	1.80
	2 Database I	2.25	2.25	2.25
	3 Computer	2.25	2.25	2.25
	4 Data Struc	3.00	3.00	3.00
	5 Database I	2.33	2.33	2.33
	6 Computer	1.40	1.40	1.40
	7 EVS	2.33	2.33	2.33
	8 SYBCA(SCI	2.25	2.25	2.25
	9 BCA241	2.33	2.33	2.33
	10 BCA242	2.67	2.67	2.67
	11 0	3.00	3.00	3.00
	12 0	2.25	2.25	2.25
	13 BCA245	3.00	3.00	3.00
	14 Python Pro	3.00	3.00	3.00
	15 EVS II	1.80	1.80	1.80
	16 BCA248	2.25	2.25	2.25
	1 DSE I (Prog	2.25	2.25	2.25
	2 DSE-II Data	3.00	3.00	3.00
	3 DSE III (Pri	2.33	2.33	2.33
	4 Artificial In	1.40	1.40	1.40
	5 Cloud Com	2.33	2.33	2.33
	6 DSE I Labo	2.25	2.25	2.25

Course	PSO1	PSO2	PSO3
BCA111	0.92	0.92	0.92
BCA112	1.56	1.56	1.56
BCA113	0.936	0.936	0.936
BCA114	0.45	0.45	0.45
BCA115	1.89	1.89	1.89
BCA116	2.2	2.2	2.2
BCA117	1.586667	1.586667	1.586667
BCA118	1.4	1.4	1.4
BCA121	1.213333	1.213333	1.213333
BCA122	0.45	0.45	0.45
BCA123	0.466667	0.466667	0.466667
BCA124	0.533333	0.533333	0.533333
BCA125	3	3	3
BCA126	1.17	1.17	1.17
FYBCA(SCIENCE)	1.24	1.24	1.24
0	1.56	1.56	1.56
Data Structures	0.936	0.936	0.936
Database Manag	1.17	1.17	1.17
Computer Netwo	0.93	0.93	0.93
Data Structures I	2.52	2.52	2.52
Database Manag	1.586667	1.586667	1.586667
Computer Netwo	1.176	1.176	1.176
EVS	1.96	1.96	1.96
SYBCA(SCIENCE)	1.17	1.17	1.17
BCA241	0.93	0.93	0.93
BCA242	2.52	2.52	2.52
0	1.56	1.56	1.56
0	1.89	1.89	1.89
BCA245	3	3	3
Python Program	3	3	3
EVS II	1.56	1.56	1.56
BCA248	1.89	1.89	1.89
DSE I (Programm	3	3	3
DSE-II Data minir	1.56	1.56	1.56
DSE III (Principle	1.213333	1.213333	1.213333
Artificial Intellige	0.728	0.728	0.728
Cloud Computing	1.213333	1.213333	1.213333
DSE I Laboratory	2.25	2.25	2.25

Course	PSO1	PSO2	PSO3
BCA111	30.66667	30.66667	30.66667
BCA112	52	52	52
BCA113	52	52	52
BCA114	20	20	20
BCA115	84	84	84
BCA116	73.33333	73.33333	73.33333
BCA117	68	68	68
BCA118	100	100	100
BCA121	52	52	52
BCA122	20	20	20
BCA123	20	20	20
BCA124	20	20	20
BCA125	100	100	100
BCA126	52	52	52
FYBCA(SCI	41.33333	41.33333	41.33333
0	52	52	52
Data Struc	52	52	52
Database I	52	52	52
Computer	41.33333	41.33333	41.33333
Data Struc	84	84	84
Database I	68	68	68
Computer	84	84	84
EVS	84	84	84
SYBCA(SCI	52	52	52
BCA241	39.85714	39.85714	39.85714
BCA242	94.5	94.5	94.5
0	52	52	52
0	84	84	84
BCA245	100	100	100
Python Pro	100	100	100
EVS II	86.66667	86.66667	86.66667
BCA248	84	84	84
DSE I (Prog	133.3333	133.3333	133.3333
DSE-II Data	52	52	52
DSE III (Pri	52	52	52
Artificial In	52	52	52
Cloud Com	52	52	52
DSE I Labo	100	100	100

TY	7	Laboratory	2.33	2.33	2.33
	8	Implemen	2.67	2.67	2.67
	9	Android Pr	3.00	3.00	3.00
	10	Programm	2.25	2.25	2.25
	11	Software P	3.00	3.00	3.00
	12	Managem	3.00	3.00	3.00
	13	Internet of	1.80	1.80	1.80
	14	Laborator	2.25	2.25	2.25
15	Laboratory	2.25	2.25	2.25	
16	Project Lab	3.00	3.00	3.00	

Laboratory (Data	1.96	1.96	1.96
Implement algor	1.386667	1.386667	1.386667
Android Program	1.56	1.56	1.56
Programming in	1.17	1.17	1.17
Software Project	1.56	1.56	1.56
Management Inf	1.56	1.56	1.56
Internet of Thing	0.936	0.936	0.936
Laboratory (And	2.25	2.25	2.25
Laboratory (Prog	2.25	2.25	2.25
Project Laborato	3	3	3

Laboratory	84	84	84
Implemen	52	52	52
Android Pr	52	52	52
Programm	52	52	52
Software P	52	52	52
Managem	52	52	52
Internet of	52	52	52
Laborator	100	100	100
Laboratory	100	100	100
Project Lab	100	100	100