

Mangalmay Institute of Management Technology Greater Noida (U.P.)



Program B.C.A. Program Objectives To provide the knowledge and enhance the understanding of software technologies. To prepare for analyze and solve the problem with effective communication. To make the managerial and technical skills to design the solution of real world problem. To prepare for investigate complex problem and their solution. To provide the ethical, social and cultural responsibilities in professional environment. To prepare the new technology and upgrade their skills for lifelong learning. Program Outcomes Ability to demonstrate knowledge of Computer science and its applications in order to enhance basic understanding of various software technologies. PO2 Ability to analyze and identify various business and technical problems to further solve problems with effective communication. PO3 Ability to adapt analytical, logical and managerial skills with the technical aspects in order to design and deploy reliable software programs and application for real world problems. PO4 Ability to investigate complex problems and provide computer-based solutions. PO5 Ability to understand and deliver ethical, social and cultural responsibilities in professional environment as an individual and team. Ability to adapt new technologies for upgrading their skills and contributing to a lifelong learning.

Code. No/CO	Subjects	Blooms Taxanomy	PO1	PO2	PO3	PO4	PO5	PO6
			Knowledge	(Creativity)	(Problem Solving and Design)	(Ethical Practices`)	(Communication and Social Skills)	(Lifelong Learning
	YEAR I							
	SEM-1							
BCA-101	Mathematics- I							
	Course Objective							
1	To learn mathematical properties of variance.							
2	To inculcate in students the fundamental mathematical background in computer science.							
3	To gain knowledge about metrices, integration, its methods, Mathematical logic, and Group theory.							
4	To learn advanced features of the numerical calculations.							
5	To learn the measures of vectors.							
601	Able to define the concept of matrices and able to implement various rules	Remembering (K1),						
CO1	applicable on it Able to understand the concept of Limit able to implement its properties	Understanding (K3) Understanding (K3),	н		М		L	
CO2		Applying (K 4) Understanding (K3),	Н		М			
CO3	theorems	Applying (K 4)	н			М		
CO4	methods	Understanding (K3), Applying (K 4)	н	н	н	Н	м	
CO5	Able to understand the concept of Vectors in various dimensions	Understanding (K3)	н	н		М		н
DG1 102	D D							
BCA-102	Programming Principle & Algorithm Course Objective							
	<u> </u>							
1	To learn the basic concept of C programming language.							
2	To enhance problem solving and programming skills in C.							
3	Understand the concept of functions and pointer. In addition, resolve real world problems using functions and pointers							
4	To write implementation of a code and able to undersStand its working.							
5	Exercise user defined data types including structure and union.							
CO1	Able to define and understand the basic concept of Tokens, Keywords, Identifiers, Variables, Constant, Data Types, and Comments	Remembering (K1), Understanding (K3)	н		м			
	Able to understand and implement the various Operators used in 'C' and	Understanding (K3),						
CO2	their precedence	Applying (K 4) Understanding (K3),	н		М			
CO3	Able to understand and apply Control structures	Applying (K 4) Understanding (K3)	н			М		
CO4	Able to understand and create algorithm and flow chart	Creating (K6) Understanding (K3),	Н	н	н	н	м	
CO5	Able to understand the concept of function, its importance and can implement functions in 'C' and analyze result	Applying (K 4), Analysing (K 5)	н	н		м		н
BCA-103	Computer Fundamental & Office Automation							
1	Course Objective To introduce the components of computers .							
2	To introduce basic concepts of hardware and software.							
3	To introduce the general structure of the CPU, motherboard and advance interfaces							
4	To understand problem solving methodologies							
5 6	To develop and create algorithm and flowchart. To make the slide and develop the presentation skills.							
CO1	Able to define the basic concept of Computer and its different parts Able to understand and implement the concepts of Algorithm and flow	Understanding (K3)	н		м		L	
CO2	chart	Applying (K 4)	н		м			
CO3 CO4	Able to understand the about various types of operating systems Able to create a document using MS word	Understanding (K3) Creating (K6)	M H	н	1	M H	м	
	Able to prepare worksheet MS Excel and able to analyze and evaluate	Stariff (mo)	"	"			IWI	

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CO6	Able to prepare a presentation slide using MS Powerpoint	Applying K(3)	н	н		М		н
BCA-104	Principles of Management							
	Course Objective							
1	To help the students gain understanding of the functions and responsibilities of managers.							
	To provide them tools and techniques to be used in the performance of the							
2	managerial job.							
3	To enable them to analyze and understand the environment of the							
3	organization.							
4	To help the students to develop cognizance of the importance of							
	management principles.							
CO1	Can you define the concept of 'Management' and its various level	Understanding K(2)	н		м		L	
	Have you understood Business Ethics & Social Responsibility and various						-	
CO2	Management related theories	Understanding K(2)	н		м			
	Have you understood the importance of planning and can apply planning in							
CO3	the organization	Understanding K(2)	Н			M		
CO4	Have you understood why leader should require to motivate his subordinates	Understanding, Applying K(2), K(3)	н	н	н	н	м	
	Have you understood the advantage and disadvantages of the change in	N(S)		п	n	п	W .	
CO5	management	Understanding K(2)	н	н		м		н
	Have you understood the concept of strategic Management are you able to	Understanding, Applying K(2),						
CO6	apply strategy	K(3)	Н	L	М			М
BCA-105	Business Communication							
_ 0.1 100	Course Objective							
1	To provide an overview of Prerequisites to Business Communication.							
2	To put in use the basic mechanics of Grammar.							
3	To provide an outline to effective Organizational Communication.							
4	To underline the nuances of Business communication.							
5	To impart the correct practices of the strategies of Effective Business							
	writing.		-					
CO1	Have you understood the importance of communication	Understanding K(2)	м			м	м	1
		Understanding, Applying K(2),				IM	191	
CO2	Have you understood and can perform better oral communication Can you write a letter on any situation	K(3)	н					н
CO3	Can you write a letter on any situation	Applying K(3) Understanding, Applying	М	Н		L	Н	н
CO4	Can you understood and prepare Business Letters and analyze Reports	K(2),K(3)	М	н		н	н	н
CO5	Are you able to create Business Letter and circulars	Creating K(6)	L	М				
CO6	Are you able to use or implement electronic devices for the communication for Mock Interview and Group discussion							
CO6	for Wock interview and Group discussion	Evaluating K(5)	М	Н		М	Н	н
EVS-008	Environmental Studies							
	Course Objective							
1	To develop an attitude of concern for the environment.							
2	To Create the awareness about environmental problems among people. To integrate the knowledge from multiple disciplines representing physical							
3	and life sciences perspectives, with their environments.							
4	To prepare students for careers, citizenship and environmental stewardship							
	through experiential curricular and co-curricular opportunities;							
_	To provide students with a broad interdisciplinary liberal arts framework							
5	for understanding the relationship between humans and their environment;							
	Have you understood the need for Public Awareness of Environmental							
CO1	Studies	Understanding K(2)	м			н		н
	Have you understood about the natural and non-natural resources and can	Understanding, Analyzing K(2),						
CO2	analyze these	K(4)	М			M		М
CO3	Have you understood the concept of Biodiversity and its conversation	Understanding K(2)	м	н			н	н
CO4	Are you able to understand about the various types of pollutions	Understanding K(2)	н	п	L	н		M
	Are you able to analyze and evaluate social issues which are affecting							
CO5	environment	Analyzing, Evluating K(4), K(5)	М		М			н
			-					
	SEM-II		-					
BCA-201	Mathematics- II		-					
	Course Objective To gain knowledge about sets, ketations runctions, matrices,							
1	Made and the first							
	To Develop analytical ability to solve real-world problems using these		I			<u> </u>		
2	methodologies.							
3	To inculcate in students the fundamental mathematical background in computer science.							
4	To develop logical understanding of the subject.		 					
	To develop mathematical skill so that students are able to apply							
	mathematical methods & principals in solving problem from computer							
5	science field.							1
CO1	Able to define the 'Sets' and its various types	B t						-
COI	Able to define the 'Relation' and 'Function' and implement Trigonometric,	Rembering K(1)	н		L			
CO2	Logarithmic and Exponential Function	Rembering, Applying K(1), K(3)	н		н			
CO3	Able to understand about the Partial order relations and lattices	Understanding K(2)	м		н			м
CO4	Able to define and implement the concept Partial Differentiation	Rembering, Applying K(1), K(3)			н			
CO4 CO5	Able to determine the concept of 3D Coordinate Geometry	Applying K(3)	н		н			
		Understanding, Applying K(2),						
CO6	Able to understand and determine the concept of Multiple Integration	K(3)	М					н
DC4 coc	C.D.,							
BCA-202	C Programming Course Objective		1				1	
	To analyze problems efficiently and develop comprehensive logic to solve							
1	it.	<u> </u>	<u></u>			<u> </u>		
2	To develop good algorithms and flowcharts to solve problems.							
3	To write C programs in a structured manner.							
	To understand the concept of header files.							-
4								
	To make the student learn a programming language and learn problem							
5								

CO1	Will be able to define and implement the concept of Arrays in 'C'	Rembering, Applying K(1), K(3)	М		М		1	
CO2	Able to define and implement and able to implement 'Pointers'	Rembering, Applying K(1), K(3)	м		н			м
CO3 CO4	Can you implement with 'Strings' in 'C' Able to understand the importance of 'Structure'	Applying K(3)	М		м			М
CO4	Able to understand the importance of Structure	Understanding K(2) Rembering K(1)	н		н			
CO5	Able to define the concept of preprocessor directives and Bitwise operators		М			м		
CO6	Can you implement the concept of working with files using 'C'	Applying K(3)	М		М			н
BCA-203	Organization Behavior							
	Course Objective							
1	To discuss the development of the field of organizational behaviour and explain the micro and macro approaches							
	To analyze and compare different models used to explain individual							
2	behaviour related to motivation and rewards							
3	To identify the processes used in developing communication and resolving conflicts							
	To explain group dynamics and demonstrate skills required for working in							
4	groups (team building)							
5	To explain organizational culture and describe its dimensions and to examine various organizational designs							
6	To discuss the implementation of organizational change.							
001	All and the second of the seco							
CO1	Able to define the concept Organization Behaviour	Rembering K(1)	М		М			
CO2	Able to understand the terms Perceptions, Attitude, Values & Motivation	Understanding K(2)	М			н		
000	Able to and annual development of the second							
CO3	Able to understand the about the personality and its various theories Will be able to evaluate stress form its source	Understanding K(2) Evaluating K(5)	M H	L	M H	М	н	М
CO5	Will be able to understand Group Behaviour and apply Leadership	Understanding K(2)	M			м		
CO6	Will be able to analyze the Conflict in Organization	Analyzing K(4)	М		М			н
BCA-204	Digital Electronics and Computer Organization							
	Course Objective							
1	To Identify, understand and apply different number systems and codes.							
1								
2	To understand the digital representation of data in a computer system.							
	To understand the general concepts in digital logic design, including logic							
3	elements, and their use in combinational and sequential logic circuit design.							
-	To understand computer arithmetic formulate and solve problems,							
4	understand the performance requirements of systems.							
5	To Study and construction of sequential logic circuits, understanding various design of flip flops.							
CO1	Able to understand the concept of Logic Gates and circuit	Understanding K(2)	М		М		L	
	Subtracter	Understanding K(2)	M	L	M			M
CO2	Able to define various types of Memories				м	м		
CO3 CO4 CO5	Able to define various types of Memories Able to implement the various types of Flip-flop Able to understand the concept of memory organization	Rembering K(1) Applying K(3) Understanding K(2)	M M M	L	M H	М		M
CO3 CO4 CO5	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective	Rembering K(1) Applying K(3)	M M			М		
CO3 CO4 CO5	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management	Rembering K(1) Applying K(3)	M M			М		
CO3 CO4 CO5 BCA-205	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations.	Rembering K(1) Applying K(3)	M M			М		
CO3 CO4 CO5 BCA-205	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics	Rembering K(1) Applying K(3)	M M			M		
CO3 CO4 CO5 BCA-205	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting	Rembering K(1) Applying K(3)	M M			м		
CO3 CO4 CO5 BCA-205	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business.	Rembering K(1) Applying K(3)	M M			м		
CO3 CO4 CO5 BCA-205	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book	Rembering K(1) Applying K(3)	M M			м		
CO3 CO4 CO5 BCA-205	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business.	Rembering K(1) Applying K(3)	M M			M		
CO3 CO4 CO5 BCA-205 1 2 3 4	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management	Rembering K(1) Applying K(3) Understanding K(2)	M M M					M
CO3 CO4 CO5 BCA-205	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting	Rembering K(1) Applying K(3)	M M			M		
CO3 CO4 CO5 BCA-205 1 2 3 4	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management	Rembering K(1) Applying K(3) Understanding K(2)	M M M					M
CO3 CO4 CO5 BCA-205 1 2 3 4 5	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4)	M M M		м	M		M
CO3 CO4 CO5 BCA-205 1 2 3 4 5	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2)	M M M		н		н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3 CO4	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4)	M M M		м	M	н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement Able to evaluate Working capital	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4) Applying, Analyzing K(3), K(4)	M M M		M H	M	н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement Able to evaluate Working capital Able to define Cash Management, Inventory Management and Receivables	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4) Applying, Analyzing K(3), K(4) Understanding K(2) Evluating K(5)	M M M H M		M H	M	н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3 CO4	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement Able to evaluate Working capital	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4) Understanding K(2) Understanding K(3)	M M M H		M H	M	н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement Able to evaluate Working capital Able to define Cash Management, Inventory Management and Receivables Management VEAR II	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4) Applying, Analyzing K(3), K(4) Understanding K(2) Evluating K(5)	M M M H M		M H	M	н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement Able to define Cash Management, Inventory Management and Receivables Management YEAR II SEM-III	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4) Applying, Analyzing K(3), K(4) Understanding K(2) Evluating K(5)	M M M H M		M H	M	н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement Able to evaluate Working capital Able to define Cash Management, Inventory Management and Receivables Management VEAR II	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4) Applying, Analyzing K(3), K(4) Understanding K(2) Evluating K(5)	M M M H M		M H	M	н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement Able to evaluate Working capital Able to define Cash Management, Inventory Management and Receivables Management YEAR II SEM-III Object Oriented Programming using C++ Course Objective To apply the concepts of class, method, constructor, instance, data	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4) Applying, Analyzing K(3), K(4) Understanding K(2) Evluating K(5)	M M M H M		M H	M	н	M
CO3 CO4 CO5 BCA-205 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-301	Able to implement the various types of Flip-flop Able to understand the concept of memory organization Financial Accounting and Management Course Objective To help the students to develop cognizance of the importance of accounting in organization financial statements Describe the role of accounting information and its limitations. To provide the students to analyze specific characteristics of Logistics Management Accounting To enhance the abilities of learners to develop the concept of management accounting and its significance in the business. To Identify and analyze the reasons for the difference between cash book and pass book balances. Able to understand the basics of Financial Accounting & Management Accounting Will be able to prepare Journal, Final Accounting, P&L account, and analyze Balance sheet Will be able to implement Ratio Analysis, Fund Flow, and cash flow Able to understand Capitalization, Cost of capital and measurement Able to evaluate Working capital Able to define Cash Management, Inventory Management and Receivables Management YEAR II SEM-III Object Oriented Programming using C++ Course Objective To apply the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and	Rembering K(1) Applying K(3) Understanding K(2) Understanding K(2) Understanding K(2) Applying, Analyzing K(3), K(4) Applying, Analyzing K(3), K(4) Understanding K(2) Evluating K(5)	M M M H M		M H	M	н	M
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BCA-302	Data Structure using C & C++							
	Course Objective							
2	To impart the basic concepts of data structures and algorithms To understand concepts about searching and sorting techniques							
	To Understand basic concepts about stacks, queues, lists, trees and graphs							
3	To Oracistana basic concepts about stacks, queues, nsis, aces and graphs							
	To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures							
5	To Analyze the efficiency of programs based on time complexity.							
	To Analyze the efficiency of programs based on time complexity.							
CO1	Do you remember Different types of Matrices Have you understood Stacks & Queues and can you implement these in 'C'	Rembering K(1) Understanding, Applying K(2),	м					М
CO2	or 'C++'	K(3)	н	м	м		L	м
CO3	Have you understood linked list and its features and can you implement these in 'C' or 'C++'	Understanding, Applying K(2), K(3)	м	L	м			
CO4	Have you understood and implement different types of Trees.	Understanding, Applying K(2),	н	м	н			
CO5	Are you able to implement B-Trees and able to evaluate result	K(3) Applying, Evaluating K(3), K(5)	ı.	IVI	м		ı	м
CO6	Are you able to implement Sorting and Searching	Applying, Evaluating K(3), K(5)			м		·	
	The you do to implement borning and beaterning		IW.		M			
BCA-303	Computer Architecture and Assembly Language							
	Course Objective							
1	To discuss the basic concepts and structure of computers.							
2	To understand concepts of register transfer logic and arithmetic operations.							
3	To explain different types of addressing modes and memory organization.							
4	To learn the different types of serial communication techniques.							
5	To summarize the Instruction execution stages.						+	
CO1	Are you able to define registers and memory	Understanding K(2)	м					
CO2	Have you understood different components of Central Processing Unit of a computer	Understanding K(2)	н	м	L			м
	Have you understood Computer arithmetic and able to implement	Understanding, Applying K(2),						
CO3 CO4	Computer arithmetic Have you understood the Input-Output Organization	K(3) Understanding K(2)	M M	M	M H		1	м
CO5	Have you understood evaluation of microprocessor	Understanding K(2)	M		L L	L	м	L
CO6	Have you understood and able to implement Assembly Language commands	Understanding, Applying K(2), K(3)	м	м	L			
BCA-304	Business Economics							
	Course Objective							
1	To familiarize the students with the basic concept of economics. To make student understand the demand and supply analysis in business							
2	applications							
3	To familiarize students with the production and cost structure under different stages of production.							
	To understand the pricing and output decisions under various market							
4	structure. To help students understand and apply the various decision tools and policy							
5	2004-2009.							
CO1 CO2	Have you understood the Scope and able to define Method of Economics,	Understanding K(2)	н			м	L	
CO2	Have you understood Market Structure	Understanding K(2)	М			М	М	М
CO3	Are you able to define Macro Economics Concerns and different policies	Understanding K(2)	м	м				
CO4	Have you understood WTO, Group of 20, Export Import Policy 2004-2009	Understanding K(2)	м	м		м		м
BCA-305	Elements of Statistics							
BCA-303	Course Objective							
	To develop the skills to analyse complex statistical data coming from the							
1	various fields like industry, marketing, finance, agriculture and business.							
2	To implement data analysis strategies to develop efficient models for various theoretical postulations.							
3	To organize, manage and present data.							
4	To derive the probability density function of transformation of random variables.							
	To calculate probabilities, and derive the marginal and conditional							
5	distributions of bivariate random variables.						+	
oo:	Can you define Statistics, and able to prepare frequency charts and able to	Understand, Applying K(2),						
CO1	analyze data Are you able to implement measure of central tendency and able to analyze	K(3)	М	М	L		+	
CO2	data	Applying, Analyzing K(3), K(4)	м		м		1	м
CO3	Are you able to implement measure of dispersion and able to analyze data	Applying, Analyzing K(3), K(4)	м	м	L			
CO4	Have you understood Probability	Understanding K(2)	м	L	н			м
CO5	Have you understood Statistical Quality Control	Understanding K(2)	М	М	L		+	
n.c.	SEM-IV							
BCA-401	Computer Graphics & Multimedia Application Course Objective							
1	To understand the fundamental concepts and theory of computer graphics.							
	To understand modeling, and interactive control of 3D computer graphics							
2	applications.							
3	To understand the underlying parametric surface concepts be understood.							
4	To learn multimedia authoring tools.							
5	Write basic graphics application programs including animation.							
CO1	Have you understood the basics of the computer graphics	Understanding K(2)	м	М	L			
202	Are you able to define scanning techniques and have you understood	Rembering, Understanding K(1), K(2)						
CO2	different algorithms		М		М		+	М
CO3	Are you able to perform 3D transformation with the help of 'C' language Are you able to draw different curves using 'C'	Applying K(3)	м	м	L		1	
001		Applying K(3)	M	L	M	L	M	1
CO4 CO5	Can you define Multimedia and multimedia related devices	Remembering K(1)	м	L	н		IVI	м

CO6	T	T		T	I			ı
	Have you understood the concept of making multimedia	Understing K(2)	М	М	L			
BCA-402	Operating System Course Objective							
	To understand the services provided by and the design of an operating							
1	system.						1	
2	To understand the structure and organization of the file system.							
3	To understand what a process is and how processes are synchronized and scheduled.							
4	To understand different approaches to memory management.							
5	To understand the concept of system calls for managing processes, memory and the file system.							
	and the me system.							
CO1 CO2	Have you understood basic concepts of Operating system Have you understood different CPU scheduling techniques	Understanding K(2)	М		М			
CO2	Are you able to define deadlocks	Understanding K(2) Remembering K(1)	H M		M M			
CO4	Have you understood Input-Output and storage devices	Understanding K(2)	М					М
CO5	Have you understood the concept of File System	Understanding K(2)	М		н			М
BCA-403	Software Engineering							
BCA-403	Course Objective							
1	To gain the knowledge of basic SW engineering methods and practices, and							
_	their appropriate application. To describe software engineering layered technology and Process frame							
2	work.							
_	To understand the software process models such as the waterfall and							
4	evolutionary models. To understand the software requirements and the SRS documents.						1	
	To understand the software requirements and the SKS documents. To understand the role of project management including planning,							
5	scheduling, risk management, etc.							
6	To describe data models, object models, context models and behavioral models.							
CO1	Are you able to define Software Engineering	Remembering K(1)	м	L	м	_	1	
CO2	Have you understood Requirement Analysis and can you create SRS for a project	Remembering, Creating K(2), K(6)	м	м				
CO2	Have you understand the designing paradigms. Can you create ER diagram	K(6) Remembering, Creating K(2),	М	M	L		1	
CO3	and DFDs	K(6)	н		н			
CO4	Have you understood the implementation process	Understanding, Applying K(2), K(3)	м		м			м
CO5	Have you understood different types of maintenance	Understanding K(2)	М			_	1	
CO6	Are you able to implement SDLC	Applying K(3)	М	М	н			M
BCA-404	Optimization Technique							
BCA-404	Course Objective							
1	To enumerate the fundamental knowledge of Linear Programming and							
_	Dynamic Programming problems. To Learn classical optimization techniques and numerical methods of							
2	optimization.							
3	To Know the basics of different evolutionary algorithms.							
4	To explain Integer programming techniques and apply different optimization techniques to solve various models							
-	To understand the maximization and minimization of convex functions							
5								
	Have you understood the concept of linear programming an can you solve a							
CO1	problem using LPP methods and analyse the result	K(2),K(3)	м		м			
		Understanding, Applying,						
CO2	Do you know Queuing problem and can you solve queuing problems	Creating K(1), K(2) ,K(6)	м	м	н			
	Have you understood the concept of replacement theory and can you find	Understanding, Applying	м					
CO3	Have you understood the concept of replacement theory and can you find out the best time to replace any product.	Understanding, Applying K(2),K(3)	M	M M	H H	M		м
	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			М		М
CO3 CO4	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to	Understanding, Applying K(2), K(3) Applying K(3)	м			М		м
CO3	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	M M			М		М
CO3 CO4	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			М		М
CO3 CO4 CO5	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			м		м
CO3 CO4	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			M		М
CO3 CO4 CO5 BCA-406	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			М		м
CO3 CO4 CO5 BCA-406	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields.	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			М		M
CO3 CO4 CO5 BCA-406	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			М		M
CO3 CO4 CO5 BCA-406 1	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			М		M
CO3 CO4 CO5 BCA-406 1	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration.	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			М		M
CO3 CO4 CO5 BCA-406 1	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying,	м			M		M
CO3 CO4 CO5 BCA-406 1 2 3 4 5	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve	Understanding, Applying K(2),K(3) Applying K(1),K(3) Applying K(2),K(3) Applying K(2),K(3),K(4) Analyzing K(2),K(3),K(4)	M		H	M		
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems	Understanding, Applying K(2),K(3) Applying K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Understanding, Applying K(2),K(3) Understanding, Applying K(2),K(3)	M M	M L	H M	M		
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus	Understanding, Applying K(2),K(3) Applying K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(6)	M M M M M		H M	M		M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it	Understanding, Applying K(2),K(3) Applying K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3)	M M M M M M	M L	H M M M M M	M		
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus	Understanding, Applying K(2),K(3) Applying K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(6)	M M M M M	M L	H M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of Second order	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you sho to solve ordinal differential equations of first order	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	ı	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop mathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order VEAR III SEM-V Introduction to DBMS Course Objective	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	ı	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management systems	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	i.	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management systems Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management systems Explain the basic concepts of relational data model, entity-relationship	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501 1 2 3	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management systems Explain the basic concepts of relational algebra and SQL. Design ER-models to represent simple database application scenarios Convert the ER-model to relational tables, populate relational database and	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501 1 2 3 4	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management systems Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL. Design ER-models to represent simple database application scenarios Convert the ER-model to relational tables, populate relational database and formalate SQL queries on data.	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501 1 2 3	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management systems Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL. Design ER-models to represent simple database application scenarios Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data. Improve the database design by normalization.	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	L	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501 1 2 3 4 5	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management systems Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL. Design ER-models to represent simple database application scenarios Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data. Improve the database design by normalization.	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	ı	M
CO3 CO4 CO5 BCA-406 1 2 3 4 5 CO1 CO2 CO3 CO4 CO5 CO6 BCA-501 1 2 3 4	Have you understood the concept of replacement theory and can you find out the best time to replace any product. Are you able to solve problems based on Inventory Theory Are you able to solve the problems related to job sequence and able to interpret results Mathematics-III Course Objective To develop logical understanding of the subject. To develop nathematical skill so that students are able to apply mathematical methods & principals in solving problem from computer science fields. To understand the Linear Algebra through matrices. To understand the Complex integration. To use computational tools to solve problems and applications of Ordinary Differential Equations and Partial Differential Equations. Can you define complex variables Have you understood sequence, series and convergence and able to solve the problems Have you understood Vector Calculus Do you know Fourier Series can you solve questions based on it Are you able to solve ordinal differential equations of first order Are you able to solve ordinal differential equations of second order YEAR III SEM-V Introduction to DBMS Course Objective Describe the fundamental elements of relational database management systems Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL. Design ER-models to represent simple database application scenarios Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data. Improve the database design by normalization.	Understanding, Applying K(2),K(3) Applying K(3) Understanding, Applying, Analyzing K(2),K(3), K(4) Remembering K(1) Understanding, Applying K(2),K(3) Remembering K(1) Understanding, Applying K(2),K(3) Applying K(3) Applying K(3)	M M M M L	M L	H M M M M M	M	ı	M

		T			,			,
		Rembering, Understanding K(1), K(2)						
CO1	Are you able to define Database and its characteristics and architecture?		М	L		L		
		Understanding, APPLYING, ANALYZING, CREATING K(2),						
	Harry and the stand ED Discours and able to Decrease 8. As above the	K(3), K(4), K(6)						
CO2	Have you understood ER Diagram and able to Prepare & Analyze the project and create ER Diagram		м		м			м
CO3	Are you able to understood File organization	Understanding K(2)	н	м	М	L		
		UnderstandING, APPLYING, ANALYZING, CREATING K(2),						
		K(3), K(4), K(6)						
CO4	Have you understood Relational Model and able to analyse the project and can create SQL queries							
CO5	Can you define EER	Understanding K(2)	M L	L	L		М	м
CO6	Have you understood Data Normalization and concurrency control	Understanding K(2)	м	м	M			
BCA-502	Java Programming and Dynamic Webpage Design Course Objective							
	Write Java application programs using OOP principles and proper program							
1	structuring.							
	To understand the basic concepts and fundamentals of platform independent							
2	object oriented language.							
3	To demonstrate skills in writing programs using exception handling techniques and multithreading.							
4	To understand servlets and network connectivity approaches.							
	To develop reusable programs using the concepts of inheritance,							
5	polymorphism, interfaces and packages.							
6	To design dynamic web pages using css, jsp.							
	Have you understood the basic concepts of Java programming	Understanding,						
CO1	, and the programming	APPLYING, CREATING K(2), K(3), K(6)			м			
231	Have you understood Java Applets and able to create webpage using Java	Understanding,			IVI		1	
CO2	Applets	APPLYING,CREATING K(2), K(3), K(6)	н	м			м	м
- · · ·	Have you understood Socket Programming and able to implement JDBC	Understanding,						
CO3		APPLYING,CREATING K(2), K(3), K(6)	м	L	м		<u> </u>	
	Have you understood HTML and able to create webpage using HTML	Understanding, APPLYING,CREATING K(2),	1					
CO4		K(3), K(6)	м	м	н		М	
	Have you understood Java Servlets and able to use Java Servlet in	Understanding, APPLYING,CREATING K(2),	1					
CO5	webpage	K(3), K(6)	м		н			м
	Have you understood the concept of Java Server Pages and able to use JSP	Understanding, APPLYING,CREATING K(2),						
CO6	in webpage	K(3), K(6)	М	н	L			
BCA-503	Computer Network Course Objective							
	To build an understanding of the fundamental concepts of data							
1	communication and computer networking.							
2	To implement a simple LAN with hubs, bridges and switches.							
3	To understand how errors detected and corrected that occur in transmission							
3	To know about routing mechanisms and different routing protocols 5.							
4	Understand transport layer functions							
5	To know about different application layer protocols							
201								
CO1 CO2	Are you able to define Computer network and OSI/TCP Models Have you understood different Transmission Media	Remembering K(1) Understanding K(2)	M L		L M		м	м
662	Have you understood Multiplexer and different types of multiplexers and	Understanding K(2)			IVI			
CO3	able to understand DLC protocol		м		М			
	Can you define different types of networking devices and able to	Remembering, Understanding K(1), K(2)						
CO4	understand different routing algorithm		М	м	н		м	
005	Can you define Transport Layer, Session Layer and Application Layer							
CO5		Remembering K(1)	М		Н			М
DC1 504	Numerical Methods							
BCA-504	Course Objective							
	To provide suitable and effective methods called Numerical Methods, for							
1	obtaining approximate representative numerical results of the problems.							
2	To develop the mathematical skills of the students in the areas of numerical methods.		1					
3	To teach theory and applications of numerical methods		1	İ.				
	To teach theory and applications of numerical methods							
1								
	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications							
4 5	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications							
4 5	To deal with the various topics which require solutions of linear systems,							
5	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in	Understanding, Applying K(2),						
	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation	K(3)	м	L				
5	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and	Understanding, Applying K(2), K(3) Understanding, Applying, Analyzing K(2), K(3), K(4)	м	L				
5	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation	K(3) Understanding, Applying,			M		M	M
5 CO1	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying,	M	L	M		M	M
CO1	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and be to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume,	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4)	м		м		M	М
5 CO1	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and be to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4)			M		M	М
CO1 CO2	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying,	м				M	M
CO1	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4)	м				M	М
CO1 CO2	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying,	м		L			М
CO1 CO2	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	м		L			M
CO1 CO2 CO3 CO4	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			
CO1 CO2 CO3 CO4 CO5	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bet to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to inhement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			
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CO1 CO2 CO3 CO4 CO5	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases SEM-VI Computer Network Security Course Objective	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			
CO1 CO2 CO3 CO4 CO5	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases SEM-VI Computer Network Security Course Objective To understand basics of Cryptography and Network Security.	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			
CO1 CO2 CO3 CO4 CO5	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases SEM-VI Computer Network Security Course Objective	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			
CO1 CO2 CO3 CO4 CO5 BCA-601 1 2	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bale to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases SEM-VI Computer Network Security Course Objective To understand basics of Cryptography and Network Security. To be able to secure a message over insecure channel by various means. To learn about how to maintain the Confidentiality, Integrity and	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			
CO1 CO2 CO3 CO4 CO5 BCA-601	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bate to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to interpret the nesults Have you understood the concept of Sulution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases SEM-VI Computer Network Security Course Objective To understand basics of Cryptography and Network Security. To be able to secure a message over insecure channel by various means. To learn about how to maintain the Confidentiality, Integrity and Availability of a data.	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			
CO1 CO2 CO3 CO4 CO5 BCA-601 1 2 3	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and Extrapolation and Description and able to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to implement and able to analyse Area, Volume, Distance by applying any of the method Have you understood the concepts of solution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases SEM-VI Computer Network Security To understand basics of Cryptography and Network Security. To be able to secure a message over insecure channel by various means. To learn about how to maintain the Confidentiality, Integrity and Availability of a data. To understand various protocols for network security to protect against the	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			
CO1 CO2 CO3 CO4 CO5 BCA-601 1 2	To deal with the various topics which require solutions of linear systems, finding eigen values, eigenvectors, interpolation and applications To facilitate numerical computing. Have you understood Roots of Equations and able to apply these method in finding the Roots of the equation Have you understood the concept of Interpolation and Extrapolation and Are you able to apply different method based on Interpolation and Extrapolation and bate to interpret the results Have you understood the concept of Numerical Differentiation Numerical Integration and able to interpret the nesults Have you understood the concept of Sulution of Linear Equation and able to apply & analyse it on different cases Have you understood the concepts of solution of Differential Equation and able to apply & analyse it on different cases SEM-VI Computer Network Security Course Objective To understand basics of Cryptography and Network Security. To be able to secure a message over insecure channel by various means. To learn about how to maintain the Confidentiality, Integrity and Availability of a data.	K(3) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Analyzing K(2), K(3), K(4) Understanding, Applying, Understanding, Applying, Understanding, Applying, Understanding, Applying,	н	M L	L M			

		Remembering, Understaning,	1	1		T		ı
	Are you able to identify some of the factors driving the need for network security?	Analyzing K[1], K[2], K[4]						
CO1	· · · · · · · · · · · · · · · · · · ·		м		м			
CO2	Can you identify and classify particular examples of attacks?	Understand K[2]	L	L	L			
CO3	Are you able defining the terms vulnerability, threat and attack?	Understaning, Applying K[1], K[2]	м		L			
	Are you able to identify the physical points of vulnerability in simple	Analyzing, Evaluating K[4], K[5]						
CO4	network?	Applying, Analyzing K[3], K[4]	н	М	L			
	Are you able to compare and contrast symmetric and asymmetric encryption systems and their vulnerability to attack, and explain the	Applying, Analyzing K[3], K[4]						
CO5	characteristics of hybrid systems?		м	м	м			м
BCA-602	Information System: Analysis and Design							
	Course Objective							
1	To describe principles, concepts and practice of System Analysis and Design process.							
	To explain the processes of constructing the different types of information							
2	system.							
2	To apply object oriented concepts to capture a business requirement.							
3	To design and Develop of Information Systems in real world business							
4	environment							
_	To understand the concept of dfd and trace out the error and build the							
6	problem solving capability. To develop the proposal and evaluate the cost of software.							
	To develop the proposal and evaluate the cost of software.		+				+	
CO1	Are you able to understand basic terms used in information system?	Understanding K[2]	М		М			ı
CO2	Have you understand the difference between data structures and update	Understanding, Analyzing K[2], K[4]						
	basic data files? Are you able to trace out the error and resolve it using debugging and		L	L	L			
CO3	develop logical and analytical thinking?	Evaluating K[5]	м		L			
	Have you understand the basic concept of data flow diagram.	Remembering, Understanding K[1], K[2]						
CO4		K[1], K[2]	н	м	L			
CO5	Have you able to develop a proposal of input and output design?	Creating K[6]	м	L	М			
CO6	Are you able to define the cost estimates of software?	Applying, Analyzing K[3], K[4]	м	м	м			м
BCA-603	E-commerce							
	Course Objective To understand the E-Commerce and E- business infrastructure and trends							
1	To understand the E-Commerce and E- business infrastructure and trends							
	To analyze different types of portal technologies and deployment							
2	methodologies commonly used in the industry.							
3	To understand the effectiveness of network computing and Electronic Payment System.							
	To analyze real business cases regarding their e-business strategies and							
4	transformation processes and choices.							
5	To understand the knowledge of Legal and Regulatory policy and integrate theoretical frameworks with business strategies.							
3	dieoreticai franceworks with business strategies.							
	Do you understand the Concept of E-commerce and Business Strategy in	Remembering, Understanding						
CO1	Electronic Age and different models of E-Commerce?	K[1], K[2]			м			
	What are the Administer and Maintain B2B E-Business sites?		н	L .				L
CO2	Have you Understand the Internet Architecture and Electronic Payment	Applying, Analyzing K[3], K[4] Remembering, Understanding	L	М	L			
	System.	K[1], K[2]						
CO3		Anabian Anabaian	н	L	М			L
	Are you able to demonstrate the knowledge of Legal and Regulatory policy issues in E-commerce?	Applying, Analyzing, Evaluating K[3], K[4], K[5]						
CO4			м	L	м			
CO5	Explain the protection methods from public policy issues.	Understanding, Analyzing K[2], K[4]	м	м	м			м
203		**************************************	IVI	IWI	IVI			on .
go -	Evaluate E-commerce models and identify the requirements for starting up	Understanding, Analyzing K[3],						
CO6	and operating E-business sites.	K[4], K[5]	М	М	М			М
BCA-604	E-commerce							
DCA-004	Course Objective							
1	To understand a framework and a clear language for knowledge							
	management concepts.							
	To describe how valuable individual, group and organizational knowledge							
2	is managed throughout the knowledge management cycle.							
,	To define the different knowledge types and explain how they are							
3	addressed by knowledge management. To describe the major roles and responsibilities in MIS.			1			+	
	To identify some of the key tools and techniques used in knowledge							
5	management applications.		1					
	Are you able to remember different knowledge management concepts?							
CO1	Are you age to remember unrefer knowledge management concepts?	Remembering K[1]	м	L	м			
	Have you understand the concept of data mining and knowledge discovery?							
CO2	The same Historical discussion of the Color	Understanding K[2]	М		н			
	Have you Understand the use of one of the approaches of MIS i.e. Executive information system for developing the strategic information in an							
CO3	organization?	Understanding K[2]	L	м	н			
	Evaluate different approaches of MIS and take business decisions for							
CO4	different organizations?	Evaluating K[5]	М	L	М			
CO5	Are you able to analyze the relationship between information, tacit knowledge, explicit knowledge and organizational knowledge?	Analyzing K[4]	L	н	м			м
		101-1			·		+	