SNo.	Course Code	Course Title	Credits	Course Outcomes	Program Outcomes (POs)							
					1	2	3	4	5	6	7	8
1	18UC1101	Basic English	2	Apply the practical knowledge of using action words in sentence construction.					2			
				Apply and analyse the right kind of pronunciation with regards to speech sounds and able to get different types of pronunciations.					2			
				Apply the concept of fundamental principle of counting to solve the problems on linear, circular permutations and also for the problems on selections. Apply the concept of probability, while doing the problems on Leap year & Non-Leap year problems, coins, dice, balls and cards.					2			
				Analyze the given conditions and finding out all the possible arrangements in linear & circular order. Analyze the given numbers or letters to find out the hidden analogy and apply that analogy to find solutions. Finding the odd man out by observing the principle which makes the others similar.					2			
2	18MT1105	Fundamentals of Mathematics	4	Solve problems of matrices, limits and differential equations	2							
				Formulate differential calculus, differentiation rules and identify a method for solving and interpreting the results.	2							

COURSE OUTCOMES MAPPING WITH PROGRAM OUTCOMES

S.No	Course Code	Course Name	Credits	Course Outcome								
				Formulate physical laws and relations mathematically	2							
				Verify the solution of problems through MATLAB.	2							
3	18SC1105	Logic And Reasoning	2	Apply the fundamental principle of counting and use them to measure the uncertainty in random experiments.	2							
				Apply Venn diagrams to find the conclusion of statements , solve puzzles using binary logic and problems relating to cubes.	2							
				Apply the available models for Data sufficiency & redundancy and interpret it , when given, in tabular and graphical forms.	2							
				Apply the Reasoning techniques to solve problems on arrangements, series, analogies, coding and decoding.	2							
4	18GN1001	Ecology and Environment	2	Identify the importance of Environmental education and conservation of natural resources.	1			1				
				Describe the importance of ecosystems and biodiversity.	2			2				
				Apply the environmental science knowledge on solid waste management, disaster management and EIA process.	2			2				
5	18CA1101	Fundamentals of information technology	4	Understand the basic concepts and terminology of information technology	1							
				Understand Data representation and need of Logic Gates	2							
				Understand different Types of Memories and operating systems	2							
				Apply the functionalities available in MS Office, Latex ; Installing of Windows and Linux operating systems	2							

No	Code	Course	Credits	Course Outcome								
6	18CA1102	Programming in C	5.5	Explain different concepts of C programming, used to create programs.	2							
				Discuss about different data types and control structures	2							
				Demonstrate the working of functions, arrays and pointers	3							
				Identify the working of different file handling methods	2							
				Create programs using basic and advanced concepts of C language								3
7	18CA1103	Computer Organization	3	Understand the basic units of digital computer system and number system	1							
				Understanding the basic operations of the micro operations		1						
				Analyze the machine instructions and codes to implements		2						
				Understanding various components of CPU and memory system.		2						
8	18UC1202	English Proficiency	2	Apply the concepts of accurate English while writing and become equally at ease in using good vocabulary and language skills.				2				
				Understand the importance of pronunciation and apply the same day to day conversation.				2				

No	Course Code	Course Name	Credits	Course Outcome									
				Apply the concepts of Ratios, Percentages, Averages and Analysing the given information, a student is required to understand the given information and thereafter answer the given questions on the basis of comparative analysis of the data in the form of tabulation, bar graphs, pie charts, line graphs. Analyse the given data to find whether it is sufficient or not.	2								
				Apply the basic functionality of Clocks and Calendars to find the solutions for the problems. Analyze the given symbols to understand the hidden meaning of the given expression and finding the solutions. Analyze the given conditions and finding out all the possible arrangements in linear & circular order.	2								
9	18MT1208	Computer-Oriented Statistical Methods	4	To understand the basic concepts of statistics and explains the various methods of descriptive data collection and analysis	1								
				Construct the probability distribution of a random variable, based on real-world situation, and use it to compute expectation and variance	3								
				Predict the relationship between two variables and construct the linear and non-linear regression lines for the given data	2								
				Predict the trend variations for times series data and also identify the Statistical data using Ms-Excel	2								
				Verify the solution of problems through MINITAB									3

S.No	Course Code	Course Name		Course Outcome								
10	18MB4055	Organization Management	3	Understand the theories and approaches of organizational management							1	
				Understand the basics of organization structure								1
				Understand the methods for motivating in competitive business environment.						2		
				Understand the basic modes of maintaining good industrial relations								1
11	18CA2110	Computer Networks	4	Discuss how to establish a connection among various devices. Explain the different networking concepts and devices that are used today for establishing connectivity.	2							
				Summarize the functionalities of different network protocols				1				
				Describe different WAN technologies, topologies and other basic networking concepts.				1				
				Explain how to troubleshoot a network.	2							
12	18CA1205	OOPS through Java	5	Discuss different object oriented concepts, features and its application through java.	2							
				Apply the java concepts to create standalone desktop applications.		3						1
				Identify the different predefined classes and methods in packages	2							

				Apply java concepts to create UI oriented applications, along with database manipulation.	3							
				Create applications using java concepts, swings and JDBC	3							
13	18CA1207	Data Structures Using C	5	Discuss various data structures and explain how they can be used for searching and sorting elements	2							
				Identify the pros and cons of different searching and sorting algorithms	2							
				Discuss the working of different data structures and their applications	2							
				Summarize the working of linked lists, trees and graphs	2							
				Create programs to demonstrate the functionality of different data structures, sorting algorithms, searching algorithms, etc.	3							
14	18UC3206	Campus to Corporate	2	Analyze basic concepts of critical and analytical reasoning skills apply strategies to analyze issues, arguments and some aspects of corporate communication.					1			
				Creativity in writing of any given context like sending Emails, Reports, Proposals etc. Make the student to face HR interviews.					2			
				Apply the concepts of Arithmetic, the students enhance their problem solving skills which helps them to succeed in campus drives, grooming the young learners into the corporate world.	2							
				Analyze the basic concepts of Critical and Analytical Reasoning in meeting the challenges of the	2							

No.	Course Code	Course Name	Credits	Course Outcome										
				professional world.										
15	18UC0010	Universal Human Values and Professional Ethics	2	Understand and identify the basic aspiration of human beings					1					
				Envisage the roadmap to fulfill the basic aspiration of human beings.					1					
				Analyze the profession and his role in this existence.					2					
16	18CA2107	Principles Of Virtualization & Cloud Technology	5	Describe cloud concepts and types of cloud						2				
				Migration and governance in cloud	3									
				Enumerate basic concepts of Virtualization	2									
				Illustrate deployment of VMWare						2				2
17	18CA2108	Operating System	4	Discuss the working of an operating system, with its features, uses, and other functionalities.	2									
				Describe process and storage management and how OS performs various functionalities	2									
				Identify the purpose of different process synchronization and management methods	1									
				Describe security and file system management in an operating system.		2								
18	18CA2109	Database Management Systems	4	Discuss the importance of creating and maintaining an error free database.	2									
				Apply different SQL commands to manipulate a database	2									
				Discuss how to normalize a database	2									

				Describe transaction concepts in a database	2						
				Create database tables and manipulate them using SQL queries		2					
19	18CA2110	Web Technologies	4	Describe the features of different web technologies		3					
				Illustrate applications using HTML, CSS and JS	2						
				Identify the different tools used for creating web pages and what are their pros and cons	2						
				Apply multimedia, canvas and storage concepts to develop HTML5 apps			3				
				Create web pages, forms, etc. Use styling techniques in the web pages and validate them.			3				
20	18UC2204	Aptitude Builder – 1	2	Apply the concept of Critical Reading and Analytical Reading and comprehend the key ideas and gist of a passage.				2			
				Apply the concepts of grammar, various strategies and the usage of formal language in written expression				2			
				Apply the concepts of Numbers to solve the problems related to divisibility rules, problems based on Unit's digit, Remainders, Successive Division, Prime Factorization, LCM & HCF problems.	2							

				Apply the various concepts of cubes to find out how to cut a cube to get the maximum number of smaller identical pieces, how to minimize the number of cuts required to cut a cube into the given number of smaller identical pieces, how to count the number of smaller cubes which satisfy the given painting scheme.	2						
21	18CA2211	Software Engineering	3	Discuss the need for following a well-structured format for the development of software applications	2						
				Generalize how to reduce the complexity to transition from one phase in software development to another.						2	
				Summarize different testing concepts	2						
				Identify how to manage a software development project				2			
22	18CA2212	Fundamentals Of Information Security	4	Explain various information security concepts	2						
				Discuss the need for information security in the internet, and how to manage the risks.	2						
				Summarize how to identify and access risks			2		1		
				Describe network infrastructure security and how to monitor a network			2		1		
23	18CA2213	Ethical	5	Explain the concepts and types of Ethical Hacking	2						

Sno	Code	Course	Credits	Course Outcome								
		Hacking Fundamentals		Using tools create hack in scenarios			3			1		
				Identify how to perform web hacking			2				2	
				Implement report writing and mitigation	3							2
				Demonstrate the concepts of ethical hacking using tools and techniques			3	3		1		
24	18CA2214	Cryptography Fundamentals	4	Explain concepts of cryptography/ algorithms/ keys	1							
				Identify the use of digital signatures	2							
				Explain concepts involved in key management			2			1		
				Discuss various applications of cryptography			2					
25	18CA2215	Fundamentals Of Datacenter	3	Explain the basic concepts of data center and its components	2							
				Describe data center designs	2							
				Compare different types of server farms			2					
				Discuss data center construct and back-up/recovery technologies				1				1
26	18CA2216	Fundamentals Of Cloud Storage	5	Explain the types of storage and usage in different scenarios	2			1				
				Outline concepts of a backup recovery and management of data	2			1				

S.No	Course Code	Course Name	Credits	Course Outcome								
				Explain consistency and management of storage infrastructure	2							1
				Identify different storage management challenges			2			1		
27	18UC3105	Aptitude Builder – 2	2	Apply the strategies and techniques learnt in carrying out conversations in different contexts. Analyse the different parameters and formats of written technical communication and apply in everyday work and life.						2		
				Analyse the concepts of critical and analytical reading skills. Apply the strategies and techniques learnt in handling interviews in different contexts.						2		
				Apply the concepts of Ratio & Proportion, Percentages, Profit &Loss, Simple & Compound Interest, students will be able to solve the problems based on Ratios, problems involving Percentages, problems related to cost price, selling price, profit, loss, marked price and discounts, problems involving interest.	2							
				Analyze the given series of numbers to predict the next number in the series. Analyze the given set of numbers or letters to find the analogy. Analyze the given data to find the code which is used to encode a given word and use the same code in the process of decoding. Apply the given set of conditions to select a team from a group of members.	2							

No	Course Code	Course Title		Course Outcome							
28	18CA3117	Computer Forensics	5	Explain Forensics in Information Technology World	2				1		
				Discuss different data recovering methods	2				1		
				Identify various forensics techniques and their working		3			1		
				Explain the use of cyber laws and describe them	2				1		
				Analyze and validate forensic data		3	3				
29	18CA3118	Virtualization & Cloud Security	5	Explain importance of Information Security in the Cloud Context		2					
				Discuss various concepts of cloud security		2					
				Classify the cloud vulnerabilities and threats			3				
				Outline how cloud and Security works in a seamless model							1
30	18CA3119	IT Governance, Risk& Information Security Management	5	Define Governance in Info Sec areas	2						
				Classify various threats and risk involved		2					
				Summarize the Risk IT Framework		2					
				Identify how to manage information security		2					
31	18CA3120	Server Operating Systems	5	Ability to understand the components of Windows Server 2008 and their functions	2						
				Ability to configure and manage network servicesand active directory domain services				3			3

S.No	Course Code	Course Name	Credits	Course Outcome						
				Ability to understand the components of Linux OS and their functions	2					
				Ability to manage advanced users and groups	3	3				
				Ability to handle server process management and trouble shooting	3	3				
32	18FL3054	French Language	2	Ability to pronounce French words				2		
				Understanding of French culinary				1		
				Ability to converse in French language				3		
33	18CA3222	Introduction To Wireless & VOIP Technologies	3	Explain context of security in Wireless environment	2					
				Summarize how to provide VoIP security	2					
				Classify types of threats in Mobile, Wireless and VOIP			2			
				Explain how security should be enforced during mobile application development	2					
34	18CA3223	Introduction to Windows Azure	3	Define windows azure basics and cloud background	2		2		1	
				Discuss the concepts of storage in Azure	2		2			
				Summarize the process for creating and manipulating tables	2		2		1	1
				Identify the steps for creating a web site	2		2		1	
				Illustrate how to create basic elements such as websites, SQL server etc						3

S.No	Course Code	Course Name	Credits	Course Outcome									
				Understand the characteristics of biv...	1			1			1		
				Understand the YARN Infrastructure.	1		1			1			
				Learning different Sorting, Shuffling		2							
36	18CA3121	Internship	2	Apply basic concepts learnt to solve real-time problems		2							
				Discuss the IT organization hierarchy and working	1	1							
				Identify the tools/network and their functionalities to create and test application/connectivity			2				2		
				Summarize the procedures used for creating and testing applications		3					3		
				Create real time applications							3	3	
37	18IE4048	PROJECT	9	Apply technologies learnt to real life situations							3	3	
				Apply knowledge of IT Sec and Cloud security			3						
				Identify how to create a project keeping in mind Organizational Ethics and responsibilities								2	

DEPARTMENT OF COMPUTER APPLICATIONS

MAPPING OF COs WITH POs:

HOD-BCA