

## NUTAN VIDYA MANDIR EDUCATION SOCIETY'S LATE SOW.KAMALTAI JAMKAR MAHILA MAHAVIDYALAYA, PARBHANI <u>Department of Computer Science</u>

#### Introduction

Information Technology has become a favorite choice not only for students but also for their parents, as it opens the roads for abroad. This popularity of IT is also due to its potential of improving the lives of a common man. A byword for smart life, Information technology has been the main catalyst to make the existence of mankind simpler, smoother and easier. In the contemporary world, a man with information has the power to turn the wheels of fortune. In addition to this, IT also challenges the competence of an individual and motivates them to come up with ideas that can transform the structure of human life. The stupendous role of Information Technology is well reflected in multinational corporations, large-cap, mid-cap and small-cap businesses that involves and in a plethora of works like management of data, inventory, customer relationship, Information Systems, etc.

The most alluring part of this field is that there is no shortage of job options at both entry level and expert level, as the IT sector is expanding by a quantum fold. After completing their B-Tech in IT, students can seek jobs at almost all the major Multinational Corporations (MNCs) like IBM, Microsoft, Cisco, Infosys, etc. Here, some of the job profiles served by candidates after attaining a degree in the IT industry have been highlighted i.e. Computer Programmer, Web Developer, Software Analyst, Software Engineer, Information Security Analyst etc.

#### Establishment

Parbhani district is known for its rich cultural heritage. Late Sow. Kamaltai Jamkar Mahila Mahavidyalaya was established in 1983. The department was established in 2000 on Permanent Non grant basis. After that, as per the demand of students in 2009, the college has started post-graduation course M.Sc. (CS). The department has shown its involvement in all types of academic, co-curricular and extracurricular activities. Many literary programs are being organized by the department. These programs supported students to create their own identity. Department organized Campus interviews for all third year and Post graduate students also organized quiz competition for building reasoning and aptitude ability.

## **Objectives of the Department**

- To provide students with up to date technical knowledge & develop the skills needed for a successful start in computer industry.
- To enable students for developing solutions to problems by utilizing different computer platforms & programming languages.
- ◆ To prepare students for continued learning in a rapidly changing discipline.
- To design, implement & evaluate a computer based system, process or program to meet desired needs within realistic constraints.
- To apply computer science principles in a broad range of non-computing application.

## Highlights

- Outcome Based Education
- Excellent infrastructure & computing facilities
- Motivation for Self-learning initiatives
- Excellent academic results
- Well defined student counseling and mentoring process
- Strong focus on placement preparation & continuous assessment
- ✤ Transparency in academic and administrative processes.
- ✤ Best placement opportunities to students.
- Focus on Programming Hands-On

## **Department Faculty**

Name of Faculty	Designation	Date of Appointment	Qualification	Specialization	Teaching Experience
Mohammed Khaled	Assistant Professor	2018	M.Sc. Computer Science, M.Sc. Computer Management, B.Ed.	Computer Science, Computer Management	UG: 11 years PG: 13 years
Kulkarni Nikita Nandkumar	Assistant Professor	2019	M.Sc. Computer Science, B.E (Computer Science)	Computer Science	UG: 6 years PG: 5 years
Sharma Kanchan Parthkumar	Assistant Professor	2020	M.Sc. Computer Science	Computer Science	UG: 2 years PG: 2 years
Muli Nakshatra Anilrao	Assistant Professor	2021	M.Sc. Computer Science	Computer Science	UG: 1 years PG: 1 years

# Names of Programmes / Courses offered

Semester	<b>Course Code</b>	Course Title
	BCA-101	Fundamentals of Computer Science and Information Technology
	BCA-102	Office Automation
	BCA-103	Programming in C
	BCA-104 A	Element of Statistics
	BCA-104 B	Mathematical Technique In Computer Science (MTCS)
		University recognized MOOC (NPTEL / SWAYAM /
	BCA-105 A	others) OR Intra / Inter Departmental courses OR
	BCA-105 B	Applied English OR Business Communication
	BCA-106	C Programming
First	BCA-107	Office Automation
	I	
	BCA-201	Java Script
	BCA-202	Graphics Design And Content Management Tools
	BCA-203	Web Technology
	BCA- 204 A	E-Commerce
	BCA- 204 A BCA-204 B	E-Commerce Business Accounting With Tally
	BCA-204 B	Business Accounting With Tally University recognized MOOC (NPTEL / SWAYAM /
	BCA-204 B BCA-205 A	Business Accounting With Tally University recognized MOOC (NPTEL / SWAYAM / others) OR Intra / Inter Departmental courses OR

#### BCA First Year 2023-2024

BCA Second Year 2023-2024				
Semester	Course Code	Course Title		
	BCA-301	Programming in C++		
	BCA-302	Operating System Concepts		
	BCA-303	Data Base Management System		
	BCA-304 A	Business Application and ERP		
	BCA-304 B	Introduction to Multimedia		
	BCA-305 A	University recognized MOOC (NPTEL / SWAYAM / others) OR Intra / Inter Departmental courses OR		
	BCA-305 B	Numerical Aptitude		
	BCA-306	C++ Programming		
Third	BCA-307	DBMS		
	BCA-401	Programming in JAVA		
	BCA-402	Data Structure and Algorithm		
	BCA-403	RDBMS		
	BCA- 404A	Operational Research		
	BCA- 404B	Computer Graphics		
	BCA- 405A	University recognized MOOC (NPTEL / SWAYAM / others) OR Intra / Inter Departmental courses OR		
	BCA- 405B	Logical Reasoning		
	BCA-406	JAVA Programming		
Fourth	BCA-407	RDBMS		

BCA Third Year 2023-2024				
Semester	Subject Code	Subjects		
	BCA-501	System Analysis and Design (SAAD)		
	BCA-502	Web Development and PHP Programming		
	BCA-503	Mobile Application Development		
	BCA-504-A	Computer Network		
S	BCA-504-B	Cloud Computing		
Semester-V	BCA-505 A	University recognized MOOC (NPTEL / SWAYAM / others) OR Intra / Inter Departmental courses OR		
	BCA-505-B	Linux Operating System		
	BCA-506	Lab- PHP Programming		
	BCA-507	Lab- Mobile Application Development		
Semester	Subject Code	Subjects		
	BCA-601	Software Engineering		
	BCA-602	Python		
	BCA-603	Project Development activity and Seminar		
	BCA-604-A	Windows Programming		
Semester-VI	BCA-604-B	Digital Image Processing		
Semester-v1	BCA-605 A	University recognized MOOC (NPTEL / SWAYAM / others) OR Intra / Inter Departmental courses OR		
	BCA-605-B	Cyber Security		
	BCA-606	Lab- Python		
	BCA-607	Lab- Windows Programming and DIP		

M.Sc. CS First Year 2023-2024				
Semester	Course Code	Course Title		
	SCMPSC-401	Computer Architecture and Microprocessor		
	SCMPSC-402	Python Programming		
	SCMPSC-403	Advanced Java		
	SCMPSCP-401	Lab 1: Comp. Arch. and Microp. Lab		
Semester-I	SCMPSCP-402	Lab 2: Python Lab		
Semester-1	SCMPSCP-403	Lab 3: Java Lab		
	SCMPSE-401	Chose any one		
		A. Data Analysis using Power BI		
		B. Statistical Method		
		C. Web Technology		
	SVECR-401	Research Methodology		
	SCMPSC-451	Mobile Application Development with Kotlin		
	SCMPSC-452	Cloud Computing		
	SCMPSC-453	NoSQL with MongoDB		
	SCMPSCP-451	Lab 4: Kotlin Lab		
Semester-II	SCMPSCP-452	Lab 5: Cloud Computing Lab		
Semester-II	SCMPSCP-453	Lab 6: NoSQL Lab		
	SCMPSE-451	Chose any one		
		A. Data Structure		
		B. Software Testing		
		C. PHP and MySQL		
	SCMPSOJ-451	On Job Training , Internship/ Apprenticeship or Field		
		Project		

M.Sc. CS Second Year 2023-2024			
Semester	Course Code	Course Title	
	CS-301	Advance Database Administration	
	CS-302	Web Technologies	
	CS-303	Data Mining and Data	
		Warehousing	
	CS-304 A	Artificial Intelligence	
	CS-304 B	Mobile Application Development	
	CS-304 C	Research Methodology	
Semester-III	CS-305	Lab-5: Adv Database Admin	
	CS-306	Lab-6: Web Technologies	
	CS-307A	University recognized MOOC (NPTEL / SWAYAM / others) OR Intra / Inter Departmental OR Intra / Inter School	
	CS-307 B	Cyber Security	
	CS-307 D	Cyber Security	
	CS-308	SK-03: Seminar Presentation Activity	

Semester	Course Code	Course Title
	CS-401	Digital Image Processing
	CS-402	Linux Administration
	CS-403	Major Project development Activity
	CS-404 A	Client Server Technology
	CS-404 B	Software Testing Tools
Semester- IV	CS-405	Lab-7: DIP
	CS-406	Lab-8: Based on Elective Subject
		University recognized MOOC (NPTEL / SWAYAM /
	CS-407A	others) OR Intra / Inter Departmental OR Intra / Inter
		School OR
	CS-407 B	Logical Reasoning and Quantitative Aptitude
	CS-408	SK-04 : Soft Skills

# **Programme Outcomes and Course Outcomes**

Name of the	Programme Outcomes
Programme	
BCA	<ul> <li>After completing graduation in BCA, the students will-</li> <li>PO 1 Implement various programming languages like C, C++, VB.NET and Java construct in the right way.</li> <li>PO 2 Demonstrate basic technicalities of creating word document creating PowerPoint presentation, design spreadsheet for office use.</li> <li>PO 3 Define fundamental account concept conventions and terminologies</li> <li>PO 4 Understand concepts of key areas in computer science</li> <li>PO 5 Analyse and apply latest technologies to solve problems in the areas of computer applications.</li> <li>PO 6 Analyse and synthesis computing systems through quantitative and qualitative techniques.</li> <li>PO 7 Apply technical and professional skills to excel in business.</li> <li>PO 8 Develop practical skills to provide solutions to industry, society and business.</li> </ul>
MSC (Computer Science)	<ul> <li>After Completing graduation in M.Sc. Computer Science, the students will-</li> <li>PO 1 Possess knowledge and understanding of scientific subjects and challenges.</li> <li>PO 2 Can apply their knowledge and under-standing with a professional approach</li> <li>PO 3 Can use the relevant equipment, technology and software.</li> <li>PO 4 Can apply their knowledge, understanding and proficiency for resolution in new and unfamiliar situations or in an interdisciplinary context.</li> <li>PO 5 Use software development tools, software systems, and modern computing platforms.</li> <li>PO 6 Are capable of integrating knowledge, resolve complex issues and present an opinion based on the available information. PO 7</li> <li>Can apply the methods of the relevant scientific field and/or profession to present, develop and solve projects</li> <li>PO 8 Understand research and research findings.</li> </ul>

Name of the Course	Paper	Course Outcomes
Course	Fundamentals of Computer Science and Information Technology	<ul> <li>CO 1 To learn basic function of devices like I/O, HDD etc.</li> <li>CO 2 To Understand the Fundamental of Software and Hardware.</li> <li>CO 3 Understand the Concept of Operating System and Network.</li> </ul>
	Office Automation	<ul> <li>CO 1 Demonstrate oral communications skills such as presentation for an audience, discussions, and debates.</li> <li>CO 2 Demonstrate writing abilities such as: reports, instructions, and documentation.</li> <li>CO 3 Exhibits good listening skills when others are speaking, keeping notes, journals.</li> </ul>
	Programming in C	<ul> <li>CO 1 Learn how to build by the algorithms for problems.</li> <li>CO2 Learn how to create pictorial representations of the program.</li> <li>CO 3 Learn how to apply logic for problems.</li> <li>CO 4 Enhance their programming skills.</li> </ul>
	Elective: Element of	<b>CO 1</b> Have the versatility to work effectively in
B.C.A I	Statistics	a broad range analytic, scientific, government and other position. <b>CO 2</b> Recognize & appreciate the connection between theory and application. <b>CO 3</b> Be lifelong learners who are able to independently expand their statistical expertise when needed.
	<b>Open Elective: Business</b>	
	Communication	<ul> <li>CO 1 Understand and demonstrate Basic English usages for their different purposes.</li> <li>CO 2 Clear entrance examination and aptitude tests.</li> <li>CO 3 Write various letters, reports required for professional life.</li> </ul>
	JavaScript	<ul> <li>CO 1 Students will be a Front-End website Developer</li> <li>CO 2 JavaScript ensures student to have a responsive, mobile-first website. CO 3 It paces up the development process by offering resources such as templates and themes, which can be customized according to the project needs.</li> </ul>

	Graphics Design and	
	Content Management	CO1 Utilize several Flash tools and tactics
	Tools	learned throughout the course to produce an interactive flash based website.
		<b>CO 2</b> Publish flash movies in numerous
		formats and contexts in a professional
		and web friendly manner. CO 3 Know types of databases and how to
		design them.
		<b>CO 4</b> Plan website by choosing colour
	Web Technology	schemes, fonts, layouts, and more.
	Web Technology	<b>CO 1</b> Understand the enabling technologies for
		building Internet and Web database
		applications.
		<b>CO 2</b> Students are able to develop a dynamic webpage by the use of java script and
		DHTM.
		CO 3 Apply the techniques and features of the
		client/server development languages to construct a database application based on
		Internet.
	Elective : E-Commerce	
		<b>CO 1</b> Understand the basic concepts and
		technologies used in the field of management information systems.
		<b>CO 2</b> Have the knowledge of the different types
		of management information systems. <b>CO 3</b>
		Understand the processes of developing and implementing information systems. <b>CO 4</b>
		Be aware of the ethical, social, and
		security issues of information systems
	<b>Open Elective:</b>	<b>CO 1</b> Understand and demonstrate Basic
	Functional English	English usages for their different purposes
		<b>CO 2</b> Clear entrance examination and
		aptitude tests. CO 3 Write various letters, reports required for
		professional life.
		<b>CO 1</b> Apply C++ features to program design and
	Object Oriented	implementation. CO 2 Explain object-oriented concepts and
	Programming using C++	describe now they are supported by C++
		including.
		<b>CO 3</b> Identifying the features and peculiarities of the C++ programming language.
B.C.A II		<b>CO 1</b> Gain extensive knowledge on principles
		and modules of operating systems.
	Operating System	<b>CO 2</b> Understand key mechanisms in design of operating systems modules.
		CO 3 Understand process management,
		concurrent processes and threads,
		memory management, virtual memory concepts, deadlocks.
		concepts, ucautocks.

Database Management System	<ul> <li>CO1: Able to master the basic concepts and understand the applications of database systems.</li> <li>CO2: Able to construct an Entity-Relationship (E-R) model from specifications and to transform to relational model. CO3: Able to construct unary/ binary/ set/ aggregate queries in Relational Algebra. CO4: Understand and apply database normalization principles.</li> </ul>
Introduction to	<b>CO1:</b> Student will learn the different content forms of Multimedia such as text, audio,
Multimedia	images, animations, video and interactive
	<ul> <li>content.</li> <li>CO 2 Identify and describe the function of the general skill sets in the multimedia industry.</li> <li>CO 3 Identify the basic components of a multimedia project.</li> </ul>
	<b>CO 1</b> To assess whether different levels of
Numerical Aptitude	problem solving ability have any impact on the Mathematical Aptitude. <b>CO 2</b> To find out whether the type of school have any impact on the Mathematical Aptitude. <b>CO 3</b> To find out the relationship of Mathematical Aptitude with the variables like Intellectual and Problem Solving Abilities.
	<b>CO 1</b> Understand the concept of OOP as well as the purpose and usage principles of
Java Programming	<ul> <li>inheritance,polymorphism, encapsulation and method overloading.</li> <li>CO 2 Identify classes, objects, members of a class and the relationships among them needed for specific problem.</li> <li>CO 3 Develop programs using the Java</li> <li>Collection API as well as the Java standard class library.</li> </ul>
	<b>CO 1</b> Have a comprehensive knowledge of the data structures and algorithms on which file
Data Structure	structures and algorithms on which the structures and data bases are based. CO 2 Understand the importance of data and be able to identify the data requirements for an application.
	<b>CO 3</b> Understand the issues involved in algorithm complexity and performance.
	and performance.

Relational Database Management System	<ul> <li>CO 1 Master the basic concepts and appreciate the applications of database systems. CO 2 Be familiar with a commercial relational database system (Oracle) by writing SQL using the system.</li> <li>CO 3 Be familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B<sub>1</sub> tree, and hashing.</li> </ul>
Elective: Computer Graphics	<ul> <li>CO 1 Understand the real graphics programming.</li> <li>CO 2 Understand the API OpenGL CO 3 Understand the mathematics basics, mainly linear algebra and implemented by OpenGL and programming language like C.</li> </ul>
Logical Reasoning	CO 1 Distinguish the basic elements of arguments and recognize the different types of arguments. CO 2 Identify logical relations among statements; and Analyse logically complex statements into their truth- functional or quantificational components. CO 3 Distinguish valid deductive arguments from invalid ones.
System Analysis and Design	<ul> <li>CO 1 Upon successful completion of this course, you will be able to gather data to analyse and specify the requirements of a system</li> <li>CO 2 Design system components and environments &amp; build general and detailed models that assist programmers in implementing a system.</li> <li>CO 3 It also design a database for storing data, a user interface for data input and output, and controls to protect the system and its data.</li> </ul>
Web Development and PHP Programming	CO 1 Write PHP script to handle HTML forms. CO 2 Analyse and solve common web Application tasks by writing PHP program. CO 3 Analyse and solve various database tasks using PHP language
	<b>CO 1:</b> Install and use appropriate tools for
Mobile Application Development	Android development, including IDE, device emulator, and profiling tools. <b>CO2</b> : Understand the Android OS architecture. <b>CO3</b> : Understand the Android application

B.C.A III

# device emulator, and profiling tools. CO2: Understand the Android OS architecture. CO Understand the Android application architecture, including the roles of the task stack, activities, & services.

Computer Network Linux O.S	<ul> <li>CO 1 Learn the need to create a Network.</li> <li>CO 2 Learn about different layers and protocols present in those layers.</li> <li>CO 3 Learn to configure the network devices.</li> <li>CO 4 Learn about IP -Addressing.</li> <li>CO 1 Make appropriate decisions during the configuration process to create a properly functioning Linux environment.</li> <li>CO 2 Analyse the need for security measures for a Linux environment.</li> <li>CO 3 Identify the different uses and advantages of Linux in a business environment in order to participate in discussions regarding network servers and services.</li> <li>CO 1 An ability to identify, formulate, and solve</li> </ul>
	complex engineering problems by applying principles of engineering, science, and mathematics
Software Engineering	<ul> <li>CO 2 An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factor.</li> <li>CO 3 An ability to work professionally in both thermal and mechanical systems areas.</li> </ul>
Python	<ul> <li>CO1: Upon successful completion of this course, student will be able to</li> <li>CO2: Explain basic principles of Python programming language</li> <li>CO3: Implement object oriented concepts</li> <li>CO4: Implement database and GUI applications</li> </ul>

	Project Development activity and Seminar Digital Image Processing	<ul> <li>CO 1 The aim of the Project work is to acquire practical knowledge on the implementation of the programming concepts studied.</li> <li>CO 2 develop plans with relevant people to achieve the project's goals</li> <li>CO 3 Estimate and cost the human and physical resources required, and make plans to obtain the necessary resources</li> <li>CO 1 Review the fundamental concepts of a digital image processing system.</li> <li>CO 2 Analyse images in the frequency domain using various transforms.</li> <li>CO 3 Evaluate the techniques for image</li> </ul>		
M.SC CS I	Cyber Security Computer Architecture	<ul> <li>enhancement and image restoration</li> <li>CO1: Analyze and evaluate the cyber security needs of an organization.</li> <li>CO2: Determine and analyze software vulnerabilities and security solutions to reduce the risk of exploitation. CO3: Measure the performance and troubleshoot cyber security systems.</li> <li>CO4: Implement cyber security solutions and use of cyber security, information assurance, and cyber/computer forensics software/tools.</li> <li>CO1 Describe the architecture and</li> </ul>		
M.SC CS I	and Microprocessor	organization of microprocessor along with instruction set format.		
		<ul> <li>CO 2 Describe modes and functional block diagram of 8086 along with pins and their functions.</li> <li>CO 3 Develop assembly language programs using various programming tools. Visit for more Learning Resources.</li> </ul>		
	Python Programming	<ul> <li>CO 1 Design and Develop applications using Python programming.</li> <li>CO 2 Design object oriented programs with Python classes.</li> <li>CO 3 Design and Develop applications connecting with database</li> </ul>		
	Advanced Java	<ul> <li>CO 1 Create dynamic and interactive web sites and interaction with client and server.</li> <li>CO 2 Do server side programming with java Servlets and JSP.</li> <li>CO 3 Implement different data structure using collection framework</li> </ul>		
	Ele: Web Technology	CO 1 Develop the modern web pages using the HTML and CSS features with different layouts as per need of applications. CO 2 Use the JavaScript to develop the dynamic web pages. CO 3 Use server side scripting with PHP to generate the web pages dynamically using the database connectivity		

Mobile Application Development with Kotlin	<ul> <li>CO 1 Learning basic concepts of Android development such as activities, intents, layouts, and views.</li> <li>List different Android components and their roles in app development.</li> <li>CO 2 Analyze network requests and responses to integrate remote data sources. Analyzing user feedback and behavior to understand how users interact with the app.</li> <li>CO 3 Create and develop an Android based Application.</li> </ul>
Cloud Computing	<ul> <li>CO 1 Apply the fundamental concepts in Data centers to understand the tradeoffs</li> <li>in power, efficiency and cost. CO 2 Identify</li> <li>resource management fundamentals,</li> <li>i.e. resource abstraction, sharing and</li> <li>sandboxing and outline their role in</li> <li>managing infrastructure in cloud</li> <li>computing.</li> <li>CO 3 Analyze various cloud programming</li> <li>models and apply them to solve problems</li> <li>on the cloud.</li> </ul>
NoSQL with MongoDB	<ul> <li>CO 1 Demonstrate an understanding of the detailed architecture, define objects, load data, query data and performance tune Column-oriented NoSQL databases.</li> <li>CO 2 Demonstrate an understanding of the detailed architecture, define objects,</li> </ul>
	load data, query data and performance tune Key-Value Pair NoSQL databases. <b>CO 3</b> Evaluate NoSQL database development tools and programming languages.
Ele: Data Structure	<ul> <li>CO 1 Ability to analyze algorithms and algorithm correctness.</li> <li>CO 2 Ability to summarize searching and sorting techniques</li> <li>CO 3 Ability to describe stack, queue and linked list operation</li> </ul>

	Advance Database Administration	<ul> <li>CO 1 Master the basic concepts and appreciate the applications of database systems. CO 2 Be familiar with a commercial relational database system (Oracle) by writing SQL using the system.</li> <li>CO 3 Be familiar with the basic issues of transaction processing and concurrency control.</li> </ul>		
	Web Technologies	<ul><li>CO1: Students Will be Students are able to develop a dynamic webpage by the use of PHP and java script.</li><li>CO 2: On completion of this course, a student will be able to develop a web application using PHP and java script</li></ul>		
M.SC CS II	Data Mining and Data Warehousing	<ul> <li>CO 1 Store voluminous data for online processing.</li> <li>CO 2 Pre-process the data for mining applications.</li> <li>CO 3 Apply the association rules for mining the data.</li> <li>CO 4 Design and deploy appropriate classification techniques.</li> </ul>		
	Mobile Application Development	CO 1: Install and use appropriate tools for Android development, including IDE, device emulator, and profiling tools. CO2: Understand the Android OS architecture. CO3: Understand the Android application architecture, including the roles of the task stack, activities, & services.		
	Cyber Security	<ul> <li>CO1: Analyze and evaluate the cyber security needs of an organization.</li> <li>CO2: Determine and analyze software vulnerabilities and security solutions to reduce the risk of exploitation.</li> <li>CO3: Measure the performance and troubleshoot cyber security systems.</li> <li>CO4: Implement cyber security solutions and use of cyber security, information assurance, and cyber/computer forensics software/tools.</li> </ul>		
	Digital Image Processing	<ul> <li>CO 1 Review the fundamental concepts of a digital image processing system.</li> <li>CO 2 Analyse images in the frequency domain using various transforms.</li> <li>CO 3 Evaluate the techniques for image enhancement and image restoration</li> </ul>		
	Linux Administration	<ul> <li>CO 1 Make appropriate decisions during the configuration process to create a properly functioning Linux environment.</li> <li>CO 2 Analyse the need for security measures for a Linux environment.</li> <li>CO 3 Identify the different uses and advantages of Linux in a business environment in</li> </ul>		

	order to participate in discussions regarding network servers and services.
Project Development activity and Seminar	<ul> <li>CO 1 The aim of the Project work is to acquire practical knowledge on the implementation of the programming concepts studied.</li> <li>CO 2 develop plans with relevant people to achieve the project's goals</li> <li>CO 3 Estimate and cost the human and physical resources required, and make plans to obtain the necessary resources</li> </ul>
Software Testing Tools	<ul> <li>CO 1 Various test processes and continuous quality improvement</li> <li>CO 2 Input space modelling using combinatorial designs</li> <li>CO 3 Application of software testing techniques in commercial environments</li> </ul>
Logical Reasoning and Quantitative Aptitude	<ul> <li>CO 1 Distinguish the basic elements of Arguments and recognize the different types of arguments.</li> <li>CO 2 Identify logical relations among statements and Analyse logically complex statements into their truth- functional or quantificational components.</li> <li>CO 3 Distinguish valid deductive arguments from invalid ones.</li> </ul>

## **Curriculum Revision (UG and PG)**

Sr No.	Class	Revision Year
1	BCAI/MSCCSI	2019
2	BCAII/MSCCSII	2020
3	всаш	2021
4	MSC CS I	2023

# **Curriculum Planning**



# virtual Teaching platforms

# Name of the Teacher: Mohammed Khaled

	Innovative Teaching Methods									
Class	Google Classro oms Class code	YouTube link	Google Drive	Google Meet	Google Forms	Teachmint Class code	WhatsApps	Telegra m	O th er	
BCA FY		https://yout ube.com/@l earnwithkha ledshaz2473 ?si=8eRIsj4 9n1ZW_Im A			<u>https://forms</u> .gle/N dxXoo 5oYG qkmh 836	https://ww w.teachmi ntapp.com /enroll/438 236730/60 3e3d46ad3 182c75c9c d22d?utm _source=a pp?utm_ medium=a ndroid	https://chat .whatsapp. com/DLBp 7gsuqnRCa te20IDTxA			
BCA SY		https://yout ube.com/@l earnwithkha ledshaz2473 ?si=8eRIsj4 9n1ZW_Im A			https:/ /forms .gle/A qw3o wZ7X KQbX ENC8	https://ww w.teachmi ntapp.com /enroll/599 967781/60 3e3d46ad3 182c75c9c d22d?utm 	https://chat .whatsapp. com/JGjpA hTF5yzEle L2DEzGD C			
BCA TY		https://yout ube.com/@l earnwithkha ledshaz2473 ?si=8eRIsj4 9n1ZW_Im A			https:/ /forms .gle/57 wByc2 xuwX Uzuvn 9	https://ww w.teachmi ntapp.com /enroll/548 608464/60 3e3d46ad3 182c75c9c d22d?utm _source=a pp?utm_ medium=a ndroid	https://chat .whatsapp. com/KxG5 6Y0SxQ12i EgKoDZiv T			

MSC CS FY	ube. earn ledsl ?si=8	s://yout com/@l withkha naz2473 BeRIsj4 ZW_Im	https:/ /forms .gle/V TNjV D5Ntk L68N5 S7	https://ww w.teachmi ntapp.com /enroll/868 686040/60 3e3d46ad3 182c75c9c d22d?utm	https://chat .whatsapp. com/HzQX 7mYKeu6 K5zc2LlG8 t6	
				<u>_source=a</u> pp?utm_ medium=a ndroid		
MSC CS SY	ube. earn ledsl ?si=8	s://yout com/@l withkha haz2473 8eRIsj4 ZW_Im	https:/ /forms .gle/q8 h1JcZ NJFoB fC6P7	https://ww w.teachmi ntapp.com /enroll/812 388445/60 3e3d46ad3 182c75c9c d22d?utm 	https://chat .whatsapp. com/K7V3 PCU9M2r2 MOkrWi7e <u>s0</u>	

## Name of the Teacher: Kulkarni Nikita Nandkumar

	Innovative Teaching Methods								
Class	Google Classro oms Class code	YouTube link	Google Drive	Google Meet	Google Forms	Teachmint Class code	WhatsApps	Telegra m	O th er
BCA FY							https://chat .whatsapp. com/DLBp 7gsuqnRCa te20IDTxA		
BCA SY							https://chat .whatsapp. com/JGjpA hTF5yzEle L2DEzGD C		
BCA TY							https://chat .whatsapp. com/KxG5 6Y0SxQ12i EgKoDZiv T		
MSC CS FY						https://ww w.teachmi ntapp.com /enroll/769 6082040/6 2413b49f3 196bac17d 6cfe6?utm source=a pp?utm_ medium=a ndroid	https://chat whatsapp. com/HzQX 7mYKeu6 K5zc2LlG8 t6		
MSC CS SY						https://ww w.teachmi ntapp.com /enroll/809 138191/62 413b49f31 96bac17d6 cfe6?utm source=ap p?utm_me dium=and roid	https://chat .whatsapp. com/K7V3 PCU9M2r2 MOkrWi7e s0		

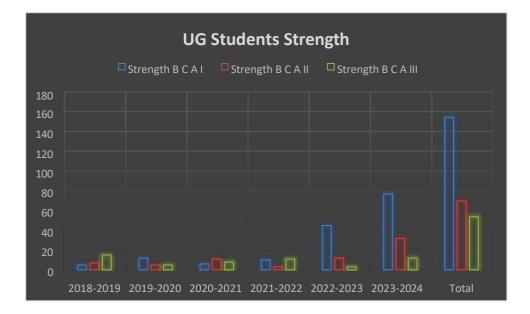
# Name of the Teacher: Sharma Kanchan Parthkumar

	Innovative Teaching Methods									
Class	Google Classro oms Class code	YouTube link	Google Drive	Google Meet	Google Forms	Teachmint Class code	WhatsApps	Telegra m	O th er	
BCA FY						https://ww w.teachmi ntapp.com /enroll/125 830238/61 c3fd3309f 69bf3f99b 4b1e?utm source=a pp?utm medium=a ndroid	https://chat .whatsapp. com/DLBp 7gsuqnRCa te20IDTxA			
BCA SY						https://ww w.teachmi ntapp.com /enroll/176 988017/61 c3fd3309f 69bf3f99b 4b1e?utm source=a pp?utm_ medium=a ndroid	https://chat .whatsapp. com/JGjpA hTF5yzEle L2DEzGD C			
BCA TY						https://ww w.teachmi ntapp.com /enroll/278 377535/61 c3fd3309f 69bf3f99b 4b1e?utm source=a pp?utm medium=a ndroid	https://chat .whatsapp. com/KxG5 6Y0SxQ12i EgKoDZiv T			

MSC CS FY			https://ww w.teachmi ntapp.com /enroll/514 0077882/6 1c3fd3309 f69bf3f99b 4b1e?utm 	https://chat .whatsapp. com/HzQX 7mYKeu6 K5zc2LlG8 t6	
MSC CS			https://ww w.teachmi	<u>https://chat</u> .whatsapp.	
SY			<u>ntapp.com</u> / <u>enroll/446</u> 274459/61 <u>c3fd3309f</u> <u>69bf3f99b</u> <u>4b1e?utm</u> <u>source=a</u> <u>pp?utm</u> <u>medium=a</u> <u>ndroid</u>	com/K7V3 PCU9M2r2 MOkrWi7e s0	

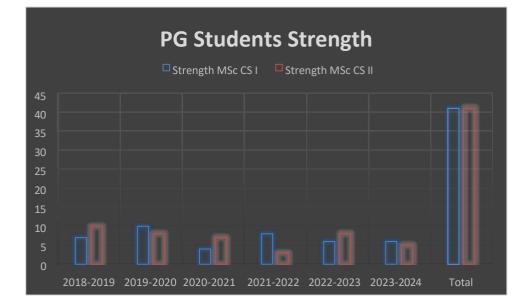
## **Students Strength (With Graph) (UG)**

Year	Strength						
	BCAI	ВСАП	ВСАШ				
2018-2019	05	07	15				
2019-2020	12	05	05				
2020-2021	06	11	08				
2021-2022	10	03	11				
2022-2023	45	12	03				
2023-2024	77	32	12				
Total	155	70	54				



## **Students Strength (With Graph) (PG)**

Year	St ength			
_	MSc CS I	MSc CS II		
2018-2019	07	10		
2019-2020	10	08		
2020-2021	04	07		
2021-2022	08	03		
2022-2023	06	08		
2023-2024	06	05		
Total	41	41		



Year		ocio - economic status of the students						
	SC	ST	OBC	OTHER	GENERAL	DIYANGJAN		
2018-2019	03	01	02	00	21	00		
2019-2020	03	02	03	01	13			
2020-2021	04	00	03	02	16			
2021-2022	02	00	01	02	19			
2022-2023	10	00	07	06	37	00		
2023-2024	20	2	19	13	68			

# **Socio - economic status of the students (UG)**

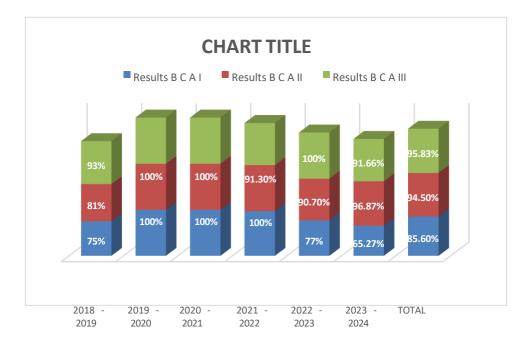
## **Socio - economic status of the students (PG)**

Year		ocio - economic status of the students							
	SC	ST	OBC	OTHER	GENERAL	DIYANGJAN			
2018-2019	01	00	06	03	07	00			
2019-2020	02	00	01	01	14	00			
2020-2021	00	00	00	00	11	00			
2021-2022	01	00	01	01	08	00			
2022-2023	01	01	01	01	10	00			
2023-2024	1		1	1	8				

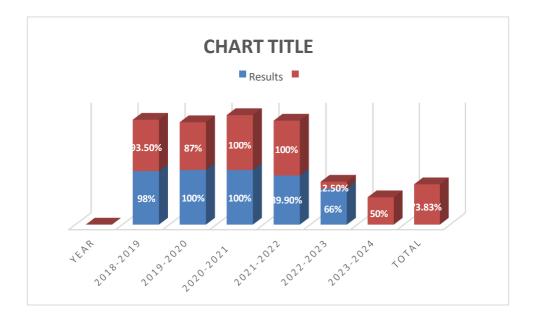
## Attainments

#### **\*** Results (With Graph)

	Results					
	BCAI	ВСАП	ВСАШ			
2018-2019	75%	81%	93%			
2019-2020	100%	100%	100%			
2020-2021	100%	100%	100%			
2021-2022	97%	100%	91.3%			
2022-2023	77%	90.7%	100%			
2023-2024	65.27%	96.87%	91.66%			
Total	85.6%	94.5%	95.83%			



Year	Resul	lts
	M.SC I	M.SC II
2018-2019	98%	93.5%
2019-2020	100%	87%
2020-2021	100%	100%
2021-2022	89.9%	100%
2022-2023	66%	12.5%
2023-2024	66%	50%
Total	86.65%	73.83%



Fresher Party Poster Presentation Reserch Festival 'Avishkar' District level	1 <sup>st</sup> Prize: Nahid Shaikh & Shraddha Sharma 2 <sup>nd</sup> Prize: Pallavi Subhedar & Vijaya Mahajan 1 <sup>st</sup> Prize at District Level Avishkar Vijaya Mahajan & Kanchan
Reserch Festival 'Avishkar'	Shraddha Sharma 2 <sup>nd</sup> Prize: Pallavi Subhedar & Vijaya Mahajan 1 <sup>st</sup> Prize at District Level Avishkar
	Vijaya Mahajan 1 <sup>st</sup> Prize at District Level Avishkar
	1 <sup>st</sup> Prize at District Level Avishkar
	Zatkawde
Research Festival 'Avishkar'	1 <sup>st</sup> Prize at University Level Avishkar
University level	Vijaya Mahajan & Kanchan Zatkawde
Research Festival 'Avishkar' State level	
Saree Day	
Seminar Presentation	
Farewel Party	
ail Awerness Program	
Poster Presentation Program	1 <sup>st</sup> prize: Alfiya Afsha Md.Azim Nasreen Ansar Khan 2 <sup>nd</sup> prize: Kadam Aarti Annasaheb
	2 <sup>nd</sup> prize: Kadam Aarti Annasaheb Sawat Mayuri Ranoji
	3 <sup>rd</sup> prize: Kahat Sheweta Pradip Bhombe Yogita Panditrao
z Competition	1 <sup>st</sup> prize: Deshpande Prajakta
	Sanajay
	2 <sup>nd</sup> prize: Sarda Tulsi Madhusudhan 3 <sup>rd</sup> prize: Bombe Yogita Panditrao
	4 <sup>th</sup> prize: Naik Dipali Chandroba
sher's Party	+ prize. Naik Dipan Chandroba
-	1 <sup>st</sup> prize: Alfiya Afhsha
strict Level)	Nakshatra Muli
	2 <sup>nd</sup> prize: Mafruja Begum Aishwarya Kulkarni
shkar research competition	2 <sup>nd</sup> prize: Alfiya Afhsha
iversity Level)	Nakshatra Muli
	State level   Saree Day   Seminar Presentation   Farewel Party   mail Awerness Program   Poster Presentation Program   z Competition   sher's Party   shkar research competition   trict Level)

			2 <sup>nd</sup> prize: Mafruja Begum Aishwarya Kulkarni
		Campus Interview	<ol> <li>Alfiya Afsha</li> <li>Nasreen Begum</li> <li>Yogini Neb</li> <li>Vijaya Mahajan</li> </ol>
		Lecture on Personality Development	
		One Week training Program on Basic of Computer	
		Research Festival 'Avishkar' State level	
		Quiz Competition on Bhartiya Sanvidhan Day	
		Quiz Competition on National Science Day	
3	2020-21	Poster Presentation Competition on Republic Day	
		Webinar- Career Opportunities in BSFI Sector	
		Picture Contest	
		One Day State Level Seminar on the occasion of (NCSAM) Cyber Crimes- Challenge Solution	
4	2021-22	Quiz on National Science Day	
		Campus Interview Of ICICI bank	
		Contest On Abbreviations on IT	<b>First Prize Agroya Shital</b> (B.C. A. F.Y.) <b>Third Prize:</b> Agrwal Ritika (B.C.A T.Y)
5	2022-23	Poster Presentation Competition During Educational Week	First Prize : Vaidya Deepali (B.C. A. S.Y.) Second Prize: Shaikh Humera (B.C.A T.Y) Second Prize: Jatti Shrutti (B.C.A F.Y) Rathod Shraddha (B.C.A F.Y) Third Prize: Agrwal Ritika (B.C.A T.Y)

		Guest Lecture on Data Security	
		Lecture on numerical aptitude	
		Cyber security awareness workshop	
		Avishkar research competition (Distr Level)	ict <sup>2nd</sup> prize : Shaikh Humera Agrwal Ritika
		National science day	
		Eid e Milan	
		One day workshop on importance of programming language	
6	2023-24	Poster presentation competition	<b>First Prize :</b> Padamawar Sanskruti Swapni (B.C. A. F.Y.) <b>Second Prize:</b> Rode Aishwariya Ashok (B.C.A F.Y)
			Rode Vaibhavi Ashok (B.C.A S.Y.) <b>Third Prize:</b> Kale Pooja Laxmanrao (B.C.A T.Y.) <b>Fourth Prize:</b> Vaidya Deepali Manikrao (B.C.A T.Y.)
			<b>First Prize:</b> Talekar Priti Ashok (BCA SY)
			Third Prize: Bhumare Sonu Santosh (BCA SY)
		Quiz competition	Consolation Prize: Vaidya
			Deepali Manikrao (BCA TY)
		Unity in Diversity	First Prize: Sharma Prajkata Ashok (B.C. A. F.Y.) Second Prize : Raut Manisha Vaijanath (B.C.A F.Y) Third Prize: Tak Pratiksha Rajebhau (B.C.A F.Y.) Fourth Prize: Hulekar Komal Mahendrakumar (B.C.A. F.Y)

# Achievements

Sr. No	Academic Year	Activities	Achievements
		Reserch Festival 'Avishkar' :District level	1 <sup>st</sup> Prize at District Level Avishkar: Vijaya Mahajan & Kanchan Zatkawde
01	2018-2019	Research Festival 'Avishkar' :University level	1 <sup>st</sup> Prize at University Level Avishkar: Vijaya Mahajan & Kanchan Zatkawde
02	2010 2020	Avishkar research competition (District Level)	<ul> <li>1<sup>st</sup> prize: Alfiya Afhsha Nakshatra Muli</li> <li>2<sup>nd</sup> prize: Mafruja Begum Aishwarya Kulkarni</li> </ul>
02	2019-2020	Avishkar research competition (University Level)	<ul> <li>2<sup>nd</sup> prize: Alfiya Afhsha Nakshatra Muli</li> <li>2<sup>nd</sup> prize: Mafruja Begum Aishwarya Kulkarni</li> </ul>
		Avishkar research competition (District Level) Drawing Competition by Nehru Yuva	2 <sup>nd</sup> prize : Shaikh Humera Agrwal Ritika 1 <sup>st</sup> prize: Rathod Shraddha
03	2022-2023	Kendra (Parbhani) Dancing Competition by Nehru Yuva Kendra	2 <sup>nd</sup> prize: Syeda Adiba 1 <sup>st</sup> prize: Insta Stars (BCA Girls)
		(Parbhani)	<b>1</b> prize. Insta Stars (DCA OILS)
		Avishkar research competition (District Level)	<ul> <li>1<sup>st</sup> prize: agriculture(shital nand)</li> <li>2<sup>nd</sup> prize: medicine(rajnandini renge)</li> </ul>
04	2023-2024		3 <sup>rd</sup> prize: medicine(manisha raut) 2 <sup>nd</sup> prize: engineering and technology(sanskruti padamwar) 3 <sup>rd</sup> prize: engineering and technology(saima shaikh)
		G-20 quiz competition	1 <sup>st</sup> prize: BCA girls

## Conference / Seminar / Workshop organized

Faculty	University/Regional/ Local	State	National	International	Total
Mohammed Khaled		01			01

## Conference / Seminar / Workshop attended

Faculty	University/Regional/	State	National	International	Total
	Local				
Mohammad	02	02	04	02	11
Khaled	02	02	04	03	11
Nikita Kulkarni	01		01	01	03
Kanchan	01		01		02
Sharma	01		01		02

## \* Research Publication

Faculty	Peer Reviewed	UGC Care List	Articles /Chapters published in Book	Conference proceedings	News papers	Radio Talks	Total
Mohammed Khaled		02					02

## Placement of Alumni

Name	Position held	Contact No	Address
Subehdar Pallavi Manoj	EIS & IOT	9423444022	Pune
Mahajan Vijaya	Network Associate	7264956067	Thane
Syeda Firdouse Syed Farooque	Advisor NVOC	7774006569	Thane
Aarti Annasaheb Kadam	EDI Developer	9156728089	Pune
Adiba Fatema Syed Farooque	Associate Customer Support	9960889644	Pune
Syeda Hajra Fatema Syed Farooque	Sr. Associate Customer Support	7420808581	Pune

## ✤ Departmental MOUs

Sr.no	Name of institutes	Date of MOU
1.	Zoom Technical Institute	05 <sup>th</sup> October 2023
2.	Imperial Skill Development Academy	20 <sup>th</sup> October 2023
3.	Devansh Computer Education	1 <sup>st</sup> September 2023
4.	Wisdom Academy Learn & Grow	17 <sup>th</sup> August 2023

Faculty	College level	University level
Mohammed Khaled	<ol> <li>H.O.D. of Computer Science Department.</li> <li>Member of College Admission Committee.</li> <li>Member of College Timetable Committee.</li> <li>Member of College IQAC Committee.</li> <li>Member of NAAC Criterion 7.</li> <li>Member of College Placement Cell.</li> <li>Member of College Website Repair committee.</li> <li>Member of College Competitive Exam Committee</li> <li>BOS member of College Diploma/ Certificate course</li> <li>Member of College Publicity committee.</li> </ol>	<ol> <li>Research Guide for District, University &amp; State Level Avishkar</li> <li>Internal Flying Squad &amp; Supervisor for Winter &amp; Summer Examination</li> <li>xternal Examiner for BCA, BCS &amp; MSC (CS).</li> <li>University Papers Assessment and Moderation.</li> </ol>
Kulkarni Nikita	1. Member of NAAC Criterion 7.	<ol> <li>Supervision for Winter &amp; Summer Examination.</li> <li>External Examiner for BCA, BCS &amp; MSC (CS).</li> <li>University Papers Assessment and Moderation.</li> </ol>
Sharma Kanchan	<ol> <li>Member of NAAC Criterion 3.</li> <li>Member of Trip Committee.</li> <li>Member of Cultural Committee.</li> </ol>	<ol> <li>Supervision for Winter &amp; Summer Examination.</li> <li>External Examiner for BCA, BCS &amp; MSC (CS).</li> <li>University Papers Assessment and Moderation.</li> </ol>

#### Security Contribution in College / University

#### \* SWOC Analysis

#### Strength

- 1- Peaceful ambiance and infrastructural facilities.
- 2- Student centric and activity based teaching and learning
- 3- The maximum number of students who get through the examination & obtain good positions.
- 4- Well planned teaching process.
- 5- Students are provided training for competitive exams.
- 6- Type of Teacher-Student involvement in academic activities

#### Weakness

- 1- Quality newly of the admitted students to courses is below average and majority of them are from rural background.
- 2- The poor socio economic background of many of the students is responsible for poor language competence in English.
- 3- Scholarship is only available for SC/ST castes and not for all.
- 4- Most of the students from surrounding rural area hardly posses updated awareness regarding IT.

#### **Opportunities**

- 1- We have opportunities to offer new courses in IT and ad-hoc Programs.
- 2- Special coaching program for SC/ST & Minority is available in the campus after class hours.
- 3- NET coaching program for students is offered with the support of UGC.
- 4- Staff strength & enterprising nature is a strong opportunity.
- 5- More students can participation in research festival "AVISHKAR" can be increased.

#### **Challenges:-**

- 1- To facilitate students to develop a deeper level of critical and analytical thinking and cultivate in them as endeavoring passion to pursue higher education.
- 2- Lack of proper motivational condition & early marriage are the major challenges infront girls in area.
- 3- To encourage research aptitude among more and more no. of students.
- 4- Dire need to develop communication and soft skills among students.

# \* Future plans

- > Creating opportunities for engagement with employers for placements of students.
- To conduct workshops and seminars for enhancing the technical and communications skills of the students.
- Modifying and enhancing the curriculum to match the demand of industry. Updating teaching techniques in keeping with challenges and demands of the teaching of computer science, being a vibrant field.
- Designing multimedia packages, web -based courses and materials for use in computer laboratory. Undertaking collaborative efforts with other centers in India and Abroad. Augmenting department infrastructural facilities
- > To organize International Seminar/Conference/Webinar.

# \* Photos/ Glimpses of the Department



Prize & Awards Distribution 2019-2020



Students Seminar & Tutorial 2019-2020



Campus Interview of ICICI Bank through NIIT & IFBI 2019-2020



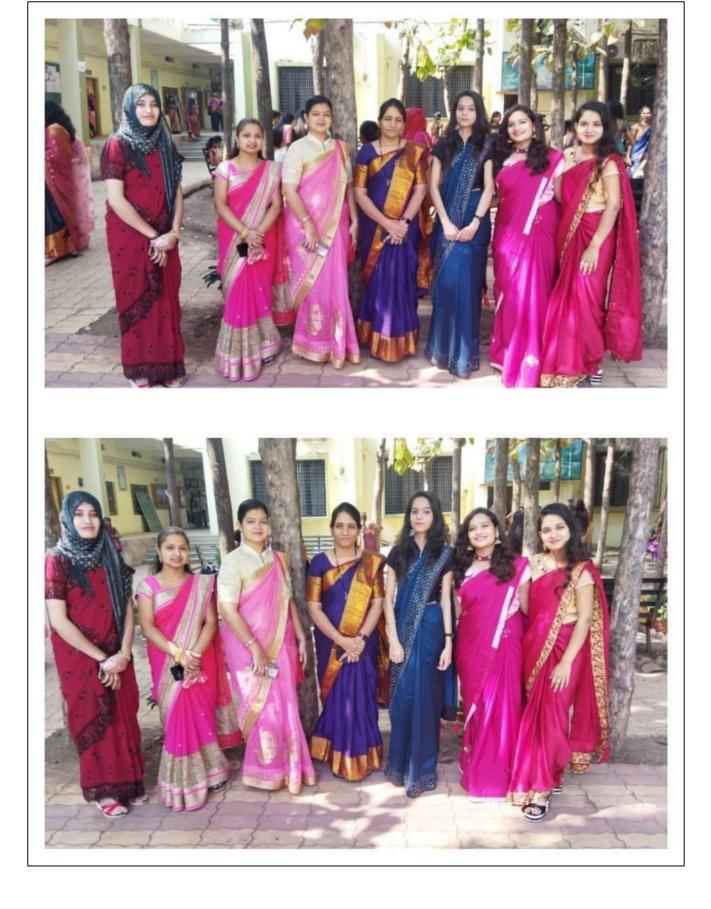
Poster Presentation Competition & Prize Distribution on 15-08-2019



Fresher's Party for BCA FY & UNIT Test 2019-2020



Avishkar -2019-2020 (District, University & State Level)



Traditional Day (Saree Day) 2021-2022