KONGUNADU ARTS AND SCIENCE COLLEGE

(AUTONOMOUS)

COIMBATORE – 641 029.

DEPARTMENT OF INFORMATION TECHNOLOGY

CURRICULUM AND SCHEME OF EXAMINATIONS (CBCS)

(2025 - 2026 onwards)

DEPARTMENT OF INFORMATION TECHNOLOGY

Vision:

- To achieve excellent standards of quality education by keeping pace with rapidly changing technologies.
- To create technical manpower of global standards with capabilities of accepting new challenges in Information Technology.
- Integral Formation and Empowerment of students for social transformation through Information Technology.

Mission:

- To provide outstanding education and training to our graduate students for their productive careers in industry, academia, and government.
- To impart quality and value-based education to raise satisfaction level of all stakeholders.
- To empower students with academic excellence, knowledge and training.
- To enable critical thinking among students towards development in IT withreference to social transformation.
- To apply new developments in Information Management and provide all possible support to promote research & development.
- To serve as a platform whereby the student enrich their personalities to assume greater responsibilities.

Job Oriented Course

UIT -122

Title of the Paper: **JOC – 1- Mobile Application Development Lab**		
Hours / Week **2**	Total Hours **30**	Credits **2**

Course Objectives

1. To Understand the Mobile Development Landscape.
2. To Learn Mobile Development Frameworks and Languages.
3. Design User-Friendly Interfaces.
4. Develop Functional Mobile Applications
5. Test and Debug Mobile Apps and Understand App Deployment.

Syllabus

1. Write a program for Mobile Application that creates Alarm Clock.
2. Write a program for Mobile application to rotating an image.
3. Write a program to develop an application that uses GUI Components, Font and Colors.
4. Write a program to develop a native Calculator Application.
5. Write a program to implement an application that creates an alert upon receiving a message.
6. Write a program to develop an application for working with Graphics and Animation.
7. Write a program to develop an application for working with location-based services.
8. Write a program to develop an application for working with device camera.
9. Write a program to develop an application for connecting to the Internet and sending mail.
10. Write a program to design a simple To-do list application using SQLite.

UIT -123

Title of the Paper: **JOC – 2 - Quantitative Aptitude**		
Hours / Week **2**	Total Hours **30**	Credits **2**

Course Objectives

1. Understand about Master Fundamental Mathematical Concepts
2. To Develop Analytical and Logical Thinking.
3. Understand about Data Interpretation and Analysis, Master Time, Work, and Speed Problems
4. Solve the Probability and Permutation/Combination Problems.
5. Improve Speed and Accuracy in Solving Problems

Syllabus

UNIT – I **5 Hours**

Numbers - Simplification - BODMAS rule - Number Systems - LCM and HCF - Decimal Fractions – Simplification - Square Roots and Cube Roots - Average - Problems on Ages - Surds & Indices - Percentages - Problems on Numbers.

UNIT – II **5 Hours**

Permutation and Combinations - Probability - Profit and Loss - Simple and Compound Interest – Time, Speed and Distance - Time & Work Ratio and Proportion Area - Mixtures and Allegation

UNIT – III **5 Hours**

Data Interpretation - Tables - Column Graphs - Bar Graphs - Line Charts - Pie Chart - Venn Diagrams

UNIT – IV **5 Hours**

Analogy - Blood Relation - Directional Sense - Number and Letter Series - Coding – Decoding - Calendars - Clocks - Venn Diagrams - Seating Arrangement - Syllogism - Mathematical Operations.

UNIT – V **5 Hours**

Problems on Trains - Heights and Distances – Discount – Partnership - Stocks & Shares - Odd Man Out & Series.

Text Book :

1. "R S Agarwal", 2015, Quantitative aptitude for Competitive examination.
2. "Abhijit Guha", 4th edition, Quantitative Aptitude by Competitive Examinations.

UIT -124

Title of the Paper: **JOC –3 - Linux Lab**		
Hours / Week **2**	Total Hours **30**	Credits **2**

Course Objectives

1. Describe the architecture and features of Linux Operating System
2. To create programs in the Linux environment using Linux utilities and commands.
3. Student is given an introduction of Linux shell commands and they will be able to write own shell scripts.
4. Shell programming is dealt in depth which can be used to develop applications.

List of Practical Programs

1. Write a shell script to stimulate the file commands: rm, cp, cat, mv, cmp, wc, split, diff.
2. Write a shell script to show the following system configuration :
    a. currently logged user and his log name
    b. current shell , home directory , Operating System type , current Path setting , current working directory
    c. show currently logged number of users, show all available shells
    d. show CPU information like processor type , speed
    e. show memory information
3. Write a Shell Script to implement the following: pipes, Redirection and tee commands.
4. Write a shell script for displaying current date, user name, file listing and directories by getting user choice.
5. Write a shell script to implement the filter commands.
6. Write a shell script to remove the files which has file size as zero bytes.
7. Write a shell script to find the sum of the individual digits of a given number.
8. Write a shell script to find the greatest among the given set of numbers using command line arguments.
9. Write a shell script for palindrome checking.
10. Write a shell script to print the multiplication table of the given argument using for loop.

UIT -125

Title of the Paper: **JOC – 4 - Network Security and Management Lab**		
Hours / Week **2**	Total Hours **30**	Credits **2**

Course Objective

1. To enable the students to learn security attacks, policies and guidelines.
2. To learn and apply the data encryption methods in network security.
3. To understand the intrusion detection systems.
4. To understand the concept of security management, email and internet banking security policies.

List of Practical Programs

1. Write a program to encrypt the data using the encryption methods:
   - Substitution Ciphers
   - Transposition Ciphers
2. Write a program to implement DES algorithm.
3. Write a program to implement the Public Key Cryptography using Diffie –Hellman Algorithm.
4. Write a program to implement the Public Key Cryptography using RSA algorithm.
5. Write a program to secure the Database using User Authentication Security.
6. Write a server security program for Dynamic Page Generation.
7. Write a C program that contains a string (char pointer) with a value \Hello World'. The program should AND or and XOR each character in this string with 127 and display the result.
8. Write a C/JAVA program to implement the Blowfish algorithm logic
9. Write a C/ JAVA program to implement the Diffie-Hellman Key Exchange mechanism.
10. Write a program to implement format string vulnerabilities.