

MCA Semester Wise Assignments (2024)

Semester-I

Computer Architecture

S.No	Assignment Topic
1	Number System Conversion Program
2	Boolean Algebra Simplification
3	8086 Microprocessor Architecture
4	Cache Memory vs Virtual Memory
5	DMA and Interrupt Handling

Object Oriented Programming with JAVA

S.No	Assignment Topic
1	Class and Object Program
2	Constructor and Method Overloading
3	Inheritance and Polymorphism
4	Exception Handling in Java
5	GUI using Swing

RDBMS

S.No	Assignment Topic
1	ER Diagram for College Management System
2	SQL Queries using JOIN
3	Normalization up to BCNF
4	Transaction Management
5	Trigger and Cursor

Data Structure through C

S.No	Assignment Topic
1	Linked List Operations
2	Stack using Array
3	Queue using Linked List
4	Tree Traversal Algorithms
5	Sorting Techniques

Semester-II

Statistical Computing and Discrete Mathematics

S.No	Assignment Topic
1	Bayes Theorem Applications
2	Probability Distribution Problems
3	Graph Coloring Problems
4	Group and Subgroup Examples

Operating Systems & Shell Programming

S.No	Assignment Topic
1	CPU Scheduling Algorithms
2	Deadlock Detection
3	Page Replacement Algorithms
4	Linux Shell Script

Internet of Things

S.No	Assignment Topic
1	IoT Architecture
2	Smart Home Automation
3	IoT Communication Protocols
4	Cloud Computing in IoT

Software Engineering

S.No	Assignment Topic
1	SDLC Models Comparison
2	Requirement Analysis
3	UML Diagram Design
4	Software Testing Techniques

Web Technologies

S.No	Assignment Topic
1	HTML5 Web Page Design
2	JavaScript Form Validation
3	PHP CRUD Application
4	AJAX with MySQL

Semester-III

Theory of Computation & Compiler Design

S.No	Assignment Topic
1	DFA and NFA Design
2	Push Down Automata
3	Context Free Grammar
4	Parsing Techniques

Machine Learning with Python

S.No	Assignment Topic
1	Linear Regression Model
2	Decision Tree Classification
3	K-Means Clustering
4	Sentiment Analysis

Data Communication & Computer Networks

S.No	Assignment Topic
1	OSI vs TCP/IP Model
2	Routing Algorithms
3	Network Topologies
4	Wireless Networking

Data Mining and Warehousing

S.No	Assignment Topic
1	Data Warehouse Architecture
2	Association Rule Mining
3	Clustering Techniques
4	OLAP Operations

Cryptography and Network Security

S.No	Assignment Topic
1	RSA Algorithm
2	DES and AES Comparison
3	Firewall and IDS
4	Cyber Security Threats

Semester-IV

Major Project

S.No	Assignment Topic
1	Online Examination System
2	Hospital Management System
3	Face Recognition Attendance System
4	E-Commerce Website
5	AI Chatbot using Python

Generic Elective / SWAYAM

S.No	Assignment Topic
1	Cloud Computing Case Study
2	Mobile App Development
3	Artificial Intelligence Applications
4	Cyber Security Awareness