

Advanced Diploma in Computer Applications (3 Years Program)

ADCA

6 Months = Days-182, Working Days=140 Days, Teaching/ Practical=Hrs 1 Hrs / Day

Project / Assignment

DCA-II

Third Semester

PAPER	TOPIC	Hrs	Days	Marks
DCA201	Fundamentals of Data Communication & Network Topology	10	10	25
	Lab Work: Media Types, Modem Routers RMI, Any Desk etc.	5	5	--
DCA202	Computer Networks	20	20	25
	Lab Work: Assign IP Addressing, Sharing, Security, Devices etc	5	5	--
DCA203	DBMS Architecture	20	20	25
	Lab Work: SQL Server Login Connectivity Security etc.	20	20	--
DCA204	RDBMS with SQL Server	30	30	25
	Lab Work: Handling with Data Base and Tables	30	30	--
ASG202	Assignment II based on 201,202,203,204	--	--	50
Total		140	140	150

Third Semester - Detailed Syllabus

Unit I: Fundamentals of Data Communication & Network Topology

Data communication and its characteristics, Components of data communication, Communication media (Guided and Unguided), Data transmission, Transmission characteristics, Types of transmission, Network devices, Network topology, Types of network topology, advantages, and disadvantages.

Unit II: Computer Networks

What is Computer network, Need of computer network, Network criteria, Advantages of networking, Network classification, Network Terminology, Network Topology, Types of Network Topology, Advantages & Disadvantages of Network Topology, OSI Model, Internet Protocol, Types of Internet Protocol,

Unit III: DBMS Introduction (Architecture)

Introduction to Database, Purpose of Database, Various Level of Database, DBMS architecture, E-R Model, Types of Relationship, Relational Data Model, Network Data Model, Hierarchical Data Model, Clint/server approach, Structure Query Language, Processing Capability of SQL, Creating Database, Working with Table.

Unit IV: RDBMS with SQL Server

Introduction to Relational Algebra in DBMS, Fundamental Operators (Selection, Projection, Union, Set Difference, Set Intersection, Rename, Cartesian Product), Derived Operators, (Natural Join, Conditional Join), Relational Calculus.