MCA Year I – Semester I (Dr. Ram Manohar Lohia Avadh University, Ayodhya)

This document provides a detailed explanation of the MCA Year I, Semester I syllabus, evaluation scheme, and subject details as per the official scheme. It includes theory and practical subjects, marks distribution, workload summary, and preparation tips.

Code	Subject Name	Type	L-T-P	Marks (Sessional + ESE)	Credits
MCA 101	Programming in C & Data Structure	Theory	3-1-0	50 + 100 = 150	4
MCA 102	Computer Organization & Architecture	Theory	3-1-0	50 + 100 = 150	4
MCA 103	Object Oriented System with C++	Theory	3-1-0	50 + 100 = 150	4
MCA 104	Operating Systems	Theory	3-1-0	50 + 100 = 150	4
MCA 105	Programming with MATLAB	Theory	3-0-0	50 + 100 = 150	3
MCA 106	Cyber Security & Information System	Theory	3-0-0	50 + 100 = 150	3
MCA 107	Programming in C & Data Structure Lab	Practical	0-0-3	30 + 20 = 50	2
MCA 108	Computer Organization Lab	Practical	0-0-3	30 + 20 = 50	2
MCA 109	Object Oriented System with C++ Lab	Practical	0-0-3	30 + 20 = 50	2
MCA 110	Operating Systems Lab	Practical	0-0-3	30 + 20 = 50	2
MCA 111	Programming with MATLAB Lab	Practical	0-0-3	30 + 20 = 50	2
MCA 112	Project / Seminar	Practical	0-0-3	30 + 20 = 50	2

Subject Explanations:

MCA 101 – Programming in C & Data Structure: Learn C language basics, arrays, linked lists, stacks, queues, trees, and algorithms.
MCA 102 – Computer Organization & Architecture: Covers CPU design, memory hierarchy, instruction sets, and I/O systems.
MCA 103 – Object Oriented System with C++: OOP concepts like classes, objects, inheritance, and polymorphism.
MCA 104 – Operating Systems: Scheduling, deadlocks, file systems, and memory allocation.
MCA 105 – Programming with MATLAB: Numerical computing, simulations, and data visualization.
MCA 106 – Cyber Security & Information System: Data protection, cryptography, and security protocols.
Labs: Practical coding in C, C++, MATLAB, OS simulations, and a final project/seminar.

Tips for Success: - Prepare notes after each lecture. - Practice coding daily (C, C++, MATLAB). - Start your project early. - Cyber Security & MATLAB are scoring subjects—practice well. - Don't ignore Class Tests & Teacher Assessments; they boost your final score.