

MASTER OF COMPUTER APPLICATIONS (MCA_NEW)

**ASSIGNMENTS
OF MCA_NEW (2Yrs) PROGRAMME
SEMESTER-II**

(July - 2025 & January - 2026)

MCS-218, MCS-219, MCS-220, MCS-221

MCSL-222, MCSL-223



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
MAIDAN GARHI, NEW DELHI – 110 068**

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Important Notes

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date.
2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations. For further details, please refer to Programme Guide of MCA (2Yrs).
3. To become eligible for appearing the Term End Practical Examination for the lab courses, it is essential to fulfill the minimum attendance requirements as well as submission of assignments (on or before the due date). For further details, please refer to the Programme Guide of MCA (2yrs).
4. The viva voce is compulsory for the assignments. For any course, if a student submitted the assignment and not attended the viva-voce, then the assignment is treated as not successfully completed and would be marked as ZERO.

Course Code : **MCSL-223**
Course Title : **Computer Networks and Data Mining Lab**
Assignment Number : **MCA_NEW(II)/L-223/Assign/2025-26**
Maximum Marks : **100**
Weightage : **30%**
Last Dates for Submission : **31st October, 2025 (For July, 2025 Session)**
15th April, 2026 (For January, 2026 Session)

The assignment has two parts A and B. Answer all the questions. Each part is for 20 marks. Computer Networks and Data Mining lab record carries 40 Marks. Rest 20 marks are for viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the MCA(New) Programme Guide for the format of presentation. If any assumptions made, please state them.

PART-I: Computer Networks

Q1: Create a simple network topology having two client nodes on left side and two server nodes on the right side. Both clients are connected with another node n1. Similarly, both server nodes connecting to node n2. Also connect nodes n1 and n2 thus forming a dumbbell shape topology. Use point to point links only. Make necessary assumptions. **(20 Marks)**

PART-II: Data Mining Lab

Q1: Implement Hierarchical Clustering Algorithm to demonstrate the clustering rule process in the following datasets:

(a) employee.arff **(10 Marks)**

(b) student.arff **(10 Marks)**