

# **MASTER OF COMPUTER APPLICATIONS (MCA\_NEW)**

**ASSIGNMENTS  
OF MCA\_NEW (2Yrs) PROGRAMME  
SEMESTER-II**

**(July - 2024 & January - 2025)**

**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/2024-25**  
**Maximum Marks** : **100**  
**Weightage** : **30%**  
**Last Dates for Submission** : **31<sup>st</sup> October, 2024 (For July, 2024 Session)**  
**15<sup>th</sup> April, 2025 (For January, 2025 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:** Setup 4 nodes , two TCP client and server pair and two UDP client and server pair. Send packets to respective clients from both the servers. Monitor the traffic for both the pair and plot the number of bytes received. Make necessary assumptions. **(20 Marks)**

### **PART-II: Data Mining Lab**

**Q1:** Implement simple K-Means Algorithm to demonstrate the clustering rule on the following datasets:  
(a) iris.arff **(10 Marks)**  
(b) student.arff **(10 Marks)**