# 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**

# CONTENTS

---

### 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 | : | MCS-219 |
|---|---|---|
| Course Title | : | **Object Oriented Analysis and Design** |
| Assignment Number | : | **MCA_NEW(II)/219/Assign/2024-25** |
| Maximum Marks | : | **100** |
| Weightage | : | **30%** |
| Last date of Submission | : | **31st October, 2024 (For July, 2024 Session)** |
| | | **15th April, 2025 (For January, 2025 Session)** |

**Note: This assignment has eight questions of 80 Marks. Answer all questions. 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 Programme Guide for the formatof presentation.**

**Q1:** Explain basic philosophy of object orientation. Explain basic constructs of object orientation with example. **(10 Marks)**

**Q2:** Draw class diagram for Online Learning System. Make necessary assumptions. **(10 Marks)**

**Q3:** Explain briefly object modeling , dynamic modeling and functional modeling with the help of suitable diagrams. **(10 Marks)**

**Q4:** Draw state diagram for Online Shopping System. Also, list the assumptions made. **(10 Marks)**

**Q5:** What is aggregation? How is it related to composition? Explain role of abstract class in system design with the help of example. **(10 Marks)**

**Q6:** What is system design? What are the major tasks performed during system design? Explain.

**(10 Marks)**

**Q7:** Map the object classes created in *Question 2* above into database tables. Make necessary assumptions. **(10 Marks)**

**Q8:** Write short notes on following (minimum in 250 words): **(10 Marks)**

      i)      Mapping designs to code

      ii)     Design Optimization