Department of Computer Science and Engineering
Motilal Nehru National Institute of Technology
Allahabad, Uttar Pradesh, India

Object Based Modeling (CA3305)
MCA-III Semester.

Mid Semester Exam   Max Marks: 20   **Max Time: One and Half Hour**

- If you need to make any assumptions, state them clearly.
- Questions carry marks shown against them.

Q1. How it is decided, what messages can be invoked over an object reference and which method will be dispatched for that invocation from the class hierarchy? Explain through an example. [02]

Q2. Describe the need of modelling. Support your answer with a fitting example that illustrates, had modeller taken due care during modelling, the above example problem could have been avoided. [02]

Q3. Explain how and which object oriented principles help in building reusable, extendible, maintainable and evolvable systems. [02]

Q4. Explain the benefits of using single interface through multiple implementations and multiple interfaces through single implementation. [02]

Q5. Describe some object oriented abstractions that are used at analysis, design and implementation stages of an object oriented system development. [02]

Q6. Describe the different kind of polymorphism and their uses. [02]

Q7. Explain through an example the need of objects without state, without behaviour and without state and behaviour both. [02]

Q8. Explain the advantages gained by message and method decoupling in object oriented systems. [02]

Q9. How to identify objects, build classes for them and identify their methods and data in modelling a real life problem. Also explain how the class hierarchy is designed pragmatically in such applications. [04]