USN | | | | | | | | | |

10CS71

Seventh Semester B.E. Degree Examination, June/July 2019
Object Oriented Modeling and Design

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions, selecting*
at least TWO questions from each part.

PART – A

1   a.   What is object oriented development? List and explain object oriented themes.   **(10 Marks)**
    b.   Define the following terms with examples:
         i)   Links and associations
         ii) Multiplicity
         iii) Association end names
         iv) Ordering
         v)   Bag and sequence   **(10 Marks)**

2   a.   What is an aggregation? Explain aggregation versus associations and aggregation versus composition.   **(10 Marks)**
    b.   Explain the following terms with an examples:
         i) Meta data   ii) Derived data   iii) Reification   **(06 Marks)**
    c.   Draw the state diagram for a telephone line.   **(04 Marks)**

3   a.   What do you mean by concurrency? Explain aggregation concurrency with a neat diagram.   **(08 Marks)**
    b.   What is an interaction model? Explain with a neat diagram sequence diagram for a online stock broker.   **(06 Marks)**
    c.   Explain the following terms with examples:
         i) Include relationship   ii) Extend relationship   iii) Generalization   **(06 Marks)**

4   a.   List and explain the stages involved in software development.   **(10 Marks)**
    b.   List the steps to construct a domain class model and explain them briefly.   **(10 Marks)**

PART – B

5   a.   Explain the steps followed in constructing application interaction model.   **(10 Marks)**
    b.   With a neat diagram explain the architecture of ATM system.   **(07 Marks)**
    c.   Name the three kinds of controls for the external event in a software system.   **(03 Marks)**

6   a.   What is refactoring? Explain the tasks involved in design optimization.   **(10 Marks)**
    b.   What are the steps involved in improving the organization of a class design? Explain them briefly.   **(10 Marks)**

7   a.   What is a pattern? Lists the properties of pattern.   **(10 Marks)**
    b.   With a neat diagram, explain the publisher-subscriber design pattern with necessary implementation steps.   **(10 Marks)**

8   a.   Explain the structure and implementation steps of view handler pattern with a neat diagram.   **(10 Marks)**
    b.   With a neat diagram explain the counted pointer idiom.   **(10 Marks)**

* * * * *