

**IV B.Tech I Semester Supplementary Examinations, April/May 2005**  
**SOFTWARE ENGINEERING**  
**(Computer Science & Engineering)**

**Time: 3 hours**

**Max Marks: 70**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Explain the recent advances in one of the leading edge software application areas among :
  - (a) Web based application.
  - (b) Virtual Reality.
2. Describe briefly
  - (a) UML
  - (b) LCA
  - (c) LCO
  - (d) IOC
3. Write different steps in Object Oriented Analysis (OOA) approach proposed by Coad and Yourdon and explain them clearly.
4.
  - (a) Explain with an example the Initial modeling step in Jackson System Development.
  - (b) Describe the concept of information hiding.
5.
  - (a) State and explain the Design Heuristics in Data Flow-Oriented design .
  - (b) What is the key element that Data flow-oriented design approach does not address directly?
6. Clearly distinguish between Object Oriented Analysis (OOA) and Object Oriented Design (OOD) in terms of the deliverables in each process. Outline the generic components of the OOD model.
7.
  - (a) Explain unit testing, system testing and integration testing. Also explain how they can be used with black box and white box testing?
  - (b) What is cyclomatic complexity?. How it is used in test case generation? Explain with an example.
8.
  - (a) Why is completeness more difficult to achieve as abstraction level increases?
  - (b) Why interactivity must increase if completeness is to increase?
  - (c) Explain the differences between restructuring and forward engineering.

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