Roll No. ....

23066

M. Tech. (Computer Engg.) 1st
Semester Examination – January, 2012

COMPUTER SYSTEM SOFTWARE

Paper : MTCE-601-A

Time : Three hours]   *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions.

1. (a) Why we need principles of class design ? Explain dependency inversion principle with example. 10

   (b) Write short notes on :   10

      (i) Hybrid Inheritance,

      (ii) Abstract Classes.

2. (a) What do you understand by Object Oriented Programming ? Compare it with procedural oriented programming. Explain the advantage of Object Oriented Design.   10

(b) What do you mean by over loading and over riding ? Compare function over loading and function over riding with example. 10

3. (a) Differentiate between the following : 08

   (i) Compiler & Interpreter,

   (ii) Loader & Linker.

(b) Draw the flow chart of first pass assembler. Give the detail of various tables employed by an assembler. 12

4. (a) What is Relative Loader ? Explain working in brief. 10

(b) List & explain the various tables employed by a macro processor. 10

5. (a) What do you mean by UML ? How can you say that UML is a language ? Explain the use case diagram for credit card validation system. 10

(b) Write short notes on : 10

   (i) Deployment diagram,

   (ii) Collaboration diagram.

6. (a) What is generic programming ? How it is implemented in C++ ? Distinguish between over loaded function & function template with example. 10

(b) Prepare a class diagram from the instance diagram given below.　　　10

7. (a) Differentiate between :　　　10

   (i) Aggregation and Association,

   (ii) Aggregation and Generalization.

   (b) What do you understand by state ? Prepare and explain state diagram for phone line.　　　10

8. (a) State & explain package cohesion and package coupling principles.　　　12

   (b) Prepare a class diagram from the instance diagram given below.　　　8