

Bachelor in Information Technology (BIT)

Term-End Examination

June, 2007

CSI-04 : COMPUTING SOLUTIONS

Time : 3 Hours

Maximum Marks : 75

Note : *There are two sections in this paper. Section A is **compulsory**. Answer any **three** questions from Section B.*

SECTION A

1. State True/False for the following statements. Support your answer with proper reasons. *2×5=10*
 - (i) Among all phases of software development, a simple error introduced in the design phase and not detected till system testing consumes maximum effort for correction.
 - (ii) Among all phases of software development, the design phase consumes maximum effort.
 - (iii) A class is an abstract data type.
 - (iv) Modern programming languages like C and Pascal are context free languages.
 - (v) Construction of a prototype of a software product before actual development always increases the overall developmental cost.

2. Differentiate between the following :
 - (i) Data flow oriented design approach and Data structure oriented design approach
 - (ii) Unstructured and Structured programming languages

3. With the help of a suitable example, explain the concept of Inheritance in OOPS paradigm. How does multiple inheritance differ from multilevel inheritance ?

SECTION B

Answer any **three** questions from this section.

4. (a) Explain the following with respect to software design :
 - (i) Graphical design tools
 - (ii) CASE tools(b) List the steps followed in object oriented design.

5. (a) Explain in detail following normal forms with one example for each :
 - (i) 1NF
 - (ii) 2NF(b) Explain the following with respect to real-time design :
 - (i) Interrupt Handling
 - (ii) Real-time databases

6. (a) Explain the following w.r.t. coding style in programming languages :
 - (i) Code document
 - (ii) Data declaration
 - (iii) Statement construction(b) Write short notes on the following :
 - (i) Loader functions
 - (ii) Compiler functions
 - (iii) Integration testing

7. Explain in detail the principles involved in the design of a two pass assembler.