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 : *10*

(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 ? *10*

SECTION B

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

4. (a) Explain the following with respect to software design : *10*

(i) Graphical design tools

(ii) CASE tools

(b) List the steps followed in object oriented design. *5*

5. (a) Explain in detail following normal forms with one example for each : *5*

(i) 1NF

(ii) 2NF

(b) Explain the following with respect to real-time design : *10*

(i) Interrupt Handling

(ii) Real-time databases

6. (a) Explain the following w.r.t. coding style in programming languages : *9*

(i) Code document

(ii) Data declaration

(iii) Statement construction

(b) Write short notes on the following : *6*

(i) Loader functions

(ii) Compiler functions

(iii) Integration testing

7. Explain in detail the principles involved in the design of a two pass assembler. *15*