

Bachelor in Information Technology (BIT)

Term-End Examination

December, 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

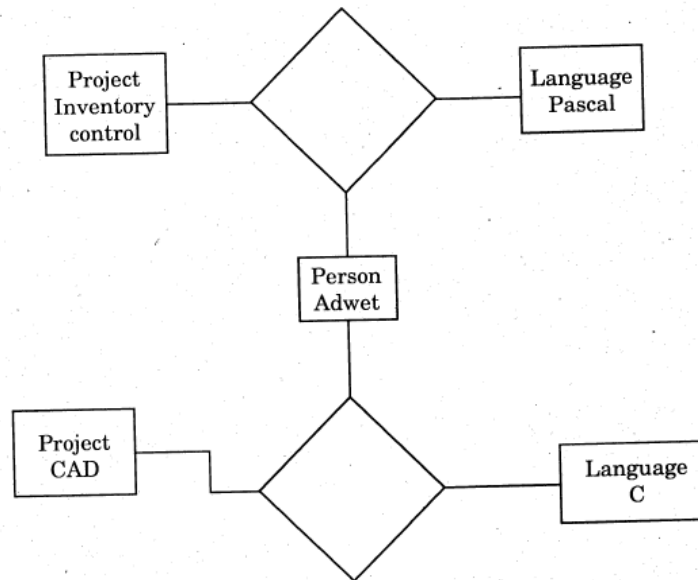
1. Explain the following in less than 20 words : 5×2=10
- (i) What is brainstorming ?
 - (ii) What is quality of design ?
 - (iii) What is test case design ?
 - (iv) When do documentation side-effects occur ?
 - (v) What is software prototyping ?
2. Fill in the blanks : 10×1=10
- (i) The object model provides the essential _____ into which the dynamic and functional models can be placed.
 - (ii) An attribute is a _____ held by the objects in a class.
 - (iii) The property that an operation may behave differently on different classes is known as _____.
 - (iv) Software requirement specification is the _____ point of the software development.
 - (v) _____ grammars do not have the powers to represent even significant parts of English language.
 - (vi) The structure or template of the data in a database is known as _____.
 - (vii) Objective-C, Smalltalk are _____ languages.
 - (viii) Debugging refers to _____.
 - (ix) An interpreter's function is _____.
 - (x) The basic purpose of performing Normalization is _____.

3. For a Railway reservation system, draw the first two levels of data flow diagrams. 10

SECTION B

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

4. (a) What do you understand by CASE tools ? How can they be used for system implementation ? Name any five CASE tools. 10
- (b) What is the significance of information security ? Explain best solution for unauthorised access. 5
5. (a) Explain a method for cost estimation of software project. Also discuss its merits and demerits. 6
- (b) Explain the following design representation techniques with an example for each : 9
- (i) Flow chart
- (ii) HIPO
- (iii) Pseudo-chart
6. (a) Interpret and prepare a class diagram for following instance diagram : 5



- (b) Distinguish among error, fault and failure. Which of them can be detected by testing ? Justify your answer. 5
- (c) Design a one-pass assembler. 5
7. Perform object oriented analysis and design for a software to be developed for automating various activities of a retail bookshop. Assume the requirements of bookshop yourself and mention them. 15