

Bachelor in Information Technology (BIT)

Term-End Examination

December, 2006

CSI-02 : SYSTEMS ANALYSIS

Time : 3 Hours

Maximum Marks : 75

Note : Section A is **compulsory**. Questions 1 to 10 of Section A carry one mark each. Questions 11 to 14 carry 5 marks each. Answer any **three** questions from Section B. Each question of Section B carries 15 marks.

SECTION A

1. The following is an example for application software : 1
 - (a) Compilers
 - (b) Assemblers
 - (c) Interpreters
 - (d) Library Information System

2. _____ is a problem-solving technique that decomposes a system into its component pieces for the purpose of studying how well those component parts work and interact to accomplish their purpose. 1
 - (a) Systems Analysis
 - (b) Systems Design
 - (c) Coding
 - (d) Maintenance

3. A _____ is a representation of either reality or vision. 1
 - (a) Repository
 - (b) Model
 - (c) Structure
 - (d) Message

4. _____ is/are set of techniques used to collect information about system problems, opportunities, solution requirements, and priorities. 1
 - (a) Fact finding
 - (b) Information Gathering
 - (c) Reverse Engineering
 - (d) Both (a) and (b)

5. A _____ is something that will limit your flexibility in defining a solution to your objectives. 1
- (a) Objective
 - (b) Constraint
 - (c) Schedule
 - (d) System proposal
6. A _____ is a description of activities and services a system must provide. 1
- (a) non-functional requirement
 - (b) functional requirement
 - (c) desirable requirement
 - (d) system proposal
7. _____ checks the requirements definition document for accuracy, completeness, consistency, and conformance to standards. 1
- (a) Requirements management
 - (b) Requirements validation
 - (c) Sampling
 - (d) Questionnaire
8. _____ is a technique for organizing and documenting a system's data. 1
- (a) Data modelling
 - (b) Functional modelling
 - (c) Normalization
 - (d) Relationship
9. _____ is a descriptive property or characteristic of an entity. 1
- (a) An entity
 - (b) An attribute
 - (c) A default value
 - (d) A key
10. _____ is an attribute, or a group of attributes, that assumes a unique value for each entity instance. 1
- (a) A key
 - (b) A degree
 - (c) Cardinality
 - (d) Domain

11. Give any five examples of software development projects which are perfectly suitable to be developed using Spiral model. Justify your answer. 5
12. Write any five tasks that are performed during Analysis phase of a Software Development Life Cycle. 5
13. Draw an E-R diagram for the *Grade Card Printing System* of a university. Assumptions can be made wherever necessary. 5
14. Explain any five duties of a Systems Analyst. 5

SECTION B

Answer any **three** of the following questions. Each question carries 15 marks.

15. List at least 10 requirements of a *Student Admission System* of a University/Institution. Make necessary assumptions. 15
16. Write the problem definition of a software project which is amenable for development using Waterfall Model. Justify your answer. 15
17. Draw detailed (at least upto 3 levels) Data Flow Diagrams for various processes involved in a *Student Admission System*. Make necessary assumptions. 15
18. Explain the fact finding/information gathering techniques with the help of an example. 15