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BICS-032

DIPLOMA – VIEP – COMPUTER SCIENCE AND ENGINEERING (DCSVI)

00945

Term-End Examination

June, 2015

BICS-032 : SYSTEM ANALYSIS AND DESIGN

Time : 2 hours *Maximum Marks : 70*

Note : *All questions are to be answered in English language only. Attempt any* ***five*** *questions. Question no. 1 is* ***compulsory****. All questions carry equal marks.*

1. (a) Enhancements, upgrades and bug fixes are done during the _____ step in the SDLC. *7×2=14*

(i) Maintenance and Evaluation

(ii) Problem/Opportunity identification

(iii) Design

(iv) Development and Documentation

(b) The _____ determines whether the project should go forward.

(i) Feasibility assessment

(ii) Opportunity identification

(iii) System evaluation

(iv) Program specification

(c) _____ design and implement database structure.

(i) Programmers
(ii) Project managers
(iii) Technical writers
(iv) Database administrators

(d) _____ spend most of their time in the beginning stages of the SDLC, talking with end-users, gathering information, documenting systems and proposing solutions.

(i) System analysts
(ii) Project managers
(iii) Network engineers
(iv) Database administrators

(e) _____ is the process of translating a task into a series of commands that a computer will use to perform that task.

(i) Project design
(ii) Installation
(iii) System analysis
(iv) Programming

(f) Debugging is

(i) Creating program code
(ii) Finding and correcting errors in the program code
(iii) Identifying the task to be computerized
(iv) Creating algorithm

(g) Translating the problem statement into a series of sequential steps describing what the program must do is known as

(i) Coding

(ii) Debugging

(iii) Creating the algorithm

(iv) Writing documentation

2. (a) Define system. What are the different classes of system ? *2+5=7*

(b) Explain in detail the design stage of system development life cycle. *7*

3. (a) What is structured analysis ? Mention the tools of structured analysis. *2+5=7*

(b) Explain in detail Data Flow Diagram, with a suitable example. *7*

4. (a) What is ER modeling ? Draw an entity-relationship diagram for the following situation (you can make any assumptions you need, but list all your assumptions clearly) :

A university has a large number of UNITS in its catalog. Attributes of UNITS include UNIT_ID, UNIT_NAME, UNIT_COMMENCE_DATE(S) and UNIT_LECTURER_NAME(S). Each UNIT may have one or more other UNITS as prerequisite(s), or it may not have any prerequisite(s). *2+5=7*

(b) What are the two aspects of software implementation ? Explain software maintenance in detail. *2+5=7*

5. (a) Define a test plan. Mention the steps involved in system testing. *2+5=7*

(b) Differentiate between static testing and dynamic testing. Explain unit testing in brief. *2+5=7*

6. (a) Differentiate between system documentation and user documentation. Explain in detail internal and external documentation. *2+5=7*

(b) Distinguish between modeling and methodology. What are the different diagrams UML provides ? *3+4=7*

7. (a) Mention the approaches to RAD. Also discuss the disadvantages of RAD. *4+3=7*

(b) Define UML. Explain the Object Model and Dynamic Model. *2+5=7*

8. Explain any ***two*** of the following with suitable examples : *7+7=14*

(a) Class Diagram

(b) State Diagram

(c) Structured Analysis