

Code: DC59 Subject: ANALYSIS & DESIGN OF INFORMATION SYSTEMS

DiplETE – CS

Time: 3 Hours

DECEMBER 2013

Max. Marks: 100

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

Q.1 Choose the correct or the best alternative in the following: (2×10)

- a. Requirement specification is carried out
- (A) after requirements are determined
 - (B) before requirements are determined
 - (C) simultaneously with requirements determination
 - (D) independent of requirements determination
- b. The role of a system analyst drawing up a requirements specification is similar to
- (A) architect designing
 - (B) a structural engineer designing a building
 - (C) a contractor constructing a building
 - (D) the workers who construct a building
- c. Cost-benefit analysis is performed to assess
- (A) economic feasibility
 - (B) operational feasibility
 - (C) technical feasibility
 - (D) all of these
- d. The primary objective of cost-benefit analysis is
- (A) to find out direct and indirect cost of developing the information system
 - (B) to determine the tangible benefits of the information system
 - (C) to determine if it is economically worthwhile to invest in developing the information system
 - (D) to determine the intangible benefits of the information system
- e. In interactive data input terminal commands are normally used to
- (A) enter new data
 - (B) add/delete data
 - (C) select one out of many alternatives often by a mouse click
 - (D) detect errors in data input

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- f. A _____ is an outline of a process that keeps develop successful information systems
- (A) system development life cycle
 - (B) CASE tool
 - (C) phased conversion
 - (D) none of these
- g. An example of hierarchical data structure is
- (A) array
 - (B) link
 - (C) tree
 - (D) all of these
- h. Which are the tools not used for System Analysis
- (A) System – test data
 - (B) Decision table
 - (C) Data Flow Diagram
 - (D) Flowcharts
- i. In a _____ one module of the new information system is activates at a time
- (A) System Development Life Cycle
 - (B) CASE tool
 - (C) Phased Conversion
 - (D) Success factors
- j. A data dictionary has consolidated list of data contained in
- (i) dataflows (ii) data stores
 - (iii) data outputs (iv) processes
- (A) (i) and (iii)
 - (B) (i) and (ii)
 - (C) (ii) and (iv)
 - (D) (i) and (iv)

Answer any FIVE Questions out of EIGHT Questions.

Each question carries 16 marks.

- Q.2** a. Who is the system analyst and what are the roles played by system analyst? **(8)**
- b. With the help of a diagram explain the role of the network in Information Systems. **(8)**
- Q.3** a. What are the resemblance in system life cycle and system development methodology? **(8)**

- b. Differentiate Sequential v/s Iterative development process. (8)
- Q.4** a. Describe the Accelerated Systems Analysis Approaches briefly. (8)
- b. Give an analysis on logic design phase. (4)
- c. Describe Decision Analysis Phase in brief. (4)
- Q.5** a. Describe the four types of actors in use case modelling. What is the purpose of the use-case ranking, priority matrix and use case dependency diagram? (7)
- b. Write a note on Key-based data model. (5)
- c. Define the following by giving suitable examples:-
(i) Cardinality of a relationship
(ii) Degree of a relationship (4)
- Q.6** a. Describe the history of object modelling. (8)
- b. What is polymorphism? When is it applied? (4)
- c. What do you understand by -The "Buy" Solution from Systems Design for Integrating Commercial Software? (4)
- Q.7** a. What do you mean by the term human factors? (8)
- b. Discuss the special considerations for user interface design? (8)
- Q.8** a. Explain the terms Control Classes, Persistence Classes, System Classes in brief. (9)
- b. Explain the difference between coupling and cohesion. (7)
- Q.9** a. Describe the systems construction and its implementation. (5)
- b. How you can Conduct System Test explain? (5)
- c. Discuss the term Conversion to the new system in system analysis and design. (6)