ROLL NO. _____

Code: DC59 Subject: ANALYSIS & DESIGN OF INFORMATION SYSTEMS

DipIETE – CS

Time: 3 Hours **DECEMBER 2012** **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. _____ help employees create and share documents that support day-to-day office activities.

(A) Decision support systems **(B)** Expert systems
(C) Communication systems. **(D)** Office automation systems

b. The person who specialists in networking and telecommunications technologies who design, install, configure, optimize, and support local and wide area networks.

(A) Graphic artists **(B)** Network architects
(C) Web architects **(D)** Technology specialists

c. The utility software that is in between application software and systems software is known as

(A) Middleware **(B)** ADE
(C) Human ware **(D)** Interface

d. Which design emphasizes the drawing of pictorial system models to document the technical or implementation aspects of a new system?

(A) Model-driven design **(B)** Modern-structured design
(C) Event-driven design **(D)** Object-oriented design

e. Which of the following tools are used in SASD?

(A) DFD **(B)** CASE
(C) HIPO **(D)** All of these

f. Which menu uses pictures to represent menu options in the main body of the window?

(A) Pop-up menus **(B)** Pull-down menus
(C) Iconic menus **(D)** Cascading menus

g. _____ defines the minimum and maximum number of occurrences of one entity that may be related to a single occurrence of the other entity.

(A) Cardinality **(B)** Degree
(C) Parent entity **(D)** Recursive relationship

h. A _____ models the life cycle of a single object.

(A) State transition event **(B)** State machine diagram
(C) Design class diagram **(D)** Model object diagram

i. A structured chart

(A) shows module inter-relationships in a hierarchical manner.
(B) describes the internal structure of a program in a graphical manner.
(C) is a graphical representation of structured English.
(D) depicts data structures in the form of a chart.

j. OLTP stands for

(A) Online testing plan **(B)** Online transaction plan
(C) Online transaction processing **(D)** Online testing processing

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Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.

Q.2 a. Define Information System? Who are the typical stakeholders in an information system? Discuss their roles. **(6)**

b. Explain the different classes of Information System Applications. **(10)**

Q.3 a. What are the basic ideas of RAD? Give some advantages and disadvantages of RAD approach. **(8)**

b. Describe Capability Maturity Model (CMM) for quality management. **(8)**

Q.4 a. What is Rapid Architected Analysis? Describe the two different techniques for applying rapid architected analysis. Give examples for both techniques. **(7)**

b. What is the purpose of Scope Definition Phase? List the five tasks you do in the scope definition phase. **(5)**

c. Write short note on Business Process Redesign (BPR). **(4)**

Q.5 a. Briefly, describe the Use-case modeling techniques. List the benefits that are provided by use-case modelling. **(10)**

b. Describe some criteria that makes a good Data model? **(6)**

Q.6 a. Today many analysts and designers prefer prototyping a modern engineering based approach to design. Describe some advantages and disadvantages of this approach. **(8)**

b. What is an activity diagram? Give the guidelines for constructing activity diagrams. **(8)**

Q.7 a. Based on the type of computer user, what are the important human engineering factors that can be incorporated into the system designs? **(8)**

b. Distinguish between different types of computer users and design considerations for each. **(4)**

c. What are the "commandments" offered by Galitz to solve the problems of user interface design? **(4)**

Q.8 a. Define visibility and explain its three levels. **(4)**

b. In brief explain the following terms:- **(2×3)**
(i) Entity class
(ii) Strategy pattern
(iii) Deployment diagram.

c. What are the steps required to transform the class diagram prepared in OOA to a design class diagram? **(6)**

Q.9 a. Identify several system conversion strategies. **(8)**

b. What are the objectives of system maintenance? **(4)**

c. What are the different types of program restructuring? **(4)**