Code: DC59   Subject: ANALYSIS & DESIGN OF INFORMATION SYSTEMS

DipIETE – CS (NEW SCHEME)

Time: 3 Hours   **JUNE 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. The first step in the systems development life cycle (SDLC) is_____.

   (A) Analysis
   (B) Design
   (C) Problem/Opportunity Identification.
   (D) Development and Documentation.

b. In the Analysis phase, the development of the _____occurs, which is a clear statement of the goals and objectives of the project.

   (A) Documentation   **(B)** Flowchart
   (C) Program Specification   **(D)** Design

c. A prototype helps the designer in

   (A) Making the programmer understand the system.
   (B) Communicating the user how the system will look like and get a feedback.
   (C) Giving a demonstration to the top management.
   (D) Implementing the system very fast.

d. The _____ manage the system development, assign staff, manage the budget and reporting, and ensure that deadlines are met.

   (A) Project managers   **(B)** Network engineers
   (C) Graphic designers   **(D)** Systems analysts

e. Validation testing is popularly known as

   (A) Black box testing.   **(B)** White box testing.
   (C) Beta testing.   **(D)** Integration testing.

f. The following are the most important combination of attributes that a system analyst must have:
(i)   Knowledge of computer systems and currently available hardware
(ii) Good interpersonal relations
(iii) Broad knowledge about various organizations
(iv) Very good accountancy knowledge.

(A) (i), (iii) and (iv)   **(B)** (i) and (iii)
(C) (i), (ii) and (iv)   **(D)** (i), (ii) and (iii)

g. The process of modeling a system's functions in terms of business events, who initiated the events and how the system responds to those events is known as

(A) Object modeling   **(B)** Object oriented modeling
(C) Use-case modeling   **(D)** Data modeling

h. Actual programming of software code is done during the _____ step in the SDLC.

(A) Maintenance and Evaluation   **(B)** Design
(C) Analysis   **(D)** Development and Documentation

i. The _____ determines whether the project should go further forward or not.

(A) Feasibility assessment   **(B)** Opportunity identification
(C) System evaluation   **(D)** Program specification

j. The problem statement includes the _____ which lists specific input numbers a program would typically expect the user to enter and precise output values that a perfect program would return for those input values.

(A) Testing plan   **(B)** Error handler
(C) IPO cycle   **(D)** Input-output specification

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

Q.2 a. Differentiate between system analysis and system design. What is the responsibility of system analyst with respect to information technology?   **(8)**

b. What is the framework for information system architecture? Explain in detail about knowledge building blocks of information system.   **(8)**

Q.3 a. Explain scope definition phase of system development process and cross life cycle activities.   **(8)**

    b. Define model driven development. Also Explain the development steps involved in detail. **(8)**

Q.4 a. Explain the essential five tasks that we undergo in scope definition phase. **(8)**

    b. Explain in detail about the structured functional requirements and prototype functional requirement tasks that are performed in logical design phase. **(8)**

Q.5 a. Why is ranking and evaluating of Use-Cases are essential and also define Use-Case dependencies in brief? **(8)**

    b. Define entities and attributes with suitable example. **(4)**

    c. What are the three aspects of domain description for attributes? **(4)**

Q.6 a. What is message & message sending? How one object invokes another object? **(6)**

    b. Define Polymorphism with some suitable example. **(4)**

    c. List all UML diagrams and describe them in brief? **(6)**

Q.7 a. Explain about Graphical User Interfaces and Menu Driven Interfaces in detail. **(8)**

    b. List and define all the steps involved in User Interface Design phase in detail. **(8)**

Q.8 a. Explain the process of object oriented design. **(8)**

    b. Define Object Reusability. Explain in detail about the design patterns. **(8)**

Q.9 a**.** Explain about system maintenance and the Bench Mark Program in detail. **(8)**

    b. What steps we should undergo to recover an existing physical system? **(8)**