

DipLETE – 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.

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- f. The following are the most important combination of attributes that a systems 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)

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- 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)