Code: DC59/DC109   Subject: ANALYSIS & DESIGN OF INFORMATION SYSTEMS

DipIETE – CS (Current & New Scheme)

Time: 3 Hours   **June 2017**   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 component that make up any system is known as system
   (A) Boundary   **(B)** Environment
   (C) Description   **(D)** All of these

b. 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

c. Which of the following tools are used in SASD?
   (A) DFD   **(B)** CASE
   (C) HIPO   **(D)** All of these

d. Strategic information is :-
   (A) haphazard   **(B)** well organized
   (C) unstructured   **(D)** partly structured

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

f. The _____ approach is centered around a technique referred to as object modelling
   (A) technical oriented   **(B)** message oriented
   (C) object oriented   **(D)** system oriented

g. System prototyping helps the designer in
   (A) Making the programmers understand how the system will function.
   (B) Communicating to the user, quickly, how the system, when developed, will look like and get a feedback.
   (C) Giving a demo of the software, to the system manager to whom he reports.
   (D) Both **(A)** and **(B)**

h. In a DFD external entities are represented by a _____
   (A) Rectangle   **(B)** Ellipse
   (C) Diamond shaped box   **(D)** Circle

i. The first step in SDLC is:
   (A) Analysis
   (B) Design
   (C) Problem/opportunity identification
   (D) Development and Documentation

j. Reliability of software is usually estimated at _____
   (A) Analysis Phase   **(B)** Design Phase
   (C) Coding Phase   **(D)** Testing Phase

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

Q.2 a. Explain the term "The players – system stake holders in system analysis and design". **(8)**

b. What are the differences between internal and external users of an Information System ? Give examples. **(8)**

Q.3 a. Describe Capability Maturity Model (CMM) for quality management. **(8)**

b. Explain the essential phases of system development. For each phase describe its purpose, inputs and outputs. **(8)**

Q.4 a. Describe the Accelerated Systems Analysis Approaches briefly. **(8)**

b. Give an overview of Requirement Analysis phase. What are the issues associated with it? **(8)**

Q.5 a. Explain briefly user-centered development and use-case modelling. Give benefits of use-case modelling. **(8)**

b. What are the three components used in Use-Case diagram? What is their purpose? **(8)**

Q.6 a. Define Polymorphism with some suitable example.   **(4)**

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

c. Explain the following System design approaches :   **(3×2)**
(i) Model – Driven Approach
(ii) Rapid Application Development

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. Discuss the special considerations for user interface design?   **(8)**

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

b. What are the phases or processes in User Interface Design?   **(8)**

Q.9 a. What is the goal of Problem Analysis phase? What are different tasks that you do in this phase?   **(6)**

b. Describe the systems construction and its implementation.   **(5)**

c. How you can Conduct System Test, explain?   **(5)**