

**DiplETE - CS**

Time: 3 Hours

**JUNE 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. Strategic information is :-

- (A) haphazard (B) well organized  
(C) unstructured (D) partly structured

b. The quality of information which is based on understanding user needs is :

- (A) complete (B) trustworthy  
(C) relevant (D) timely

c. Organizations are divided in to departments because:

- (A) it is convenient to do so  
(B) each department can be assigned a specific functional responsibility  
(C) it provides opportunities for promotion  
(D) it is done by every organization

d. The role of a system analyst drawing up a requirements specification is similar to:

- (A) architect designing a building  
(B) a structural engineer designing a building  
(C) a contractor constructing a building  
(D) the workers who construct a building

e. A feasibility study is carried out

- (A) after final requirements specifications are drawn up  
(B) during the period when requirements specifications are drawn up  
(C) before the final requirements specifications are drawn up  
(D) at any time

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- f. System design is carried out
- (A) as soon as system requirements are determined
  - (B) whenever a system analyst feels it is urgent
  - (C) after final system specifications are approved by the organization
  - (D) whenever the user management feels it should be done
- g. Managers in organizations should not design their own system as
- (A) systems have to interact with other systems
  - (B) they do not have the special skills necessary to design systems
  - (C) it is not their job
  - (D) they are always very busy
- h. Data flow diagrams are used to depict
- (A) how and when data, flows in an organization
  - (B) what documents flow in a organization
  - (C) what data flows between entities and how they are processed
  - (D) how data are generated and flow in an organization
- i. In UML diagrams of a class
- (A) state of object cannot be represented
  - (B) state is irrelevant
  - (C) state is represented as an attributes
  - (D) state is represented as a result of an operation
- j. Access right to a database is controlled by
- |                    |                            |
|--------------------|----------------------------|
| (A) top management | (B) system designer        |
| (C) system analyst | (D) database administrator |

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

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- Q.2** a. What is the main differences between strategic and tactical information? If an information system were to be designed for a hospital, what would be the strategic and tactical information? (8)
- b. What are the advantages of using automated tools and technology? Briefly describe three classes of automated tools. (8)
- Q.3** a. What are the characteristics of a good information system? List tasks performed by system analyst. (8)

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- b. Enumerate and explain stages of Information system life cycle. (8)
- Q.4** a. Explain the concept of Use-Case Modelling by taking a suitable example. (8)
- b. What do you understand by logical data model? How it helps to organize database? (8)
- Q.5** a. Why is object-oriented modelling used in practice? When is object-oriented modelling particularly useful? (5)
- b. What is prototyping? Mention some of the benefits of prototyping. (5)
- c. Write a brief note on request for quotations. (6)
- Q.6** a. Write about various guidelines to be followed for designing a user-interface design. (8)
- b. What should be characteristics of a pop-up menu? (4)
- c. Explain paging and scrolling. (4)
- Q.7** a. Discuss various design patterns used for developing an object oriented system software. (8)
- b. What is visibility in object-oriented design? Explain the different levels of visibility. (8)
- Q.8** a. Write about the advantages of having a technical support system for system operations. (6)
- b. Describe the problems associated with construction and implementation of any software system. (5)
- c. What is the definition of operations and support systems? Discuss its functions also. (5)
- Q.9** a. What is model-driven analysis? Why is it used? (5)
- b. Explain why decision analysis phase needed? (5)
- c. What is the goal of Problem Analysis phase? What are different tasks that you do in this phase? (6)