**Code: DC59    Subject: ANALYSIS & DESIGN OF INFORMATION SYSTEMS**

## DipIETE – 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

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 same of the benefits of prototyping.          **(5)**

c.  Write a brief note an 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 a 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)**