

**DiplETE – CS (NEW SCHEME) - Code: DC59**

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

Time: 3 Hours

Max. Marks: 100

**DECEMBER 2010**

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 half an hour 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. A management information system is designed to give information about
- (A) Past. (B) Present.  
(C) Future. (D) All of the above.
- b. Which of the following distinguish the level of management decision making?
- (A) Times frames (B) Type  
(C) Frequency (D) All of the above.
- c. The components that make up any system is known as system
- (A) Boundary (B) Environment  
(C) Description (D) None of the above.
- d. A major principle of modularization is
- (A) The cohesion of each module should be low and coupling between modules should be strong.  
(B) The number of modules should be as low as possible.  
(C) The number of modules should be as high as possible.  
(D) Each module should have a high degree of cohesion.
- e. When there are not enough transactions with the main computer system, the remote job entry is done under
- (A) Online mode. (B) Real time mode.  
(C) Offline mode. (D) None of the above.
- f. Reviews and walkthroughs are carried out at the stage of
- (A) Requirement analysis. (B) System design.  
(C) Coding (D) All of the above.

- g. Windows, frames, menus (pull down and cascading) belong to
- (A) user interface design                      (B) data modeling  
(C) system design                                (D) system support
- h. To ensure system quality
- (A) Unless user needs and software requirements specifications are reviewed, system design should not be initiated.  
(B) Inspection should be carried out at pre-specified milestones.  
(C) A proper test plan should be prepared and followed.  
(D) All of the above.
- i. Whether the proposed system can provide right information for the Organizations Personnel, falls under the study of
- (A) Economic feasibility                      (B) Operational feasibility  
(C) Technical feasibility                      (D) All of the above.
- j. \_\_\_\_\_ is a case tool capability that can generate initial software or database code directly from system modes.
- (A) Repository Engineering                      (B) Reverse Engineering  
(C) Optimal Engineering                      (D) Forward Engineering

**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. (6)
- b. Explain features of information system building blocks. (6)
- c. Give application of network technology in the information building. (4)
- Q.3** a. Explain the following:- (4)
- (i) Capability maturity model.                      (ii) Software life cycle.
- b. Explain features of automated tools and technology used in system development. (6)
- c. Compare various development strategies used in system development. (6)
- Q.4** a. Explain any four system analysis approaches. (8)
- b. Consider, Railway Reservation System. Identify the following for Railway Reservation System:- (8)
- (i) Requirement analysis phase                      (ii) Decision analysis phase
- Q.5** a. Explain various steps in use case modeling. Give an example for illustration. (8)
- b. Explain features of good data model and define normalization. (4)
- c. Compare content data model and key-based data model. (4)

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- Q.6** a. Design library management system using object oriented model with UML. (8)  
b. Define system design. Explain any two system design approaches. (4)  
c. Explain features of system design for integrating commercial applications. (4)
- Q.7** a. Explain various graphical user interface styles and supporting softwares. (7)  
b. Explain dialogue tone in interface design. (4)  
c. Mention design and prototype steps to design a user interface. (5)
- Q.8** a. Explain process of object oriented design. (8)  
b. Explain various design patterns used in object oriented design. (8)
- Q.9** a. Explain various phases of system construction. (4)  
b. Give a example of system enhancement using quick fix method. (5)  
c. Explain system maintenance and recovery techniques. (7)