C.U.SHAH UNIVERSITY
Summer Examination-2016

Subject Name : System Analysis and Design & Unified Modeling Language

Subject Code : 4TE04SAD1   **Branch: B.Tech (CE,IT)**

Semester : 4   **Date: 16/05/2016**   **Time : 2:30 To 5:30**   **Marks : 70**

Instructions:
  (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  (2) Instructions written on main answer book are strictly to be obeyed.
  (3) Draw neat diagrams and figures (if necessary) at right places.
  (4) Assume suitable data if needed.

Q-1   Attempt the following questions:

a) Which level does supply the information to strategic tier for the use of top management?   **1**
(a) Operational (b) Environmental (c) Competitive (d) Tactical

b) Which is an example of a hierarchical data structure ?   **1**
 (a) Array (b) Linked list (c) Tree (c) All of the above

c) Where requirement specification is carried out?   **1**
 (a) after requirements are determined (b) before requirements are determined
(c) simultaneously with requirements determination (d) independent of requirements determination

d) Why hardware study is required?   **1**
 (a) to find out cost of computer system needed
 (b) to determine the type of computer system and software tools needed to meet the final system specification
(c) to make sure that the system does not become obsolete
(d) to find how to implement the system

e) Which tasks are carried out during system implementation phase?   **1**
i) programs are written and tested with operational data
ii) user documentation is created and users trained
iii) programmers are recruited and trained
iv) the system is tested with operational data
(a) i and iii (b) ii and iii (c) ii and iv (d) i, ii & iv

f) Changes made periodically to a system, after its implementation, is known as ?   **1**
 (a) Analysis (b) design (c) development (d) maintenance

g) Class diagram, component diagram, object diagram and deployment diagram are considered as which type of diagram?   **1**
(a) structural diagrams   (b) behavioral diagrams
 (c) non-behavioral diagrams (d) non structural diagrams

h) Which type of activity is represented by FORK?   **1**
(a) Sequential (b) Joint (c) Parallel (d) None of these

i) The analysis phase takes a _____ approach to the system, ignoring its inner workings whereas the design phase takes a _____ approach, making decisions on how the model will be implemented in code.   **1**
(a) White box & Black box   (b) Black box & White box

(c) Top-Down & Bottom-Up (d) Bottom-Up & Top-Down

j) What is the input and output of design phase in SDLC? **1**
(a) Feasibility study report and Design draft (b) System requirement specification and Interface Design   (c) Requirement analysis and GUI   (d) Interface Design and Test plan

k) What is beta testing? **1**

l) What is validation and verification? **1**

m) What is caption? **1**

n) What is feedback? **1**

Attempt any four questions from Q-2 to Q-8

Q-2 **Attempt all questions**
(a) Explain Feasibility Study. **7**
(b) Explain various characteristics and Roles played by System Analyst. **7**

Q-3 **Attempt all questions**
(a) Explain Structured Design in SSADM. **7**
(b) Explain Management Information System (MIS) and Decision Support System (DSS) **7**

Q-4 **Attempt all questions**
(a) Explain SDLC with all phases. **7**
(b) What is System? Explain various characteristics of system. **7**

Q-5 **Attempt all questions**
(a) Draw Class diagram and Activity diagram of Online ticket booking for Theatre. **7**
(b) What is testing? Explain various strategies of testing. **7**

Q-6 **Attempt all questions**
(a) What is DFD? Explain rules for leveling of DFD. Design Context diagram for Hospital Management System. **7**
(b) Explain INCLUDE, EXTENDS and GENERALIZATION in USECASE diagram. **7**

Q-7 **Attempt all questions**
(a) Explain State diagram with suitable example. **7**
(b) (1) Create a decision table for the following program in an office email system **7**
  • Send email when Recipient address present, subject present, before 5:30pm
  • If after 5:30pm then put in pending folder
  • If Recipient address or subject message is missing, give warning message
  (2) Create a decision table for a given situation
  • If depositor's age is 21 or above and if the deposit is 1000Rs. or more, classify the account type as A.
  • If the depositor is under 21 and the deposit is 1000Rs.or more, classify it as type B.
  • If the depositor is 21 or over and deposit is below 1000Rs.classify it as C.
  • If the depositor is under 21 and deposit is below 1000Rs.do-not open account.

Q-8 **Attempt all questions**
(a) Explain Fact Finding Techniques. **7**
(b) Explain the various coding techniques. **7**