C. U. SHAH UNIVERSITY
Winter Examination-2019

Subject Name: System Analysis and Design & Unified Modelling Language

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

Semester : 4   **Date : 17/09/2019**   **Time : 02:30 To 05:30**   **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: (14)

  a) By levelling a DFD we mean
    A)splitting it into different levels
    B)expanding a process into one with more sub-processes giving more detail
    C)summarizing a DFD to specify only the essentials
    D)make its structure uniform
  b) Which of the following terms best describes an object that is made up of other objects?
    A)Inheritance B)Generalization   C)AggregationD) Class
  c) System Study involves
    A) identifying current deficiencies and establishing new goals
    B) documenting the existing system
    C) study of an existing system
    D) all of the above
  d) In DFD external entities may be a
    A) source of input data   B) destination of results C)Both A,B
    D) repository of data
  e) State model can be drawn for_____
    A)System   B)Sub-System C)main object D)All A,B,C
  f) What is System?
  g) What do you mean by System Analyst?
  h) What testing?
  i) How flow chart different than activity diagram?
  j) Difference between fork and join?
  k) What is generalization in class diagram?
  l) What do you mean by maintenance?
  m) What do you mean by pseudo code?
  n) What is knowledge?

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

Q-2		**Attempt all questions**	**(14)**
	a)	What are types of system? Explain various characteristics of system.	**(07)**
	b)	Explain various types of users in system.	**(04)**
	c)	What is information system? Explain.	**(03)**

Q-3		**Attempt all questions**	**(14)**
	a)	What do you mean by structured analysis? Explain SSADM.	**(07)**
	b)	Draw level-0 and level-1 diagram for student information system.	**(07)**

Q-4		**Attempt all questions**	**(14)**
	a)	What is modeling language? Explain Inception, Elaboration, Construction, and Transition in UML.	**(08)**
	b)	Draw Use case diagram for online movie ticket booking system.	**(06)**

Q-5		**Attempt all questions**	**(14)**
	a)	Explain data verification and validation with example.	**(04)**
	b)	What are rules for data flow in DFD?	**(03)**
	c)	Explain objectives and design principles of input and output design	**(07)**

Q-6		**Attempt all questions**	**(14)**
	a)	Explain dependency, composition and aggregation in UML Class Model.	**(06)**
	b)	Draw state and activity diagram for traffic signal.	**(08)**

Q-7		**Attempt all questions**	**(14)**
	a)	Draw class diagram and sequence diagram for online hotel's room booking system.	**(10)**
	b)	Explain various strategies of testing.	**(04)**

Q-8		**Attempt all questions**	**(14)**
	a)	What do you mean by fact gathering? Explain Interviewing, Questionnaires and Observations.	**(07)**
	b)	What is physical diagram in UML? Explain various symbol used in physical diagram with example.	**(07)**