

GUJARAT TECHNOLOGICAL UNIVERSITY**M.C.A. Sem-III - Examination –June- 2011****Subject code: 630001****Subject Name: Structured & Object Oriented Analysis & Design Methodology****Date: 03/06/2011****Time: 02.30 pm – 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Draw figures whenever necessary.
5. Answer the Q.1 in true or false with proper justification for that.

- Q.1**
1. The role of system analyst is limited to analysis only. **03**
 2. In JAD, the analyst has to perform series of interviews with users. **03**
 3. We can get all details regarding system from logical DFD. **03**
There is no need to define physical DFD.
 4. Link and association are related with each other. **03**
 5. Data dictionary is useful to get metadata and eliminate redundancy. **02**
- Q.2 (a)**
1. Describe Data warehouse and OLAP in brief. **04**
 2. Describe the systematic method for developing decision table with example. **03**
- (b)** Explain points to be considered during dialog design. **07**
- OR**
- (b)**
1. List and explain different data entry methods. **04**
 2. How will you validate input data? Describe different validation testing. **03**
- Q.3 (a)**
1. Address the guidelines for designing web site. **04**
 2. Write a short note on guidelines for display design of web forms. **04**
- (b)** How will you describe data structure? Explain physical and logical data structure with example. **06**
- OR**
- Q.3 (a)** Explain state diagram. Draw state diagram for telephone line. **06**
- (b)**
1. Write a brief note different method of file organization. **04**
 2. Define state. Describe state transition with example. **04**
- Q.4 (a)**
1. List and explain different viewpoints for modeling a system in brief. **04**
 2. Define constraint. How will you apply constraint on objects and link? Explain. **03**
- (b)** Explain generalization and its use. Describe generalization in multilevel inheritance with example. **07**
- OR**
- Q.4 (a)** Describe software development process with stages. **07**
- (b)**
1. Describe the construction of domain class model with steps. **04**
 2. List different architectural styles of system. And explain any two of them. **03**

- Q.5 (a)** Draw (1) use case diagram, (2) activity diagram and (3) class diagram and (4) sequence diagram for the following system. **07**
 For a site of a Restaurant which allow three kind of user (1) guest (2) platinum and (3) administrator
 1. Guest user can view the content of site (i.e. (i) types of cuisine, rate of cuisine, (ii) venue of restaurant and can (iv) registered to the site etc.)
 2. Platinum user can (i) do all the task done by guest user and (iii) can book the table, (iii) get the discount e-coupon, (iv) get the service of home delivery for their order of food, (v) get the benefits of festival offer release by the restaurant etc.
 3. Administrator can (i) manage users, (ii) introduce the new offer, (iii) can put the offer and messages on e-notice board of the site, (iv) get the feedback from the all users etc.
- (b)** 1. Explain any 4 Structural things of UML diagram. **04**
 2. Describe the reification of behavior. **03**
- OR**
- Q.5 (a)** Draw (1) use case diagram, (2) activity diagram and (3) class diagram and (4) sequence diagram for the following system. **07**
 For an online exam's web site
 1. Unregister user can appear for demo exam and get the result of exam for a single subject.
 2. Registered user can appear for the online exam of a single subject at a time and can answer the questions asked. One question is display per page. He/she can move next page or previous page during the exam for answering the question. Online Result will be declared immediately after the completion of exam.
 3. No negative marking for a wrong answer.
 4. Administrator can manage (add, update, delete) -- users, Subjects and e-notice board etc of the website. He/ She can design the policy for the types of the exam (i.e. easy, moderate and hard) for all of the subjects.
 5. Tutors can insert, update or delete the Questions for a particular subject.
- (b)** 1. How will you design algorithms in class design? Explain. **04**
 2. Discuss the decomposition of system into subsystem. **03**
