

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA – SEMESTER (3) – EXAMINATION – WINTER- 2017

Subject Code: 2830402

Date: 09/JAN/2018

Subject Name: System Analysis & Design (SA & D)

Time: 10:30 AM TO 01:30 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) Answer the following multiple choice questions: 06

1. _____ level supply information to strategic tier for the use of top management.
A. Operational B. Environmental
C. Competitive D. Tactical
2. In a DFD external entities are represented by a _____.
A. Rectangle B. Ellipse
C. Diamond shape D. Circle
3. _____ can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.
A. System Data B. System Analysis
C. System Procedure D. System Record
4. _____ is a tabular method for describing the logic of the decisions to be taken.
A. Decision table B. Decision Tree
C. Decision method D. Decision data
5. Problem analysis is done during _____ phase.
A. System design phase B. Systems analysis phase
C. System Testing phase D. All of the above
6. The primary tool used in structured design is a _____.
A. Data-flow diagram B. Program flowchart
C. Structure chart D. None of the above

Q.1 (b) Define following terms briefly: 04

1. Inheritance
2. RFP
3. COCOMO
4. Primitive DFD

Q.1 (c) Discuss difference between MIS & DSS. 04

Q.2 (a) Discuss Traditional Waterfall SDLC. Also list down disadvantages associated with traditional SDLC. 07

(b) What do you mean by “Software”? Discuss various sources of Software. 07

OR

(b) Describe value chain analysis and how organizations use this technique to evaluate and compare projects. 07

Q.3 (a) What do you mean by decision table & explain the steps in creating a decision table? Compare & contrast, structured English & decision table techniques of logic modeling. 07

- (b) What are the guidelines one should follow to decompose the DFDs to its lowest logical level? **07**

OR

- Q.3** (a) Explain the difference between a Structured Interview and an Unstructured Interview. When is each type of interview appropriately used? **07**
(b) Distinguish between unary, binary, and ternary relationships and give an example of each. **07**

- Q.4** (a) Describe five methods of interacting with a system and list down various hardware devices for interacting with an information system. **07**
(b) What is the difference between evolutionary and throwaway prototyping? How does a traditional design specification differ from Agile design specification? **07**

OR

- Q.4** (a) Discuss software testing in detail. What is acceptance testing and give your thoughts regarding why should this testing be done? **07**
(b) What are the different approaches to installation? Explain the most expensive method and also discuss most risky method for the same? **07**

- Q.5** **Discuss the case study with answers of following questions.** **14**

Security Loopholes

Utpal had just joined SystemX as Systems Manager. But he was a worried man looking at the current state of affairs at SystemX. As a part of assessing hardware and software requirements, it was found that out of the 364 desktops at the corporate office; more than half did not have their antivirus software updated with recent virus signature files. Three - fourths had not changed the default e-mail password (it was the user name) and no one had installed OS patches. And one of its local mail servers seemed to be an open relay! For a fleeting moment, he wondered about the situation at the seven branch offices across the country.

SystemX used the Net extensively in dealing with its branches, customers and suppliers. Information like contract documents, marketing plans, Cheque and Draft numbers, bank account details and collection details were regularly transmitted by e-mail. Utpal's first thought was that he would recommend that SystemX bring in a security consultant. But the budget constraints meant that his recommendation was unlikely to find favour. He was beginning to feel a bit out of depth and was wondering what he should do to ensure that SystemX's data remained safe and secure.

Questions:

1. What security loopholes come to the fore in the situation described? How can these be plugged?
2. What is the importance of a "security budget" in the context of the given situation?

OR

- Q.5** **Discuss the case study with answers of following questions.** **14**

Order Fulfillment Process

Order fulfillment is a common process found in practically every company in the USA. The process begins when a customer places an order, ends when the goods are delivered, and includes everything in between.

Typically, the order fulfillment process involves a dozen steps performed by different people in different departments. First, someone in

customer service receives the order, logs it in, and checks it for completeness and accuracy. Then the order goes to finance, where someone else runs a credit check on customer. Next, someone in sales operation determines the price to charge. Then, the order travel to inventory control, where someone checks to see if the goods are on hand. If not, the order gets routed to production planning, which issues a back order.

Eventually, a warehouse operation develops a shipment schedule. Traffic determines the shipping methods such as rail, truck, air, or water, and picks the route and carrier. Product handling picked the products from the warehouse, verifies the accuracy of the order, assembles the pickings, and loads them. Finally, traffic releases the goods to the carrier, which takes responsibility for delivering them to the customer.

Common complaints that most companies received are: first, once an order enters the process, no one can tell the customer where the order is & when it will arrive. Second, errors are investable with so many people having to handle and act separately on the same order. Thirdly, even if every person involved in it did his or her job perfectly and in exactly the time allotted, the process would still be slow & error-prone. Finally, the process can't be made flexible enough to deal with special requests or to respond to inquiries.

Questions:

1. What are the root causes of the problems?
2. If you are a manger, how you can resolve all such problems? Discuss in detail.
