Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA – SEMESTER -III– EXAMINATION – WINTER 2021

Subject Code: 4539252 **Date: 23-02-2022**

Subject Name: Systems Analysis and Design

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) Objective Questions **(6)**

1. What is the Real-time systems?

A. Used for monitoring events as they occur B. Primarily used on mainframe computers

C. Used for real-time interactive users D. Used for program development

2. The _____ Operating System pays more attention to the meeting of the time limits.

A. Network B. Distributed

C. Online D. Real-time

3. …… is a sort of blueprint of the system Development Effort.

A) MDP B) DMP

C) MPD D) DPMQ

4. Datastore in a DFD represents.

A) a sequential file B) a disk store

C) a repository of data D) a random access memory

5. …… system consists of programs, data files and documentation

A) Conceptual B) Logical

C) Physical D) None of the above

6. …… is a good example of the deterministic system.

A) Lifecycle B) Computer Program

C) Software Program D) None of the above

Q-1 (b) Short Question **(4)**

1. System Analysis

2. System Record

3. Decision Tree

4. Inheritance

Q-1 (c) What is Real-time and distributed systems. **(4)**

Q-2

A) Discuss Traditional Waterfall SDLC. Also list down disadvantages associated with traditional SDLC. **(7)**

B) What do you mean by "Software"? Discuss various sources of Software. **(7)**

OR

B) Describe value chain analysis and how organizations use this technique to evaluate and compare projects. **(7)**

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. **(7)**

B) What are the guidelines one should follow to decompose the DFDs to its lowest logical level? **(7)**

OR

A) Explain the difference between a Structured Interview and an Unstructured Interview. When is each type of interview appropriately used? **(7)**

B) Distinguish between unary, binary, and ternary relationships and give an example of each. **(7)**

Q-4

A) Describe five methods of interacting with a system and list down various hardware devices for interacting with an information system. **(7)**

B) What is the difference between evolutionary and throwaway prototyping? How does a traditional design specification differ from Agile design specification? **(7)**

OR

A) Discuss software testing in detail. What is acceptance testing and give your thoughts regarding why should this testing be done? **(7)**

B) What are the different approaches to installation? Explain the most expensive method and also discuss most risky method for the same? **(7)**

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:

a) What security loopholes come to the fore in the situation described? How can these be plugged? **(7)**

b) What is the importance of a "security budget" in the context of the given situation? **(7)**

OR

a) Discuss difference between MIS & DSS. **(7)**

b) What fact-finding techniques are used for investigating the information requirement of a large organization? **(7)**

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