

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER 3 – EXAMINATION – SUMMER 2019

Subject Code: 3539252**Date: 09-05-2019****Subject Name: System Analysis And Design****Time: 02.30 PM TO 05.30 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** Explain the terms **14**
- (a) Debugging
 - (b) Joint Application Development
 - (c) Metadata
 - (d) COCOMO
 - (e) Alpha Testing
 - (f) Enterprise Data Warehouse
 - (g) OTLP
- Q.2** (a) Define the term System. Elaborate role and need of system analyst. **7**
- (b) Discuss the various phases of System Development Life Cycle. **7**
- OR**
- (b) Enumerate the basic principles of successful system. **7**
- Q.3** (a) Explain main types of documentation along with its importance. **7**
- (b) Explain the cost benefit analysis with example. **7**
- OR**
- Q.3** (a) Explain the term Decision Table with its practical applicability. **7**
- (b) Elaborate any three data gathering technique with its merits. **7**
- Q.4** (a) Write a note on user interface design. **7**
- (b) Prepare a note on structure chart. **7**
- OR**
- Q.4** (a) Explain financial analysis tools and project management tools. **7**
- (b) Elaborate conversion methods **7**
- Q.5** Case Study

Noida Public Library is the biggest library in Noida. Currently it has about 300 members. An individual needs to be 18 years old to be a member. There is a membership fee of Rs 400 for a year. There is a form to be filled in which person fills personal details. These forms are kept in store for maintaining members' records and knowing the membership period.

A member can issue a maximum of three books. He/she has three cards to issue books. Against each card a member can issue one book from library. Whenever a member wishes to issue a book and there are spare cards, then the book is issued. Otherwise that request is not entertained. Each book is to be returned on the specified due date. If a member fails to return a book on the specified date, a fine of Rs 2 per day after the due return date is charged. If in case a card gets lost then a duplicate card is issued.

Accounts are maintained for the membership fees and money collected from the fines. There are two librarians for books return and issue transaction. Approximately 100 members come to library daily to issue and return books.

There are 5000 books available out of which 1000 books are for reference and can not be issued. These records contain details about the publisher, author, subject, language, etc. There are suppliers that supply books to the library. Library maintains records of these suppliers.

Currently all functions of the library are done manually. Even the records are maintained on papers. Now day by day members are increasing. Maintaining manual records is becoming difficult task. There are other problems also that the library staff is facing. Like in case of issue of duplicate cards to a member when member or library staff loses the card. It is very difficult to check the authenticity of the problem.

Management plans to expand the library, in terms of books, number of members and finally the revenue generated. It is observed that every month there are at least 50-100 requests for membership. For the last two months the library has not entertained requests for the new membership as it was difficult to manage the existing 250 members manually. With the expansion plans, the management of the library aims to increase its members at the rate of 75 per month. It also plans to increase the membership fees from 400 to 1000 for yearly and 500 for half year, in order to provide its members better services, which includes increase in number of books from 3 to 4.

Due to the problems faced by the library staff and its expansion plans, the management is planning to have a system that would first eradicate the needs of cards. A system to automate the functions of record keeping and report generation. And which could help in executing the different searches in a faster manner.

Questions:

- (a) List the main problems highlighted in the given case. 7
 - (b) How would you design and develop the system for Noida Public Library? 7
- OR
- (a) Suggest the different ways to for testing and validation of system. 7
 - (b) How would you evaluate and control the whole system? 7
