# CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY

## FACULTY OF TECHNOLOGY AND ENGINEERING (FTE)

DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY AND RESEARCH

CE343: SOFTWARE ENGINEERING

## QUESTION BANK 2: UNIT 4

1. It is very important to understand the customer's wants and needs before you begin designing or building a computer-based solution. For the same explain all requirement engineering tasks in details.
2. If a team want to develop a "Customer Address Book" using the Waterfall methodology and you are the part of this team, the order of work would be as follows. Product manager creates Use-cases document that include the following Use-cases:
    - User can login to the system.
    - User should be able to create new contacts.
    - User should be able to view their contacts.
    - User should be able to import contacts from other programs.
    - User should be able to email their contacts from the address book.
    - User should be able to add pictures to represent their contacts.
    - There is one admin who can manage all these things.

    Note: This system must have valid login. Help manager to draw the diagram of overall system that shows Users view with all the elements.
3. Why SRS is document also known as black box specification of a system? What are the contents of SRS?
4. The library management system should be able to handle the requests for membership, issue and return of books as well as handle the purchase of books from the suppliers. Draw the context diagram for library management system
5. Explain any two requirement elicitation methods.
6. List the characteristics of good SRS?
7. Draw the SRS template.
8. Define "requirement engineering". How does the domain knowledge help in requirement analysis? What are the underlying principles that guide analysis work? Why is it difficult to gain a clear understanding of what the customer wants?

9. Develop an ER diagram for library management system.
10. Draw UML diagrams (use case, activity and sequence) for online ticket booking system for IPL 2020 tournament
11. Design test case for login functionality (invalid login, forgot password and lock account after 3 attempts)
    i. Draw context and DFD for BookMyShow application which includes ticket sales for movies, plays and corrects.
    ii. Draw a Sequence Diagram, DFD, Activity, User Interface Diagram for Food Ordering System in a restaurant.
    iii. Develop an E-R diagram, Sequence Diagram, DFD and prepare Data Dictionary for Hospital Management System.
12. A student comes to a library for borrowing book. The student makes the book request giving book title and author name. The students have to submit his library card to the library. Sometimes student may simply give topic and demand for a book. The library information system maintains list of authors, list of titles, list of topics. This system also keeps record of topics on which books are available with the system. This system maintains information about shelf number on which books are located. Finally, the list of demanded book should be displayed, on the console for ease of selection. Draw DFD ; E-R diagram, Sequence Diagram, Activity Diagram.
13. Give the problem statement and prepare DFD for Library Management System.
14. Develop a complete use cases for the system which is known to you.
15. It is often useful to examine each requirement against a set of checklist questions. Mention the checklist.
16. Draw UML diagrams (Use Case, Activity and Sequence) for the online ticket booking system for IPL2020 Twenty 20 Tournament.
17. Draw context and data flow diagram (DFD) for BookMyShow application which includes ticket sales for movies, plays and concerts.
18. Develop E-R diagram for library management system.
19. The library management system should be able to handle request for membership, issue and return of books as well as handle purchase of books from the suppliers. Draw a context diagram for a library management system.

20. Draw DFD up to level 2 for “Student Management System”.
21. Prepare DFD for library management system.
22. Draw use case diagram for Online Shopping & Hospital management system.
23. Discuss the steps required to establish the ground-work for an understanding of software requirements.
24. What questions will help you gain a preliminary understanding of the problem?
25. What are the basic guidelines for conducting a collaborative requirement gathering meeting?
26. Define the following terms:
    a) QFD.
    b) Activity Diagram.
    c) State Diagram.
    d) Association.
    e) Dependencies.
    f) CRC.
    g) User stories.
    h) Functional and Non-functional requirements.
27. Mention the elements of the requirements model.
28. What does win-win mean in the context of negotiation during the requirements engineering activity?
29. What do you think happens when requirement validation uncovers an error? Who is involved in correcting the error?
30. The requirements model as a bridge between the system description and the design model. Justify.
31. Mention all the analysis rules of thumb.
32. What different points of view can be used to describe the requirements model?