

(Please write your Exam Roll No.)



Exam Roll No.

END TERM EXAMINATION

SEVENTH SEMESTER [B.TECH.] DECEMBER-2012

Paper Code: ETCS413

Subject: Requirements & Estimation Techniques

Time : 3 Hours

Maximum Marks :75

Note: Attempt five questions including Q.no.1 which is compulsory.

Q1 (a) Define software estimation. List and explain the problems with software estimation. (3)

(b) Explain the Putnam resource allocation model. What are the limitations of this model? (5)

(c) Discuss the significance and use of requirement engineering. What are the problems in the formulation of requirements? (4)

(d) What are various activities during software project planning? (4)

(e) Compare and contrast various software requirement elicitation techniques. (4)

(f) List five desirable characteristics of a good SRS document. Also, discuss important issues that an SRS must address. (5)

Q2 (a) Explain the spiral model of software development. What are the advantages and limitations of such a model? (6)

(b) Compare and contrast various software development life cycle models. (6.5)

Q3 Consider the following Library Information System (LIS) software:

- The Librarian can create new member records by entering the member's name and address. LIS assigns a unique membership number to each new library member. The Librarian can also delete a membership by entering the membership number.
- LIS registers each book issued to a member. When a member returns a book, LIS deletes the book from the member's account and makes the book available for future issue.
- When a member returns an overdue book, the LIS software computes the penalty charge and prints a bill towards the fine payable by the member.
- A member can input either the name of a book or the name of the author of the book, and query about the availability of the book. If available, LIS displays the following: the rack number in which the book is located, the number of copies of the books available for issue and the number of copies of the book already issued out.

Draw the following using standard notations. If necessary, you can make suitable assumptions regarding the details of various features of LIS software, but you must clearly write down the assumptions you make.

1. Draw the context diagram (level 0 DFD) for the LIS software (2.5)
2. Draw the level 1 DFD for the LIS software. (2)
3. Draw use case diagram for the LIS software (2)
4. Write use case description of any two of the use cases (3)
5. Draw class diagram of the LIS software (3)