Madras University

M.C.A Software Engineering Question paper

Time: Three hours Maximum: 75 marks

PART A - [5 x 5 = Marks 25]

Answer ALL questions.
All questions carry equal marks.

1. (a) What are the quality attributes that every software should possess? Explain them clearly. List any 2 objectives of software Engineering.

Or

(b) Explain the three levels of project complexity in detail bringing the important factors concerned with it. Give the classification of projects.

2. (a) Distinguish between software engineering and hardware engineering. What is project planning? Explain.

Or

(b) What are the different types of prototypes? Explain them. What is meant by cost estimation? Explain.

3. (a) Discuss 4 GT paradigm for the software engineering with necessary diagram. Explain the salient features of it.

Or

(b) Clearly, explain the different specification techniques that are used. Briefly compare them on any 2 factors.

4. (a) Explain the different criteria that are applied for evaluation of languages.

Or

(b) Does prog languages has an impact on project planning, analysis design, coding, testing and maintenance? Discuss.

5. (a) Describe the testing strategy of a software through the spiral design. Mention its

important features (any 2)

Or

(b) With neat diagram, explain the building blocks in CASE. Bring out the need of software maintenance in brief.

PART B - [5 x 10 = Mark 50]

Answer any FIVE questions.
All questions carry equal marks.

6. Describe the features that are to be concentrated for software project management. How to implement them? Explain. Briefly discuss about software myths.

7. Explain the technique of modeling a system architecture. Specify the requirements for the same. Explain the principles used for analysis.

8. Give an account on the concept of structured analysis, in detail. Give example. What is data modeling? Explain.

9. Discuss, in detail, about the design fundamentals that are involved in Data flow oriented design. Compare this with that of object oriented design (on any three features).

10. Assuming a real time system of your choice, discuss the concepts. Analysis and design factors of the same, elaborately.

11. Define and explain the terms:
Coding style and Coding efficiency. List and explain the characteristics of a programming language.

Mention the features on which the programming languages are classified.

12. Give a detailed account on the debugging techniques on their classification and the methods involved. What is meant by software quality assurance? Explain.

13. What are the project management tools used? List them and explain them, bringing their salient features. Explain the side effects that are caused due to software maintenance.