M.Tech(CSE) 1st Semester Examination
Software Engineering Concepts & Methodology
Subject Code: CSL-503

Time Allowed: 03 hours.          Maximum Marks: 100

Before answering the question paper the candidate should ensure that they have been supplied the correct question paper. Complaints in this regard, if any, shall not be entertained after the examination.

Note: Attempt any five questions and all questions carry equal marks.

Section – A

Q1. a) “Software is not manufactured” Give your views to this statement                           (5)

b) Why is it difficult to improve quality of any software? (5)

c) Is documentation a part of software? What kind of problem can occur without documentation? (5)

d) Why is risk analysis rare activity in most of the organization? (5)

Q2. a) Let, An organization has to develop software in a new technology. Which life cycle model should be adopted by that organization and explain all the phases of that cycle in detail? (2+8)

b) Explain Line of Code, a size estimation technique, by taking an example. (10)

Q3 a) Let, An organization has to develop software by taking feedback of users at every step. Which life cycle model needs to be used by that organization and explain all the phases of that cycle in detail? (2+8)

b) Explain various methods of requirement elicitation. (10)

Section – B

Q4 a) Differentiate between software reliability and software Quality in brief. How to characterize software reliability. (5+5)

b) Explain “McCall” software quality model. (10)

Q5. Consider a program for the determination of roots of a quadratic equation. Its input is a triple of positive integers (say a,b,c) and values may be from interval [0, 50]. The program output may have one of the following words-

i) Not a quadratic equation;
ii) Real roots;
iii) Imaginary roots;
iv) Equal roots

Design the robustness testing cases. (20)

Q6. a) Explain software maintenance process cycle. (10)

b) Explain Boehm’s model for maintenance. (10)