2007-HIMACHAL PRADESH UNIVERSITY
B.TECH V SEMESTER DEGREE EXAMINATION
SOFTWARE ENGINEERING
(COMPUTER SCIENCE & ENGINEERING, INFORMATION TECHNOLOGY)

PAPER ID : IT-5001

TIME-3 HOUR
MARK-100

NOTE: ANSWER ALL QUESTIONS

SECTION-A[10*8=80]

1. What do you mean by software life cycle? Compare and contrast Water fall model with spiral model.

2. Explain the following:

(i) Software Prototyping.

(ii) Nature of SRS.

(iii) Organisation of SRS.

(iv) Structured analysis and design techniques

3. (a) Describe the two methods used to estimate the cost of effort involved in software project.

(b) What do you mean by software matric? Name any three quality matrices and explain how they are used and their advantages and disadvantages.

4. Define risk. What are the typical software risks? How are these identified? What are the activities involved in risk management, explain?

5. (a) Devise a set of three black box tests for a system that reads a textual words, from a document, up to a maximum of hundred words. The system outputs the most frequent word. In each test case explain what it is you are testing.

(b) Explain regression testing in detail.

6. Define and briefly describe the following terms:

(i) Stress testing.

(i) Fault tolerance.

(iii) Verification and validation.

(iv) Orthogonal array testing.

(v) Equalization partitioning.

7. Define software maintenance. What are the categories of maintenance? Explain any one model for the estimation of maintenance cost.

8. Explain the following terms:

(i) Cost of quality.

(ii) Quality assurance.

(iii) Measurement of reliability.

(iv) SQA activities.

SECTION-B[10*2=20]

9. Attempt the following questions:

(i) Define the following terms:

(a) Failure on demand.

(ii) Write the three properties of SRS.

(iii) What is the need of software engineering.

(iv) What do you mean by seize matrices.

(v) Write short note on testing for real time systems.

(vi) What are common problems faced during the software maintenance?

(vii) What is the role of review meeting in software quality assurance?

(viii) Define ripple effect.

(ix) Differentiate between top down and bottom up integration techniques

(x) Write short note on finite state machines.