CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY

Sixth Semester of B. Tech. Examination (IT/CE)
November 2012
IT-307 Software Engineering (S.E.)

Date: 08.11.2012, Thursday **Time: 10:00 a.m. To 01:00 p.m.** **Maximum Marks: 70**

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Rough work is to be done in the last page of main supplementary, please don't write anything on the question paper.
5. Indicate clearly, the option(s) you attempt along with its respective question no.
6. Figures to the right indicate marks.

SECTION-I

Q-1 **Answer the following questions.**

1. Explain the different categories of feasibility analysis (study). 3
2. Explain the system development life cycle. How does it relate to system analysis? 4
3. Why is it so difficult to gear a clear understanding of, what the customer wants? How does analysis determine the users need for a system? 4

Q-2

[A] What are the different kinds of project resources? Draw hierarchy of it. 4

[B] Compare the relative advantage of using the iterative waterfall model and the spiral model of software development. Explain with the help of examples, the type of problems for which you would adopt the waterfall model of software development, and the type of problems for which you would adopt the spiral model. 4

OR

[B] The library management system should be able to handle requests 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. 4

[C] Software project planning entails what activities? What are the difficulties faced in measuring the *software costs*? 4

OR

[C] Explain any two requirement elicitation methods. 4

Q-3

[A] Define Reverse Engineering and Re-Engineering. What are the main objectives of Reverse Engineering? 4

[B] What is Software Requirement Specification (SRS)? Why is it important? List the characteristics of a good quality SRS. 4

OR

[B] Define quality assurance. List the factors that affect the quality of a system. 4

[C] Describe design walk through, code walk through and critical design reviews. 4

SECTION-II

Q-4

1. Define cohesion & coupling. Give suitable examples for the same. Also explain various levels cohesion. 3
2. If new system design is likely to meet user specifications then why do users resist change? How can this resistance to change be reduced? 4
3. What are the activities performed under Quality Assurance department? 4

Q-5

[A] What is the basic construct of a GUI? List two important special considerations for user interface design. 4

[B] Why are interpersonal and technical skills necessary in system development? 4

[C] What is a risk? What are the activities of risk assessment? 4

OR

Q-5

[A] Differentiate between object oriented and function oriented design. How is software design different from coding? 4

[B] How is cyclomatic complexity useful in program test? What is sequence of testing? What is testability? 4

[C] Write a note on: Key process areas of Capability Maturity Model (CMM). 4

Q-6

[A] Define software testing. Explain various levels of testing. 4

[B] Discuss merits and demerits of ISO 9001 and SEI CMM certification. 4

OR

[B] When are verification and validation performed? Who should perform validation test (developer or user)? Justify your answer. 4

[C] Write a note on "The Software Team". As a project manager, identify the traits that you would look for in a software engineering while trying to select personnel for your team. 4

OR

[C] Compute function point value for a project with the following domain characteristics: 4

No. of I/P = 30

No. of O/P = 62

No. of user Inquiries = 24

No. of files = 8

No. of external interfaces = 2

Assume that all the complexity adjustment values are average. Assume that 14 algorithms have been counted.