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(Please write your Exam Roll No.) *Exam Roll No.* 01314920007

END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY-JUNE-2009

Paper Code: BCA204	*Subject: Software Engineering*
Paper Id-20204	(Batch 2005 - 2007)
Time : 3 Hours	*Maximum Marks :75*

Note: Q.1 is compulsory. Attempt one questions from each Unit.

Q1 (a) Write down the major characteristics of software. Illustrate with a diagram that the software does not wear out. (5)

(b) What is software testing? Discuss the limitations of software testing. (5)

(c) What is modularity? List the important properties of a modular system (5)

(d) List out requirement elicitation techniques. Which one is most popular and why? (5)

(e) What do you understand by the term Software Development Life Cycle (SDLC)? Why is it important to adhere to a life cycle model while developing a large software product? (5)

I

Q2 (a) Discuss the prototyping model. What is the effect of designing a prototype on the overall cost of the project? (6.5)

(b) Compare the waterfall model and the spiral model of software development. (6)

OR

(a) Draw a DFD for borrowing a book in a library which is explained below: "A borrower can borrow a book if it is available else he/she can reserve for the book if he/she so wishes. He/she can borrow a maximum of three books". (6)

(b) What is software requirements specification (SRS)? List five desirable characteristics of a good SRS document. Discuss the relative advantages of formal requirement specifications. List the important issues, which an SRS must address. (6.5)

II

Q3. (a) Discuss various types of COCOMO mode. Explain the phase wise distribution of effort. (6.5)

(b) What is risk? Is it economical to do risk management? What is the effect of this activity on the overall cost of the project? (6)

OR

(a) Describe any two software size estimation techniques. (6.5)

(b) Compute the function point value for a project with the following information domain characteristics.

Number of user inputs = 30
Number of user outputs = 42
Number of user enquiries = 08
Number of internal logical files = 07
Number of external interfaces = 6

Assume that all complexity adjustment values are average. (6)

III

Q4. (a) Define module cohesion and explain various types of cohesion? (6)

(b) What are software metrics? Describe data structure metrics. (6.5)

OR

(a) Discus the areas of applications of software metrics? What are the various categories of software metrics? Discuss with the help of suitable example. (6)

(b) Define module coupling and explain different types of coupling. (6.5)

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IV

Q5. (a) What are various kinds of functional testing? Describe any one in detail. (6)

(b) What are various debugging approaches? Discuss them with the help of examples. (6.5)

(a) Describe various maintenance cost estimation models. (6.5)

(b) What are configuration management activities? Draw the Performa of change request form. (6)

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