Reg No.

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V SEMESTER B.E. DEGREE MAKE-UP EXAMINATION
December-2011
SUBJECT: **SOFTWARE ENGINEERING (CSE 303)**

Date:-**28-12-2011**   TIME : 3 HOUR   MAX.MARKS :50

Instructions to Candidates
- Answer any 5 full questions.
- Answer should be clear and concise in point form.
- Missing data if any can be suitably assumed.

1A.	Explain the iterative waterfall model with a diagram	(3 Marks)
1B.	Compare different life cycle models.	(3 Marks)
1C.	Which life cycle model, would you follow for developing software for each of the following applications? Mention the reasons justifying your choice of a particular life cycle model.	(2+2)Marks

     i) The graphical user interface part of a large software product.
     ii) A software product that would function as the controller of a telephone switching system

2A.	List different cohesions and couplings. Explain each of them.	(5 Marks)
2B.	Draw the control flow graph for the following code:	(2 Marks)

      1. while(p>10)
      2. if(p<5)
      3.   p=p*2
      4. endif
      5. p=p+1
      6. endwhile

2C.	Explain the emergence of software engineering from its early stage to different design approaches with example for each.	(3 Marks)

3A.	Discuss the different stages of the ISO9000 registration process elaborately	(3Marks)
3B.	Compare ISO9001 with SEI-CMM.	(3 Marks)
3C.	Explain the reliability metrics which are used to quantify the reliability of software products.	(4 Marks)

4A.	Write a formal algebraic specification of the sort symbol-table whose operations are informally defined as follows:	(6 Marks)

         i)**create:** bring a symbol table into existence.
         ii) **enter:** enter a symbol table and its type into the table.
         iii)**lookup:** return the type associated with a name in the table.
         iv)**delete:** remove a name, type pair from the table, given a name as a

parameter.

        v)**replace:** replace the type associated with a given name with the type specified as its parameter.

The enter operation fails if the name is already present in the table. The lookup, delete, and replace operations fail if the name is not available in the table.

4B. What is fourth generation programming technique? What are its advantages and disadvantages vis-à-vis a third generation technique? (3 Marks)

4C. What are the factors the design review team checks while doing a design review. (1 Mark)

5A. Explain the different types of integration testing. (5 Marks)

5B. If there are 100 defects in the system and 12 of these defects are found during testing. 50defects are seeded into the system and 1 of them is found during testing. Find the number of defects still remaining in the system after testing. (3 Marks)

5C. State true or false. Justify your answer. (2Marks)

i. Error and failure are synonymous in software testing terminology.

ii. Introduction of additional edges and nodes in the CFG due to introduction of sequence type of statements in the program can increase the cyclomatic complexity of the program.

6A. Using the table given below, draw activity diagram. Compute the earliest start time, latest start time and slack time of each activity. Also, Identify the critical path. (7Marks)

Activities	Duration	Dependencies
A	7	-
B	3	-
C	6	A
D	3	B
E	3	D,F
F	2	B
G	3	C
H	2	E,G

6B. What are the shortcomings of LOC Metric (3 Marks)