

**B.Tech. VIEP - COMPUTER SCIENCE &
ENGINEERING****Term-End Examination****June, 2011****BICS-005 : SOFTWARE ENGINEERING***Time : 3 hours**Maximum Marks : 70*

Note : Attempt any seven questions. All questions carry equal marks.

1. (a) Define the term software. Describe its various characteristics. 5
- (b) Define software development life cycle. Discuss various activities during SDLC. 5
2. (a) What is spiral model ? Give merits and demerits of this model. Compare it with waterfall model. 8
- (b) Why feasibility study is important in any project. 2
3. (a) What is the role of the project manager in an organization? 2
- (b) What is the function point approach for software estimation ? What are the information domain parameters used in this technique ? Broadly outline how to compute the function point? 8

4. (a) What are different 'Design Metrics' ? Explain when 'Design metrics' are inadequate method predicting design quality ? 5
- (b) What do you mean by risk management ? Explain how to select the best risk reduction technique when there are many ways of reducing risk ? 5
5. (a) Explain Software Prototyping ? What are the various prototyping methods and tools ? 5
- (b) Explain with example the functional and Behavioural modeling. How do we model the software's reaction to some external event ? 5
6. (a) What are design principle ? What is the significance of design document ? 5
- (b) What are the concept of cohesion and coupling ? How they are useful in making a good design software ? 5
7. (a) Illustrate and explain the concept of modular design. How does a modular design enhance life of a software product ? 6
- (b) Explain "scheduling" and its importance in software project. 4

8. (a) What are different type of software testing ? Explain them with suitable examples. 8
- (b) Make boundary value test suite for the system meeting following requirements : 2
- (i) $30 \leq X \leq 60$
- (ii) $50 \leq Y \leq 100$
9. (a) Illustrate the importance of testing phase. Explain different levels of testing. 5
- (b) What is the difference between functional and structural testing ? Explain any two functional testing techniques. 5
10. Write short notes on *any two* :
- (a) COCOMO Model 5
- (b) Software Requirement specification 5
- (c) Debugging 5
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