

**B.Tech. VIEP - COMPUTER SCIENCE AND  
ENGINEERING (BTCSVI)**

**Term-End Examination**

**June, 2013**

**BICS-005 : SOFTWARE ENGINEERING**

*Time : 3 hours*

*Maximum Marks : 70*

*Note : Attempt any seven questions. All questions carry equal marks. All the questions are to be answered in english only.*

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|----|-----|--|---|
| 1. | (a) | Describe the various software development models in brief.   | 5 |
|    | (b) | What is system engineering ? What kind of tasks are required to be followed by the system engineer ? | 5 |
| 2. | (a) | What is SDLC ? Explain the various steps of SDLC in detail.  | 8 |
|    | (b) | How software is different from program ?   | 2 |
| 3. | (a) | What are project metrics ? What is their importance, describe giving examples ?                      | 6 |
|    | (b) | What is prototype model ? How it is different from spiral model ?                                    | 4 |

4. (a) What is function point approach of software estimation? How can we compute the function points? Explain by giving a suitable example. 8
- (b) Why initial investigation is needed? Explain in brief. 2
5. (a) Explain various software specification attributes in detail. 6
- (b) What is a data dictionary? What is the importance of having a good data dictionary? 4
6. (a) How can design reviews improve software designs? How can design reviews help in educating operators, users, clients, analyst and testers? Explain in detail. 8
- (b) What are the various design tools? Explain any one of them. 2
7. (a) What is project scheduling? Explain its role in software project management. 5
- (b) What is modular design? When is a module called more cohesive? Explain with the help of example. 5

8. (a) What is software maintenance ? Explain various activities which are part of software maintenance. 5
- (b) What is system testing ? How unit testing is different from integration testing ? Explain. 5
9. (a) Differentiate the following giving examples. 6
- (i) Fault (ii) Failure (iii) Error
- Also describe their relation to each other.
- (b) What is security testing ? What are the various parameter which we have to taken in consideration during security testing ? 4
10. Write short notes on : 2.5x4
- (a) COCOMO Model
- (b) Waterfall Model
- (c) Software Crisis
- (d) Performance Testing
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