

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

Term-End Examination

00828

June, 2015

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.

1. What are the symptoms of the present software crises ? What are the factors that have contributed to the making of the present software crises ? What are the possible solutions to the present software crises ? 10

2. Explain in detail about the incremental model of software development. Also explain how it differs from the prototype model. 10

3. (a) Calculate Halstead's basic measure on factorial code given below : 5

```
int fact (int n) {  
    if ( n = = 0 )  
        {return 1;}  
    else  
        {return n*fact (n-1);}  
}
```

- (b) Describe the cyclomatic complexity measures. 5

4. (a) What is Risk management ? Explain the various Risk management techniques. 5
- (b) What are the different parameters used for cost estimation ? 5
5. What are the various requirement elicitation techniques ? Explain what problems and challenges are faced while eliciting requirements. 10
6. Draw a context level DFD and level 1 DFD for library management system. Identify its software modules and their functions. 10
7. (a) What are the design principles ? Why are they important ? 5
- (b) Explain Data Modelling. What is the impact of data modelling in software engineering ? 5
8. What is the difference between black box testing and white box testing ? Explain both methods in detail. 10
9. (a) What is the need for testing in software engineering ? When should testing start in SDLC ? 5
- (b) Explain the terms 'correctness', 'robustness' and 'reliability' of the software. How are they different from each other ? 5

10. Write short notes on any *two* from the following : 2×5=10

- (a) Software Architecture
 - (b) Debugging
 - (c) Verification and Validation
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