

**ANNA UNIVERSITY-2007**  
**B.E/B.TECH DEGREE EXAMINATION**  
**SOFTWARE ENGINEERING**  
**(COMPUTER SCIENCE ENGINEERING)**

JUNE-2007

TIME-3HOUR  
MARK-100

**ANSWER ALL THE QUESTIONS**

**PART A — (10 × 2 = 20 MARKS)**

1. Define the term software engineering?
2. Name the different approaches to software sizing problems.
3. Define the terms cardinality and modality.
4. What are the properties to be specified in architectural design.
5. What are the factors to be considered for computing function points?
6. Give the definition software reliability and availability.
7. Give any two differences between white box and black box testing.
8. What do we need version control.
9. Why do we mean by sensitivity testing?
10. Write any four features and contents of Case repository.

**PART B — (5 × 16 = 80 MARKS)**

- 11.a)i) Explain the spiral model with neat diagram.
  - ii) What are the approaches for software prototyping? Describe in detail.
  - 12.a)i) What is data modeling? Identify the data objects with attributes used in Employee Information systems. Draw the ER diagram neatly.
  - ii) Explain modularity in detail
- OR
- 12.b)i) Explain cohesion and coupling in with necessary diagrams.
  - ii) List out design heuristics for effective modular design
  - 13.a)i) Compute the function point value for a project with the following information domain characteristics.  
Number of user inputs 32  
Number of outputs 60  
Number of inquiries 24  
Number of files 8  
Number of external interfaces 2  
Assume that all complexity adjustment values are average
  - ii) What are direct and indirect measures? Explain size-oriented metrics in detail.
- OR
- 13.b)i) Explain formal technical review in detail.
  - ii) Write notes on ISO 9000 quality standards.

14.a)i) Write a procedure to find the sum of Fibonacci series up to N. Draw the flow graph and find cyclomatic complexity. Derive all possible test cases.

OR

14.b)i) Write in detail about system testing

ii) Elaborate the types of maintenance

15.a)i) What is CASE repository? Write about any 5 CASE tools.

ii) What are the building blocks of CASE tools.

OR

15.b) What are the tasks in SCM process? Explain each of them.

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