

**B. Tech 4th Semester Examination**

**Software Engineering (NS)**

**IT-224**

**Time : 3 Hours**

**Max. Marks : 100**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt five question in all, selecting one question from Sections A, B, C and D. Section E is compulsory.

**SECTION - A**

1. What is prototyping? Distinguish between various types of prototyping. (20)
2. What is meant by 'Software Crisis'? Discuss the reasons for its occurrence. (20)

**SECTION - B**

3. What is 'Data Dictionary'? How does it help in Requirements Analysis? Discuss. (20)
4. Which one is a better measure of Size-LOC or Healdstead's Software Science? Discuss. (20)

**SECTION - C**

5. What is meant by Coupling? What are the various levels of coupling? How does it contribute towards the complexity of software? Discuss. (20)

[P.T.O.]

6. What are Test ORACLES? How do they help in effective testing? Discuss. (20)

**SECTION - D**

7. Why is Software Maintenance more expensive than actual development? Give reasons. (20)
8. Define 'Software Metrics'. What is the role of Software Metrics in Software Quality Assurance? Discuss. (20)

**SECTION - E**

9. (i) What is software crisis?  
(ii) Differentiate between process and product metrics.  
(iii) What is an SRS?  
(iv) What is UML?  
(v) What is a Process Model?  
(vi) What is a DFD?  
(vii) What are E-R Diagrams?  
(viii) What is Debugging?  
(ix) What is SCM?  
(x) What is TQM? (2×10=20)