

Roll No.

Total No. of Pages : 2

MCA/D11

4519

Software Engg.

Paper : MCA – 104

Time : Three Hours] [Maximum Marks : 80

Note :- Attempt any FIVE questions selecting at least ONE from each Unit. Question No. 1 is compulsory.

1. Write short notes on the followings :

- (i) SEI-CMM Quality standard
- (ii) Cyclomatic Complexity
- (iii) Putnam Model
- (iv) Software Risks
- (v) Behavioral and Non-Behavioral requirements
- (vi) Object-Oriented Design
- (vii) Musa Model for software reliability
- (viii) Defensive programming.

UNIT-I

2. (a) What is Software Crisis ? State its significance in reference to software engineering discipline.
- (b) What is Cyclomatic Complexity ? State Halstead Theory for driving Cyclomatic complexity.

3. What are various methods for software size measurements ? Explain their role in calculating the software cost estimation.

UNIT-II

4. What are characteristics of good SRS ? How prototyping is useful in SRS. What problems may arise if problem remains during SRS ?
5. Write and explain various project management activities in brief and cost estimation in detail.

UNIT-III

6. What is System Design ? Explain various design strategies. What is relevance of cohesion and coupling in designing ?
7. What do you mean by Software Reliability ? Explain the relevance of fault tolerance, fault avoidance and exception handling in view of software reliability.

UNIT-IV

8. Why software maintenance is most time consuming activity in software process ? What are the various types of maintenance ? When it starts and why it is costly ? Also explain various measures through which it can be minimized.
9. Write short notes on following testing :
 - (a) Loop testing
 - (b) Mutation testing
 - (c) Validation testing
 - (d) Regression testing
 - (e) Beta testing
 - (f) Exhaustive testing
 - (g) Path testing