

Roll No.

Total No. of Pages : 2

MCA/D09

5419

Software Engineering

Paper : MCA-104

Time : Three Hours]

[Maximum Marks : 80

Note :- Question no. 1 is compulsory. In addition to the compulsory question attempt **FOUR** more questions selecting **ONE** question from each Unit.

1. (i) Explain software crisis problem in few lines.
(ii) Define defensive programming.
(iii) List the weaknesses of waterfall model.
(iv) Write few uses of Data Dictionary.
(v) Differentiate between Walk through and Code Inspection.
(vi) List out coding standards.
(vii) Define Regression testing.
(viii) List out drawbacks of LOC metric.

3 each

UNIT-I

2. Differentiate between the following with examples :
(i) Design Metrics and Data Structure Metrics
(ii) ISO 9001 and SEI-CMM.
3. Explain the following with suitable examples :
(i) Halstead complexity measures
(ii) Information Flow Metrics.

UNIT-II

4. Differentiate between the following with examples :
(i) Project scheduling and project monitoring
(ii) Behavioural and non-behavioural requirements
(iii) Single and multivariate models.
5. Draw E-R diagrams and Data Flow diagrams for a small library management system of your choice.

UNIT-III

6. Differentiate between the following with examples :
(i) Function Oriented design and User Interface design
(ii) Fault avoidance and tolerance.
7. Write short notes on the following :
(i) JM reliability model
(ii) Software design principles.

UNIT-IV

8. Differentiate between the following :
(i) Validation testing, loop testing and mutation testing
(ii) Reverse Engineering and Software Re-engineering.
9. Explain the following with examples :
(i) Peer Reviews
(ii) Black-box testing
(iii) Maintenance side effects
(iv) Configuration Management.