

Software Engineering**Paper: MCA-I04**

Time: Three Hours

Maximum Marks: 80

Note:- Attempt **FIVE** questions in all Question No.1 is compulsory and attempt **FOUR** more questions by selecting **ONE** question from each unit.

1.
 - (i) Explain software crisis problem in few lines.
 - (ii) Define defensive programming.
 - (iii) List the weakness 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 drawback of LOC metric.

UNIT-I

2. Differentiate between the following with example:-
 - (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 example:-
 - (i) Project scheduling and project monitoring
 - (ii) Behavioral and non-behavioral requirements
 - (iii) Single and multivariate models.
5. Draw E-R diagram and Data Flow diagram for a small library management system of your choice.

UNIT-III

6. Differentiate between the following with example:-
 - (i) Function Oriented design and User Interface design.
 - (ii) Fault avoidance and tolerance.
7. Write short notes on the following:-
 - (a) JM reliability model
 - (b) 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 example:-
 - (i) Peer reviews
 - (ii) Black-box testing
 - (iii) Maintenance side effect
 - (iv) Configuration Management.