Roll No. ....

Subject Code—6713

M.C.A. EXAMINATION

(Third Semester)

(5 Years Integrated Course)

MCA-303

SOFTWARE ENGINEERING

Time : 3 Hours   *Maximum Marks : 100*

Note : Attempt any *Five* questions. All questions carry equal marks.

1. Differentiate between the following :

   (a) Data flow and Control flow based testing

   (b) Reverse Engineering and Re-engineering

   (c) Evolutionary and Throwaway prototyping.

2. (a) What are the merits and demerits of LOC metric ?

1-01-411) J-6713   **P.T.O.**

(b) Define Software Crisis and discuss in brief the factors responsible for it.

(c) Differentiate between data coupling and control coupling using suitable examples.

3. Write short notes on the following :

(a) Function Point Metric

(b) Mutation Testing

(c) SEI-CMM.

4. (a) What do you understand by regression testing ? Explain.

(b) What is Perfective Maintenance ? Discuss.

(c) What are the limitations of Water fall model ?

5. (a) Using an example show that path coverage is a stronger adequacy criteria than branch and statement coverage.

(b) What is DFD ? What is the difference between flowcharts and DFD ? Draw a DFD for payroll problem ? Make the necessary assumptions.

6. (a) What are the factors affecting the cost of software ? What is basic COCOMO ? Discuss.

(b) What is the difference between adaptive and corrective maintenance ? Discuss.

7. (a) What is Integration Testing ? What types of errors are detected by it ?

(b) What is the difference between hardware and software reliability ?

8. (a) What do you understand by Formal Technical Review (FTR) ? What are its merits and demerits over inspections ?

(b) Discuss the use of cyclomatic complexity in design and testing phase.