Reg. No.											

Manipal Institute of Technology, Manipal
(A Constituent Institute of Manipal University)

VI SEMESTER B.TECH (OPEN ELECTIVE)

MAKEUP EXAMINATION, MAY/JUNE 2016

SUBJECT: Principles of Software Engineering (CSE 344)

REVISED CREDIT SYSTEM

Date: 08-07-2016

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ANY FIVE FULL** questions.
- Missing data, if any, may be suitably assumed.

1A.Identify the problem one would face, if he tries to develop a large software product without using software engineering principles. 2M

1B.Write a brief note on the following evolution of the software engineering process in the context of the design methodology.

i) Control Flow-Based Design
ii) Data Structure-Oriented Design
iii) Object-Oriented Design 6M

1C.State five symptoms of the present software crisis in the software industry while developing industrial software products. 2M

2A.Identify at least four basic characteristics that differentiate a simple program from a software product. 4M

2B. State three important advantages of structured programming paradigm. 3M

2C.Write six phases of software engineering process. Write the name of practical waterfall model. 3M

3A.Explain the problems that might be faced by an organization if it does not follow any software life cycle model. 3M

3B.Briefly discuss two basic roles of a system analyst in software industry in the context of performing requirement analysis**.** 2M

3C.With the help of the diagram explain the working of an Evolutionary Model of software product development. 5M

4A.Briefly discuss three important parts of a System Requirements Specification (SRS) document. 3M

4B.Identify the non-functional requirement-issues that are considered for any given problem description? 3M

4C.Write the properties of good System Requirements Specification (SRS) document. 4M

5A.What is the necessity of constructing Data Flow Diagrams (DFDs) in the context of a good software design?. 2M

5B. List three Symbols used in Data Flow Diagrams (DFDs) along with its meaning. 3M

5C. A software system called RMS calculating software would read three integral numbers from the user in the range of -1000 and +1000 and then determine the root mean square (rms) of the three input numbers and display it. The system accepts three integers from the user and returns the result to him. Write the context diagram and Level 1 DFD. 5M

6A.list some representative coding standards developed by organizations for good software product development. 4M

6B.Bringout the meaning and context of the following tests.

i) Alpha testing
ii) Beta testing
iii) Acceptance testing 3M

6C. With the help of the block diagram explain precedence ordering among Planning Activities. 3M