(Please write your Exam Roll No.) *Exam Roll No.* 01250404415

END TERM EXAMINATION

SECOND SEMESTER [MCA] MAY- JUNE 2016

Paper Code: MCA-110 ***Subject: Software Engineering***

Time: 3 Hours ***Maximum Marks: 75***

Note: Attempt any six questions including Q.No1 which is compulsory.

Q1 Attempt **any five** questions from following:- **(5x5=25)**

(a) What is software crisis? List the reasons for software crisis.

(b) What do you understand by SDLC? What are the advantages of developing the prototype of a system?

(c) Explain the concept of Function Points. Why FPs are becoming acceptable in industry?

(d) Discuss is the objective of software design. How do we transform an informal design to a detailed design?

(e) What are the various categories of software metrics? Discuss with the help of suitable examples.

(f) What is software reliability? List the name of some of the models for software reliability estimation.

(g) Discuss the significance and use of requirement engineering. What are the problems in the formulation of requirements?

(h) Discuss the problems during the software maintenance. How the maintenance cost can be reduced?

(i) What is reverse engineering? Discuss reverse engineering ad re-engineering.

(j) Why does software testing need extensive planning? Explain.

Q2 What is the importance of software life cycle model? Discuss the selection process parameter for a life cycle model. Which model is most widely used in software industries now a day? **(10)**

Q3 A university has decided to engage a software company for the automation of student results management system for its UG program. What documents are needed by the company to build the software? Draw a context diagram for university student result management system. **(10)**

Q4 What are the objectives of software design? How do we classify the modularity of software? Explain the steps to analyze and design Object Oriented System. **(10)**

Q5 Write a program for the calculations of roots of a quadratic equation. Generate cross reference list for the program and calculate, WM (module weakness), LV (Average no. of lives variables), γ(Avg. life of variables). **(10)**

Q6 Discuss the various software quality models. **(10)**

Q7 What is Cohesion & coupling? What is object oriented design. **(10)**

Q8 Consider an example of grading the students in academic institution. The grading is done according to the following rules: **(10)**

Marks Secured	Grade
75-100	Distinction
6-74	First Division
50-59	Second Division
30-49	Third Division
0-29	Fail

Generate the test cases using the equivalence class testing techniques.

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