MCA–302(N)

M. C. A. (Third Semester)
EXAMINATION, Nov.-Dec., 2007
(New Course)

SOFTWARE ENGINEERING
[MCA – 302 (N)]

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 40

Note : There are *five* Units in paper. Attempt *one* question from each Unit.

Unit – I

1. (a) Explain System. What are the characteristics of system ? Explain the role of System Analyst. 10

   (b) Explain various information gathering tools. 10

2. (a) Explain in detail System Development Life Cycle. 10

   (b) Explain the process of design and various design methodologies. 10

Unit – II

3. (a) What do you mean by the term software engineering ? Describe the evolving role of software. What are its attributes ? 10

   (b) Explain the types of situations where iterative enhancement model might lead to difficulties.

Compare iterative enhancement model and evolutionary development model. 10

4. (a) Differentiate between program and software. Why documents and documentation have become important ? Explain software characteristics. 10

   (b) Compare waterfall model and the spiral model. How does project risk factor affect the spiral model of software development ? 10

Unit – III

5. (a) What is risk ? Is it economical to do risk management ? What is its effect on overall cost of the project ? 10

   (b) Suppose we are faced with developing a system that we expect to have 100,000 lines of code. Compute effort and development time for each of the three development mode. 10

Software Project	a_b	b_b	c_b	d_b
Organic	2·4	1·05	2·5	0·38
Semidetached	3·0	1·12	2·5	0·35
embedded	3·6	1·20	2·5	0·32

6. (a) What is Design ? Discuss the objectives of software design-differentiate between conceptual design and technical design. 10

   (b) What is the difference between flowchart and structure chart ? Explain the strategy of design. Also explain top-down and bottom up design. 10

Unit – IV

7. (a) Explain Black Box testing. What are the various methods of Black Box testing ? 10

(b) Explain the terms quality. quality control, quality assurance and cost of quality. 10

8. (a) Explain decision table based testing. Write a procedure to find maximum of three numbers and develop decision table for this procedure. 10

(b) Explain Debugging techniques and the approaches induction approach and deduction approach. 10

Unit — V

9. (a) Explain "Designing an MIS for an organization is an art and not a science" and "MIS supports manager in his functional responsibilities". 10

(b) Explain how is organization a system where inputs are processed to get a desired output. 10

10. (a) Explain Planning. What are the dimensions of planning ? 10

(b) Differentiate between the following : 10

(i) Data and Information

(ii) Data processing and Information processing

(iii) MIS and Computer system