Roll No. .....

Total Pages: 3

### MCA/D-19

10012

#### MCA

(Software Engineering)
Paper-MCA-14-13

Time Allowed: 3 Hours

[Maximum Marks: 80

Note: Attempt five questions in all, selecting at least one question from each Unit. Question No. 1 is compulsory. All questions carry equal marks.

# Compulsory Question

- 1. Answer the following questions in brief:
  - (a) What are the major causes of Software crisis?
  - (b) What are the salient features of ISO 9001 requirements
  - (c) Distinguish between Behavioral and Nonbehavioral requirements.
  - (d) What approach is followed in the structured analysis technique of organizing information during problem analysis?
  - (e) List the desirable characteristics that a good user interface should possess.
  - (f) Distinguish between Functional abstraction and Data abstration.
  - (g) What do you mean by Equivalence class testing?
  - (h) What is Control flow based testing?

P. T. O.

UNIT-I

- What is the goal of any Development Process?
   How is a process model related to it? Compare
   the different Software Development Paradigms or
   the Processes.
- What are Software metrics and Measures? List and describe the various types of Software metrics.

### UNIT-II

- 4. What are the major issues that a project plan addresses? Give a brief description of each.
- 5. (a) What are the different types, components and levels of DFD?
  - (b) List the desirable characteristics of a good Software Requirements Specification (SRS) document.

## UNIT-III

- 6. Describe what is meant by Coupling and Cohesion in the context of software design. How are these concepts useful in arriving at a good design of a system? Discuss the classification of Coupling and Cohesion.
- (a) Specify the basic constructs of structured programming.
  - (b) Define the term software reliability and describe the metrices used to measure software reliability.

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## UNIT-IV

- 8. Describe and distinguish between the following :
  - (a) Unit Testing, integration testing and system testing.
  - (b) Black-box testing and White-box testing.
- 9. Why is maintenance considered to be a part of software evaluation? What techniques are used for maintenance of Software?

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