

Code: AC63/ AT63 Subject: SOFTWARE ENGINEERING

- f. Which model shows how individual objects change their state in response to events?
- (A) Sequence models (B) State machine models
(C) Subsystem models (D) Object interface models
- g. Software _____ is work done to enhance software functionality, correct errors and improve the performance of software.
- (A) Design (B) Maintenance
(C) Reverse engineering (D) Corrections
- h. _____ involves using programming constructs and techniques that contribute to fault avoidance and fault tolerance.
- (A) Extreme programming (B) Safe programming
(C) Exception handling (D) Dependable programming
- i. In which testing the test teams have access to the source code of the system?
- (A) Integration testing (B) Release testing
(C) Beta testing (D) Functional testing
- j. Name the metrics that are collected by measurements made of a program in execution?
- (A) Static (B) Dynamic
(C) Project (D) Quality

**Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.**

- Q.2** a. Define software process. Explain the software process model. (8)
- b. List the different steps of management activities. (4)
- c. What are the advantages of incremental development process? (4)
- Q.3** a. Give example of the type of system models that you might create during the analysis process? (4)
- b. Give the structure suggested by IEEE/ANSI 830 – 1998 for requirements documents. (4)
- c. What do you understand by requirement elicitation? Discuss any two techniques in detail? (8)

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- Q.4** a. What are the activities involved during the process of developing a formal specification of a sub-system interface? (6)
- b. What is Pair Programming? What are the advantages of pair programming? (5)
- c. What do you mean by RAD? What are the tools included in RAD environment? (5)
- Q.5** a. What are the non-functional system requirements that may be chosen for an application for a particular style and structures? (6)
- b. Write the advantages and disadvantages of broadcast model approach? (5)
- c. Discuss the important characteristics of distributed approach to system development? (5)
- Q.6** a. What are the key factors that one should consider while planning for software reuse? (8)
- b. Define component? How components are different from objects? (8)
- Q.7** a. What do you mean by user interaction? What are the different styles in which forms of interaction can be classified? Give one advantage, disadvantage and an example of each style. (2+4+4)
- b. For small and medium sized systems, what is the software engineering approach to develop tool, techniques and methods that leads to the production of fault-free software? (6)
- Q.8** a. What do you mean by software inspection? Write major advantages of inspection over testing? (5)
- b. What are Test Principles and what are the attributes of a “good” test? (7)
- c. Describe two metrics that have been used to measure software productivity? (4)
- Q.9** a. Explain the different types of CASE Tools. (8)
- b. With the help of a figure, explain the key stages of software measurement process which is a part of a quality control process? (8)