

Fifth Semester B.E. Degree Examination, December 2012
Software Engineering

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting
at least TWO questions from each part.**

PART – A

- 1 a. What are the attributes of a good software? Explain. Also list and explain the key challenges facing software engineering. (10 Marks)
- b. Explain with block diagram, the system engineering process. (10 Marks)
- 2 a. Define the term dependability. List and explain the various dependability properties. (10 Marks)
- b. What is a software process model? Explain with a block diagram the evolutionary development model. (10 Marks)
- 3 a. Distinguish between functional and non-functional requirements. With a block diagram, explain non-functional requirement types. (10 Marks)
- b. List at least five stake holders for an automated university examination system. Classify the identified stake holders under different view points. (10 Marks)
- 4 Write short notes on:
 - a. Context models.
 - b. Object models.
 - c. Project scheduling.
 - d. Risk management. (20 Marks)

PART – B

- 5 Explain the terms:
 - a. Architectural design decisions.
 - b. The repository model.
 - c. Unified modeling language (UML).
 - d. Sequence models. (20 Marks)
- 6 a. List and explain the principles of agile methods. Also explain the problems with agile methods. (10 Marks)
- b. Define “Program Evolution Dynamics”. Discuss the Lehman laws for program evolution dynamics. (10 Marks)
- 7 a. Explain the various inspection roles and inspection checklists for software inspection process. (10 Marks)
- b. What is partition testing? Identify equivalence class partitions for automated air conditioning system having at least four partitions. List also the boundary values for each class. (10 Marks)
- 8 a. Define people capability maturity model (PCMM). With a block diagram, explain various P-CMM levels. (10 Marks)
- b. List and explain various COCOMO cost estimation models. (10 Marks)