USN | | | | | | | | | | 10IS51

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)**

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