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06CS/IS72

Seventh Semester B.E. Degree Examination, December 2012

Software Architecture

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART - A

- 1
 - a. Explain in detail the building of Architecture Business cycle by identifying the factors of influence. (10 Marks)
 - b. Briefly explain, what does software architecture constitute. (05 Marks)
 - c. Describe the Architectural structure of a system. (05 Marks)

- 2
 - a. Enlist the different Architectural styles and discuss in brief Event – based, Implicit Invocation. (06 Marks)
 - b. Explain the software paradigm for process control. (04 Marks)
 - c. State the problem of KWIC. Propose Abstract Data types and Implicit Invocation styles to implement solutions for the same. (10 Marks)

- 3
 - a. Explain quality attribute scenarios. (06 Marks)
 - b. Distinguish between availability and modifiability scenarios. (04 Marks)
 - c. Explain the following with respect to tactics :
 - i) Fault prevention ii) Defer binding time iii) Resource arbitration
 - iv) Internal monitoring v) Run time tactics. (10 Marks)

- 4
 - a. Explain layers architectures pattern, with sketches and CRC cards. (06 Marks)
 - b. List the components of a pipe and filter architecture pattern and depict the dynamics behaviour of it. (08 Marks)
 - c. Explain the forces that influence solution to problem based on black board pattern. (06 Marks)

PART - B

- 5
 - a. Describe the structure of Broker architectural pattern with their respective CRC cards. (08 Marks)
 - b. Explain the dynamic behaviour of MVC pattern, with sketches. (08 Marks)
 - c. List the benefits of PVC pattern. (04 Marks)

- 6
 - a. Enumerate the implementation of a Micro Kernel pattern. (10 Marks)
 - b. Explain the reflection architectural pattern and its known uses. (10 Marks)

- 7
 - a. Enlist the benefits of whole – part pattern. (04 Marks)
 - b. Discuss the structure, dynamics and implementation of Master – Slave pattern. (10 Marks)
 - c. List the known uses and liabilities of proxy pattern. (06 Marks)

- 8
 - a. Explain ADD and its steps. (07 Marks)
 - b. What are views? How they serve the architecture, with examples. (06 Marks)
 - c. List the steps in documenting a view for architecture. (07 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.