USN | | | | | | | | | |　　　　　　　　　　　　　　　　**06IS51**

Fifth Semester B.E. Degree Examination, June/July 2011
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 is software engineering? What are the differences between generic and customized software products? **(06 Marks)**
　b. With a block diagram, briefly explain the different phases of systems engineering process. **(14 Marks)**

2　a. What are the three main types of critical systems? Explain. **(06 Marks)**
　b. With a neat diagram, describe the waterfall model of software development process. **(10 Marks)**
　c. Explain the most important dimensions of the system dependability? **(04 Marks)**

3　a. Explain the structure of software requirements document? **(08 Marks)**
　b. Explain requirements elicitation and analysis process. **(06 Marks)**
　c. What are the requirements validation techniques? Explain briefly. **(06 Marks)**

4　a. Briefly explain the purpose of each of the sections in a software project plan. **(10 Marks)**
　b. With diagram, briefly explain the components of a CASE tool for structured method support. **(10 Marks)**

PART – B

5　a. With an example, describe the repository model and give its advantages and disadvantages. **(10 Marks)**
　b. Draw and explain sequence diagram and state diagram for a typical weather station. **(10 Marks)**

6　a. Briefly explain the tools that are included in rapid application development (RAD) environment, with a diagram. **(10 Marks)**
　b. With a block diagram, explain the activities of re – engineering process. **(10 Marks)**

7　a. Explain the roles of inspection process and discuss the possible inspection checks. **(10 Marks)**
　b. Explain the different types of interfaces between program components. **(04 Marks)**
　c. Briefly explain with a diagram, clean – room software development. **(06 Marks)**

8　a. Briefly explain the factors that may influence the decision of selecting staff for the project team. **(05 Marks)**
　b. Explain the different cost estimation techniques briefly. **(05 Marks)**
　c. Explain the basic COCOMO model with formula for different types of projects. **(10 Marks)**

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