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**Fifth Semester B.E. Degree Examination, June/July 2016**  
**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 good software? Explain the key challenges facing in software engineering. (08 Marks)
- b. What are emergent system properties? Give the example for each. (06 Marks)
- c. Describe the general model of design process. (06 Marks)
- 2 a. What are critical systems, with its types? Explain. (08 Marks)
- b. With the neat diagram, explain water fall model. (06 Marks)
- c. Explain the requirement engineering process with its four phases. (06 Marks)
- 3 a. Define and differentiate functional and non functional requirements. (06 Marks)
- b. Write IEEE standard format for requirement documentation. (06 Marks)
- c. What is requirement Elicitation and analysis? (04 Marks)
- d. Write short note on Ethnography. (04 Marks)
- 4 a. Explain data flow model with an example of insulin pump. (08 Marks)
- b. Define object model and explain object aggregation. (04 Marks)
- c. Explain different section of project plan and define milestones and deliverables. (08 Marks)

**PART – B**

- 5 a. Explain the architectural design decision. (06 Marks)
- b. Explain : i) Repository model ii) Layered model (06 Marks)
- c. Explain object oriented design process with example of weather mapping system of the layered architecture. (08 Marks)
- 6 a. What are agile methods? Discuss the principles of agile method. (06 Marks)
- b. Explain the Lehman's laws. (04 Marks)
- c. Explain the steps involved in reengineering process with a neat diagram. (10 Marks)
- 7 a. Define validation and verification and explain two complementary approaches to system checking and analysis. (04 Marks)
- b. Explain clean room software development process with neat diagram. (08 Marks)
- c. Explain interface testing with neat diagram. (08 Marks)
- 8 a. Explain the factors governing staff selection. (10 Marks)
- b. Write short notes on group communication. (04 Marks)
- c. Explain briefly the algorithmic cost modeling and write the difficulties. (06 Marks)