

IV B.Tech II Semester Regular Examinations, Apr/May 2006
PRINCIPLES OF SOFTWARE ENGINEERING
(Electrical & Electronic Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain the prototyping software process model and write its limitations. [16]
2. (a) Is it possible for spoilage to increase while defects/kLOC decrease? Explain
(b) Explain project planning objectives. [8+8]
3. Explain about software configuration management . [16]
4. Explain about Jackson System Development. [16]
5. Develop a complete flow model for the photocopier software. [16]
6. Write about:
 - (a) The design model
 - (b) Design documentation [8+8]
7. Explain clearly about how transactions analysis is useful in the dataflow oriented design. [16]
8. Write notes on the following:
 - (a) graph matrices
 - (b) testing documentation and help facilities
 - (c) flow graph
 - (d) basis path testing [4+4+4+4]

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1. Describe the liner sequential model. [16]
2. State the advantages and disadvantages of the following methods of estimation.
 - (a) function point analysis
 - (b) COCOMO
 - (c) feature point analysis. [5+5+6]
3. What is hazard analysis? What are the steps to be performed in hazard analysis? Explain with a suitable example. [16]
4. What are milestones and deliverables in a software project? What is the critical destination between the two? Why is it important to clearly identify these in planning a project. [16]
5. You have been asked to build the following system a network – based registration system for your university. [16]
6. Discuss how structural partitioning can help to make software more maintainable. [16]
7. What is meant by transform mapping. Explain with a suitable example. [16]
8. Explain black box and white box testing? [16]

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1. Enumerate and explain various software methods. [16]
2. (a) Explain about size-oriented metrics.
(b) Explain about Defect Removal efficiency. [8+8]
3. Explain software quality assurance. [16]
4. Briefly explain the models used for structure analysis. [16]
5. Software for a word-processing system is to be developed. Build a requirements model of the system using structured analysis. [16]
6. Discuss how structural partitioning can help to make software more maintainable. [16]
7. Explain about Data design with examples. [16]
8. Write notes on the following:
 - (a) Recovery testing
 - (b) Security testing
 - (c) Performance testing
 - (d) Sensitivity testing [4+4+4+4]

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1. Write short notes on the following:
 - (a) Class room software engineering
 - (b) Business process reengineering. [8+8]
2. (a) Explain about size-oriented metrics.
(b) Explain about Defect Removal efficiency. [8+8]
3. (a) Explain the software quality assurance (SQA) plan.
(b) Software reviews are a filter for the software engineering process- Explain. [8+8]
4. Discuss the use of 4GLs for prototyping. What are the kinds of application for which this would be recommended? Justify. [16]
5. What are entity – Relationship (E-R) diagrams? How E – R notation is useful for data modeling? [16]
6. (a) What are the goals of the user interface design?
(b) Explain clearly how effective modular design can be achieved. [8+8]
7. Explain interface design guidelines. [16]
8. (a) Why does software fail after it has passing acceptance testing.
(b) What is debugging? [8+8]
