

**III B.Tech II Semester Supplementary Examinations,
November/December 2005
SOFTWARE ENGINEERING
(Common to Computer Science & Systems Engineering and Electronics &
Computer Engineering)**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. Give a generic view of software engineering. [16]
2. What is meant by risk assessment? What are the different steps to be performed in risk assessment? Explain. [16]
3. Discuss the use of 4GLs for prototyping. What are the kinds of applications for which this would be recommended? Justify. [16]
4. (a) Explain how Data Structure oriented methods represent software requirements by focusing on data structure rather than data-flow? [8]
(b) Write similarities and differences between DSSD and JSD. [8]
5. Consider the interactive application of Library management system and develop a design model and a user model. [16]
6. Describe the worst interface that you have ever worked with and critique it relative to the concepts that you have studied in user interface design. [16]
7. (a) Explain the Software Quality Assurance (SQA) plan. [8]
(b) Software reviews are a filter for the software engineering process - Explain. [8]
8. (a) Discuss about loop testing. [8]
(b) Discuss about software maintenance costs. [8]

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1. Explain the software process models. [16]
2. What is hazard analysis? What steps to be performed in hazard analysis? Explain with a suitable example. [16]
3. (a) State and explain different characteristics suggested by Coad and Yourdon that analyst considers each potential object for inclusion in the analysis model, and write an example. [8]
(b) Explain with an example how processing narrative of a project is useful to develop a meaningful set of attributes for an object. [8]
4. Explain Warnier Diagrams and DSSD approach with an example to each. [16]
5. Consider the interactive application of Library management system and develop a design model and a user model. [16]
6. Describe the worst interface that you have ever worked with and critique it relative to the concepts that you have studied in user interface design. [16]
7. Explain various software quality standards and discuss how to assure them. [16]
8. (a) Why is completeness more difficult to achieve as abstraction level increases?
(b) Why interactivity must increase if completeness is to increase?
(c) Explain the differences between restructuring and forward engineering. [5+5+6]

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1. Explain the recent advances in one of the leading edge software application areas among :
 - (a) Web based application. [8]
 - (b) Virtual Reality. [8]
2. Design a timesheet or a form to be filled by the programmers that can be used to get the data required to monitor the effort spent on different phases in the project as well as the time spent on different components. The design should be such that automated processing is possible. [16]
3. Explain in detail the various analysis principles. [16]
4. What is Jackson System Development (JSD)? Explain the different steps applied by analyst to conduct JSD with an example. [16]
5. (a) What are the goals of the user interface design? [8]
(b) Explain clearly how effective modular design can be achieved? [8]
6. (a) State and explain user interface evaluation cycle. [8]
(b) Write short notes on the Interface Standards. [8]
7. Explain various software quality standards and discuss how to assure them. [16]
8. What is meant by software testing? What are its types? Explain any two testing techniques. [16]

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1. Explain the software process and give the process maturity level in detail. [16]
2. What are indirect measures and why are such measures widely used in software metrics works? [16]
3. Discuss the problems of using natural language for requirements specification and show, using small examples, how structuring natural language into forms can help avoid some of these difficulties. [16]
4. (a) Briefly explain the models used for structures analysis [8]
(b) Explain about jacks on system development. [8]
5. (a) Explain the relationship in software design in technical aspects and management aspects. [8]
(b) What is formal technical review? Explain how it will asses software design quality. [8]
6. State and explain different categories of Human-Computer Interface design guidelines. [16]
7. Explain various software quality standards and discuss how to assure them. [16]
8. (a) Why is completeness more difficult to achieve as abstraction level increases?
(b) Why interactivity must increase if completeness is to increase?
(c) Explain the differences between restructuring and forward engineering. [5+5+6]
