Code No: R05220501 **Set No. 1**

II B.Tech II Semester Regular Examinations, Apr/May 2008
SOFTWARE ENGINEERING
(Common to Computer Science & Engineering, Information Technology and Computer Science & Systems Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Elaborate on evolution of software. [16]
2. (a) Differentiate between prototyping and incremental models.
   (b) Explain the unified approach to software development. Discuss the merits and demerits of this approach. [6+6+4]
3. Discuss about principal requirements engineering activities and their relationships. [16]
4. (a) Define and explain about coupling and cohesion. Also differentiate between them.
   (b) Discuss the statement, "Abstraction and refinement are complementary concepts". [5+3+8]
5. (a) What is meant by User Interface? What are the three areas that user interface design focuses? Explain them.
   (b) Discuss the importance of user interface design? [10+6]
6. (a) The software analysis and design are constructive tasks, and software testing is considered to be destructive from the point of view of developer. Discuss.
   (b) Who will test the software, either developer or an independent test group? Discuss the advantage and draw backs of each one. [8+8]
7. (a) Compute the function point value for a project with the following information domain characteristics.
   Number of external inputs: 32
   Number of external outputs: 60
   Number of external inquires: 24
   Number of external interface files: 2
   Number of internal logical files: 8
   Assume that all complexity adjustment values are average.
   (b) What is an indirect measure? And how are such measures common in software metrics work? [8+8]
8. (a) What is meant by FTR? Discuss about review reporting and record keeping.
   (b) State and explain the guidelines for formal technical reviews. [8+8]

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Code No: R05220501 **Set No. 2**

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SOFTWARE ENGINEERING
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Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Give a generic view of Software Engineering. [16]
2. Discuss various evolutionary software process models in detail. [16]
3. Discuss an example of a type of system where social and political factors might strongly influence the system requirements. Explain why these factors are important in your example. [16]
4. (a) Define and explain abstraction and refinement. Also differentiate between them.
   (b) What is refactoring? Why is it done? [4+4+3+5]
5. (a) What is a state machine model? Discuss with an example.
   (b) What is Object interface specification? Write a Java description of weather station interface. [8+8]
6. (a) Discuss about Security testing and Performance testing.
   (b) State and explain various debugging tactics.
   (c) What are the questions that every software engineer should ask before making the "Correction" that remove the cause of a bug? [6+4+6]
7. (a) Discuss about software tools for project and process metrics.
   (b) Discuss any four useful indicators for software quality. [8+8]
8. (a) Is it possible asses the quality of software if the customer keeps changing? What it is supposed to do?
   (b) Can a program be correct and still not exhibit good quality? Explain. [8+8]

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Code No: R05220501 **Set No. 3**

II B.Tech II Semester Regular Examinations, Apr/May 2008
SOFTWARE ENGINEERING
(Common to Computer Science & Engineering, Information Technology and Computer Science & Systems Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain the five software assessment principles.
   (b) Discuss about various phases of assessment. [6+10]
2. (a) What is water fall model? How is it different from other engineering process models?
   (b) Explain various types of evolutionary development. [5+5+6]
3. (a) Why requirements review is conducted? Discuss various types of it.
   (b) What is requirements management? Why is it needed? [8+8]
4. (a) Define interface. Discuss various types of interfaces. Give examples for each.
   (b) What is component? Also explain about component diagrams. [3+3+3+3+4]
5. (a) State the design principles suggested by Mayer for OOD.
   (b) OOD tends to be programming language dependent. Why? [8+8]
6. (a) List some of the problems that might be associated with the creation of an independent test group.
   (b) Why is a highly coupled module is difficult to unit test? [8+8]
7. (a) Discuss the seven principles of risk management which were identified by SEI.
   (b) Distinguish between generic risks and product specific risks. [10+6]
8. A Formal Technical Review (FTR) effective only if every one has prepared in advance. How do you recognize a review participant who has not prepared? What do you do if you are the review leader? [16]

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Code No: R05220501 **Set No. 4**

II B.Tech II Semester Regular Examinations, Apr/May 2008
SOFTWARE ENGINEERING
(Common to Computer Science & Engineering, Information Technology and Computer Science & Systems Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain the five software assessment principles.
   (b) Discuss about various phases of assessment. [6+10]
2. (a) What is water fall model? How is it different from other engineering process models?
   (b) Explain various types of evolutionary development. [5+5+6]
3. Using your own knowledge of how an ATM is used, develop a set of use-cases that could be used to derive the requirements for an ATM system. [16]
4. (a) Discuss the advantages and disadvantages of modularization.
   (b) Why should not we over modularize? How would you decompose a software solution to obtain the best set of modules. [8+3+5]
5. Draw a sequence diagram showing the interactions of objects in a group diary system when a group of people arrange a meeting. [16]
6. (a) What is the overall strategy for software testing? Explain it clearly.
   (b) Discuss a testing strategy for Object-Oriented architectures. [10+6]
7. (a) Explain the size-oriented metrics with an example.
   (b) Discuss about Function-oriented metrics. [8+8]
8. What is meant by SQA? Discuss in detail SQA activities. [16]

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