浙江大学 2006 - 2007 学年春季学期

《软件工程》课程期末考试试卷

开课学院:	计算机学院	<u>:</u> ,考试形式	式: 开卷 ,允许带	·_ <u>一本教科书</u> _)	\场
考试时间:	_2007_年_4_月_	_23_日, 所需时	间: <u>120</u> 分钟		
考生姓名:		学号:		:	教师:
题序	_	<u> </u>	=	四	总 分
得分					
评卷人					
1. Which factor (A) mana (C) prob. 2. Evolutionar (A) the s 3. What mode (A) Data 4. Which of th (A) allow	ors are important what agerial identity (I agerial identity (I agerial identity (I agerial identity) are software process in piral model (B) the same created during a model (B) Linear following interfact winteraction to be universal in the same interfact of the sa	selection since there hen choosing a project B) ability of commun (D) outstanding pro- models include he RAD model g the analysis phase of ar sequential model the design principles re modelbe (B) discloserom casual users (D)	et team leader? icating to other peop gramming ability C) OO model (D) to f a software develop (C) Functional mode educe the user's mem e information in a pr	le the incremental mode ment process? del (D) Behaviora ory load? ogressive fashion	el
5. Which of th (A) case		are configuration item able programs (C)		ımentation	
6. Three categ (A) proje 7. A task set in (A) respo 8. UML (unifi	gories of risks areect risks (B) plans n project scheduling onsibilities (B) engied modeling langua	ning risks (C) tech is a collection of gineering work tasks ge) analysis modelin	(C) milestones (I g focuses on the	osiness risks O) cost estimates	
9. The design (A) operation (A) operation (A) operation (B) single (C) group	description of an ob- ator sequences (B) esting integration str- ations that are critical e operations as they ps of classes that col-	ral model (C) behaving the protocol description at the attention at the protocol description at the protocol description at the protocol description at the attention at the att	the following forms (C) implementation (C) implemen	on description (D)	object template

II. Please specify "T" (true) or "F" (false) for the following statements: (10 pts.)

- 1) If we get behind schedule, we can add more programmers and catch up.
- 2) CD and CC team structure can be successfully applied to simple problems, but DD structure is best for difficult problems.
- 3) LOC is the important normalization value for function-oriented metrics.
- 4) Software project estimation can never be an exact science, but a combination of good historical data and systematic techniques can improve estimation accuracy.
- 5) Formal technical review is a kind of important activities in software quality assurance process.
- 6) The good design should supply low cohesion and high coupling.
- 7) Program flow chart is easier to maintain than PDL for procedural designing.
- 8) Black-box testing focuses on the software interface, and if we have conducted a successful black-box testing, we can omit the white-box testing.
- 9) Because software developers are familiar with the software, the best software testing candidates are software developers.
- 10) Information about one thing should be localized with a single class, not distributed across multiple classes.

III. Please give brief answers to the following questions: (20 pts.)

- 1. Explain how size-oriented metrics differ from function-oriented metrics. Discuss the pros and cons of each. Why is it important for software developers to make use of measurement to guide their work? (6 pts.)
- 2. For the statement if ((A>B)&&(C==D) | (E<=G)), what is the minimum number of test cases required to test every condition at least once? Please briefly verify your answer. (6 pts)
- 3. Given a procedure for computing the average of positive numbers:

Please draw the corresponding box diagram; (4 pts.)

4. Please describe the three most important characteristics of object-oriented systems.. (4 pts.)

IV. Given the description of Document Management System, please analyze the system requirements and complete the requested models. (50 pts.)

Document Management System description: The system is for managing the lifecycle of documents. The software can catalog the documents into many hierarchical directories. Any one piece of document belongs to one and only one directory and contains some versions, which may include some files. Each of the above objects is attached with at least three attributes: id, name and created time. User can create a new document and add it to the specified directory. When a user checks out a document version, system will lock the document version until the user checks in a new version. User can search document by name and delete the document.

- 1. Please draw two data flow diagrams for creating a new document (including building a default version and uploading some files) in a specified directory and searching some documents by name. (12 pts.)
- 2. Please give the 2 most important data dictionary cards. (8 pts.)
- 3. Please draw the state transition diagram for a document. (10 pts.)
- 4. Please give the 4 most important CRC cards. (8 pts.)
- 5. Please draw the relationship diagram between objects according to the above 4 CRC cards. (12 pts.)

Answer Sheet

		Part		
1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
	·	Part	II	
1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
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Part IV