**四川大学期中考试试题（开卷）**

（2015~2016学年第2学期）

课程号： **311082030** 课程名称： **软件设计与体系结构（B卷）** 任课教师： **张严辞**

适用专业年级： **软件工程 2014级** 学号： 姓名：

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| **题 号** | **一(30%)** | **二(20%)** | **三(30%)** | **四(20%)** | **五(0%)** | **六(0%)** | **七(0%)** | **八(0%)** | **卷面**  **成绩** |
| **得 分** |  |  |  |  |  |  |  |  |  |
| **阅卷时间** |  |  |  |  |  |  |  |  |

##### 注意事项：1. 请务必将本人所在学院、姓名、学号、任课教师姓名等信息准确填写在试题纸和添卷纸上；

##### 2. 请将答案全部填写在本试题纸上；

##### 3. 考试结束，请将试题纸、添卷纸和草稿纸一并交给监考老师。

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##### 一、Choice Questions（10 items，3 points each，total 30 points）

**评阅教师**

**得分**

##### 提示：在每小题列出的四个备选项中至少有一个是符合题目要求的，请将其代码填写在下表中。错选、多选或未选均无分。

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| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
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1．What structure is used for scheduling analysis（ ）

（A）Class structure （B）Service structure

（C）Implementation structure （D）Working assignment structure

（E）Concurrency structure

2．Which quality attributes relate to the time（ ）

（A）Modifiability （B）Performance

（C）Testability （D）Usability

（E）Availability

3．Adding a new business rule to a pricing logic module probably changes which part of the system

（ ）

（A）Nonlocal part （B）Architectural part

（C）Local part （D）Framework

（E）Global part

4．Why does the software structure must be abstraction（ ）

（A）It’s requirement of design （B）Easy to understand

（C）Reduce the complexity （D）It is written in book

（D）Nothing

5．Cost and schedule estimates help the project manager to（ ）

（A）Define constraints on an implementation

（B）Acquire the necessary resources

（C）Monitor progress on the project

（D）Enhancing communication among stakeholders

（E）Know if and when a project is in trouble

6．Which kinds of stakeholder may concern about low cost（ ）

（A）Developing organization’s management （B）Marketing

（C）End user （D）Maintenance organization

（E）Customer

7．Useful mapping among architectural elements include（ ）

（A）The mapping of modules and runtime elements to each other

（B）Choosing the major data abstractions

（C）The assignment of runtime elements to processors

（D）The assignment of items in the data model to data stores

（E）The mapping of modules and runtime elements to units of delivery

8．Availability tactics include（ ）

（A）Fault detection （B）Fault recovery

（C）Increasing cohesion （D）Fault prevention

（E）Managing sampling rate

9．Which may be involved when considering environment in the modifiability scenario（ ）

（A）Design time （B）Compile time （C）Build time

（D）Initiation time （E）Runtime

10．Performance can be measured in terms of（ ）

（A）Stability （B）Throughput （C）Latency

（D）Security （E）Expandability

##### 二、Terms Explanation（5 items，4 points each，total 20points）

**评阅教师**

**得分**

1． Software architecture

2． Architecture Influence Cycle

3． Stimulus

4． Dependability

5. Tactic

##### 三、Short Answer Questions（3 items，10 points each，total 30 points）

**评阅教师**

**得分**

1. What do performance tactics consist of? For each one, try to list some of its tactics.

2. How various tactics to support qualities attributes of software do impact each other? Give two examples, one explains the positive impact, another explains negative impact.

3. Drawing a concrete quality attribute scenario (six parts) according to below description.

A sales manager wants to get the sales of a product from a remote location during normal operations, the system detected the order immediately, identified his information and returned the data to him.

##### 四、Analytical Questions（1 item，20 points）

**评阅教师**

**得分**

1．Analyze the below structure, and answer question.

1) Which structure does the below graph represent?

2) Explain the structure, include: role, element, relation of the structure, and relative quality attributes

