2018年第一学期

《软件工程概论》平时作业(1-3章) 参考答案

**开课学期： 2018年第一学期（春季）**

**课 时： 32**

**学 分： 2**

**课程属性： 必修**

**考核方式：考试 闭卷笔试 70%**

**课程作业 30%**

**教学班级： 1613011 1613013**

Chapter 1 Why Software Engineering ?

Part 1 Fill Blanks

1．Programs (Instruction), data (structures), documents

2．systematic, disciplined, measureable

development, operation, and maintenance

3. analyzing synthesizing

4. the software product, the process of development software product,

in business environment

5. customer， client, user

6. analysis, design, construction, verification, management

Part 2 Brief Description

1. the requirement analyst work with customer, break down what the customer wants into discrete requirement.
2. the designer generate the system-level description of what the system is to do
3. the programmer write line of code that implement what requirement specify.
4. the tester catches faults that programmer overlook
5. the trainer shows users how to use the system

Chapter 2 Modeling the Process and Life Cycle

Part 1 Fill Blanks

1. process, steps, activities, constraints, resources

2．Product, lifecycle

3. conception, implementation, delivery, use, maintenance

1. requirement analysis and definition, system design, program design, program implementation, unit testing, integration testing, system testing, system delivery, maintenance
2. requirement analysis, system design, program design, coding, unit & integration testing, system testing, acceptance testing ,operation & maintenance
3. validation, verification
4. iteration , rework
5. risk, risk control
6. prototype

Part 2 Brief Description

1. Advantage

As described in the bottom paragraph of test book P49.

Disadvantage of the WatterFall model

See the PPT of this section.

Chapter 3 Planning and Managing the Project

Part 1 Fill Blanks

1. Project schedule, phases, tasks , activities

2．Time line

1. Items
2. Activity, milestone
3. Gantt chart
4. Real time ,actual time ,available time, slack time, float time, available time , real time
5. CPM
6. schedule

Part 2 Brief Description

1. See middle items in the Page 83 of the test book.( four types of deliverable)
2. See middle items in the Page 96 of the test book.( ten aspects)
3. Exercise 2

|  |  |  |
| --- | --- | --- |
| No | Activity leading to | Precursors |
| 1 | A |  |
| 2 | B | A |
| 3 | C | A |
| 4 | D | A,B |
| 5 | E | A |
| 6 | F | A,C |
| 7 | G | A,E |
| 8 | H | A,C,E,F,G |
| 9 | I | A,B,D |
| 10 | J | A,B,D,E,G,I |
| 11 | K | A..J |
| 12 | L | A..K |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Activity leading  From..to.. | Earliest Start  Time | Latest Start Time | Slack |
| 1 | A..B | 1 | 1 | 0 |
| 2 | B..D | 4 | 4 | 0 |
| 3 | B..I | 4 | 5 | 1 |
| 4 | D..I | 9 | 9 | 0 |
| 5 | I..J | 11 | 11 | 0 |
| 6 | A..C | 1 | 5 | 4 |
| 7 | C..F | 6 | 10 | 4 |
| 8 | F..H | 9 | 13 | 4 |
| 9 | A..E | 1 | 4 | 3 |
| 10 | E..G | 5 | 8 | 3 |
| 11 | G..H | 8 | 14 | 6 |
| 12 | G..J | 8 | 11 | 3 |
| 13 | H..K | 10 | 14 | 4 |
| 14 | J..K | 13 | 16 | 3 |
| 15 | J..L | 13 | 13 | 0 |
| 16 | K..L | 15 | 18 | 3 |
| 17 | L | 21 |  |  |

Critical Path: A-B-D-I-J-L 20 days

1. Exercise 3

Critical Path: A-B-C-E-D-I-K-L

24 days

**End of Reference Answers for Chapter 1, Chapter 2 and Chapter 3.**