**1. Process design** **(10 marks)**

The two system process design sub-tasks will be marked according to the following criteria.

**·a)** Process design for normal operation of all objects. **(8 marks)**

**Outstanding: 8 marks**

The process design is complete, the conditions of each step are clear, and the judgment conditions are set clearly.

· **Appropriate: 6 marks**

The process design is basically complete, the conditions of each step are clear, and the judgment conditions are set clearly.

**· Needs improvement: 4 marks**

The process design is basically complete, each step is basically clear, and the judgment condition setting is clear.

**· Hard to understand: 2 marks**

The process design is basically complete, each step is basically clear, and the judgment conditions are unclear.

**· No submission or missing section: 0**

This part is not submitted.

**·a)** Process design of abnormal operation of all objects. **(2 marks)**

**Outstanding: 2 marks**

The process design is complete, the conditions of each step are clear, and the judgment conditions are set clearly.

· **Appropriate: 1.5 marks**

The process design is basically complete, the conditions of each step are clear, and the judgment conditions are set clearly.

**· Needs improvement: 1 marks**

The process design is basically complete, each step is basically clear, and the judgment condition setting is clear.

**· Hard to understand: 0.5 marks**

The process design is basically complete, each step is basically clear, and the judgment conditions are unclear.

**· No submission or missing section: 0**

This part is not submitted.

**2. Program Implementation:** **40 marks**

The marks are divided into 3 parts,

**i-vi) function implementation 30 marks: each function has 5 marks and will be marked according to the following criteria.**

Outstanding: **5 marks**

The function is realized correctly, the calling logic is clear, and the variable usage method is correct.·

Appropriate: **4 marks**

Correctly realize functions, call logic is clear, and basically use variables correctly·

Needs improvement: **3 marks**

Correctly realize functions, call logic is basically clear, and variables are basically used correctly·

Hard to understand: **2 marks**

The function logic is correct, the calling logic is basically clear, and the variables are basically used correctly

· No submission or missing section: **0 marks**

This part is not submitted.

vii)**, Quality (5 marks)**

· Outstanding: **5 marks**

Correct use of naming rules, good code comments and good code alignment·

Appropriate: **4 marks**

Proper use of naming rules, good code comments and general code alignment

· Needs improvement: **3 marks**

Proper use of naming rules, less code comments and general code alignment

· Hard to understand: **2 marks**

No naming rules are used, few code comments, and code alignment is general

· No submission or missing section: **0 marks**

This part is not submitted.

v**iii), Encapsulation (5 marks)**

Outstanding: **5 marks**

Correctly design object-oriented development, correctly use class encapsulation and correctly use header files.

·Appropriate: **4 marks**

· Correctly design object-oriented development, correctly use class encapsulation, and do not use header files.

Needs improvement: **3 marks**

Correctly designed object-oriented development without class encapsulation and header file.

Hard to understand: **2 marks**

The basic design is object-oriented development, without class encapsulation and header file.

·No submission or missing section: **0 marks**

This part is not submitted.

3. **Program Testing (10 marks)**

The two program testing sub-tasks will be marked according to the following criteria.

i) normal operation testing of all objects. **(8 marks)**

·Outstanding: **8 marks**

The test process is correct, the test input coverage is good, and the test result are recorded correctly.

· Appropriate: **6 marks**

The test process is correct, the test input coverage is not so good, and the test result are recorded correctly.

· Needs improvement: **4 marks**

The test process is correct, the test input coverage is not so good, and the test result are not recorded correctly.

· Hard to understand: **2 marks**

The test process is basic correct, the test input coverage is not good, and the test result are not recorded correctly.

· No submission or missing section: **0 marks**

This part is not submitted.

ii) abnormal operation testing of all objects. **(2 marks)**

Outstanding: **2 marks**

The test process is correct, the test input coverage is good, and the test result are recorded correctly.

· Appropriate: **1.5 marks**

The test process is correct, the test input coverage is not so good, and the test result are recorded correctly.

· Needs improvement: **1 marks**

The test process is correct, the test input coverage is not so good, and the test result are not recorded correctly.

· Hard to understand: **0.5 marks**

The test process is basic correct, the test input coverage is not good, and the test result are not recorded correctly.

· No submission or missing section: **0 marks**

This part is not submitted.

**4 Peer Review (40 individual marks)**

Table 1 Peer Review Rubrics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks | 8 | 6 | 4 | 2 | 0 |
| Contributions | Routinely provides useful ideas when participating in the group discussion. A leader who contributes a lot of effort. | Usually provides useful ideas when participating in the group discussion. A strong group member who tries hard! | Sometimes provides useful ideas when participating in the group discussion. A satisfactory group member who does what is required. | Rarely provides useful ideas when participating in the group discussion. May refuse to participate. | No contribution or no submission. |
| Problem- solving | Actively looks for and suggests solutions to problems. | Refines solutions suggested by others. | Does not suggest or refine solutions, but is willing to try out solutions suggested by others. | Does not try to solve problems or help others solve problems. Lets others do the work. | No contribution or no submission. |
| Attitude | Is never publicly critical of the project or the work of others. Always has a positive attitude about the task(s). | Is rarely publicly critical of the project or the work of others. Often has a positive attitude about the task(s). | Is occasionally publicly critical of the project or the work of other members of the group. Usually has a positive attitude about the task(s). | Is often publicly critical of the project or the work of other members of the group. Is often negative about the task(s). | No contribution or no submission. |
| Focus on the task | Consistently stays focused on the task and what needs to be done. Very self-directed. | Focuses on the task and what needs to be done most of the time. Other group members can count on this person. | Focuses on the task and what needs to be done some of the time. Other group must nag, remind to keep this person on task. | Rarely focuses on the task and what needs to be done. Lets others do the work. | No contribution or no submission. |
| Working with others | Almost always listens to, shares with, and supports the efforts of others. Tries to keep people working well together. | Usually listens to, shares, with, and supports the efforts of others. Does not cause "waves" in the group. | Often listens to, shares with, and supports the efforts of others, but sometimes is not a good team member. | Rarely listens to, shares with, and supports the efforts of others. Often is not a good team player. | No contribution or no submission. |