

## 选择题

- 1) For the statement `if ((A>1)&&(B))`, the minimum number of test cases required to test every condition at least once is .  
(A) 7 (B) 5 (C) 4 (D) 2
- 2) Scenario-based testing  
A) concentrates on actor and software interaction  
B) misses errors in specifications  
C) misses errors in subsystem interactions  
D) both a and b

## 简答题

- 1) 画出右方的伪码程序的盒图或 PAD 图。

```
START
IF p THEN
    WHILE q DO
        f
    END DO
ELSE
    BLOCK
        g
        n
    END BLOCK
END IF
STOP
```

- 2) How do object-oriented testing and structured testing differ?
- 3) 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.
- 4) Given a procedure for computing the average of positive numbers:

<pre>i=0; sum=0; input a; while (a!=0) {     if (a&gt;0){         i++;         sum+=a;     }     input a; }</pre>	<pre>if (i&gt;0)     avg=sum/i; else     avg=0;</pre>
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Please draw the corresponding box diagram

- 5) Suppose a piece of code is used to calculate the value of the function  $(x-2)/[(x-8)(x+100)]$  defined for all integers. Please design the test cases by applying

equivalence partitioning and boundary value analysis technique. (8 pts.)

6) Suppose one function is used to calculate the value of the following formula:

$$y = (x-2) / [(x-8)*(x+100)];$$

Please design the test cases by applying equivalence partitioning and boundary value analysis technique. (6 pts.)

7) Suppose the function is to calculate the average of all the **positive** numbers in a given sequence of  $N$  ( $0 < N < 1000$ ) numbers. Please design the test cases by applying equivalence partitioning and boundary value analysis technique.

## 判断题

- 1) 边覆盖与判定覆盖、路径覆盖与条件组合覆盖具有相等的检错能力。 ( )
- 2) 程序的复杂程度  $C$  可用公式  $C=n-m+p$  定量度量, 其中  $m$  为强连通的程序图的节点数,  $n$  是弧数,  $p$  是连通区域数。 ( )
- 3) Class testing for OO software is to test operations or algorithms individually for classes.
- 4) 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.
- 5) Use-cases can provide useful input into the design of black-box and state-based tests of OO software.
- 6) A successful application of transform or transaction mapping to create an architectural design must be supplemented by test cases for each module.
- 7) Random testing is a kind of efficient testing method for OO testing.