



Course Name: Software Testing (0721430, 721386, 761467) **Section: 1**

Semester 1 **Second Exam** **Time:** 50 minutes

Information for Candidates

1. This examination paper contains questions 4 totaling 20 marks
2. The marks for parts of questions are shown in round brackets.

Advice to Candidates

1. You should attempt all questions
2. You should write your answers precisely, clearly and to the point.

I. Basic Notions

Objectives. The aim of the question in this part is to evaluate the required minimal student knowledge and skills. Answers in the pass category represent the minimum acceptable standard.

Question 1 (8 marks)

Given the following specification:-

- If you are less than 18, you are too young to be insured.
- Between 18 and 32 inclusive, you will receive a 25% discount.
- Anyone over 32 is not eligible for a discount.

1. Find the equivalence classes? [4 marks]
2. Find a valid Boundary Value Analysis test case? [4 marks]

Class	Action	Boundary Value
$0 \leq \text{age} \leq 17$ { 0 to 17 } or 1 to 17	young to be insured	{ (-1, 0) , (17, 18) }
$18 \leq \text{age} \leq 32$ { 18 to 32 }	25% discount.	{ (17, 18) , (32,33) }
Age > 32	not eligible for a discount	{ (32,33) , (> 32) }

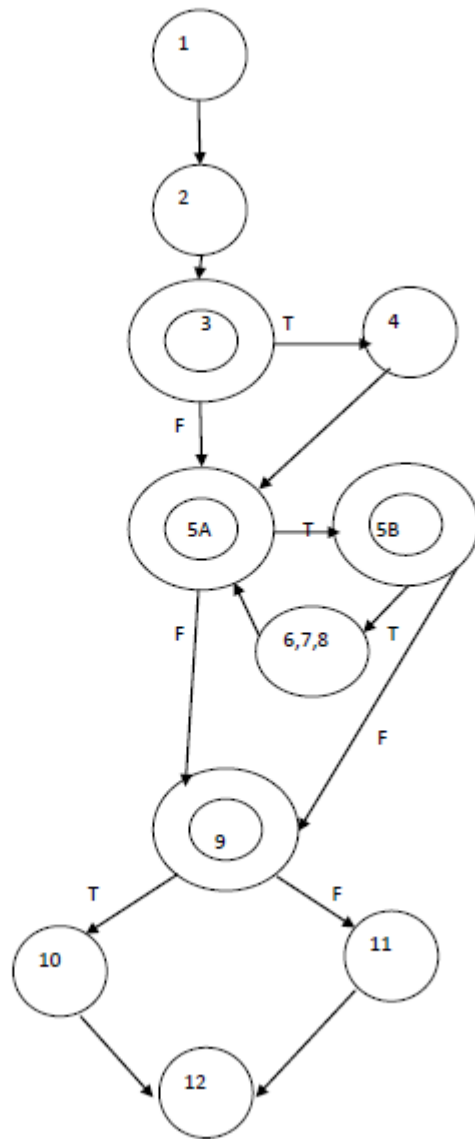
II. Familiar Problems Solving

Objectives. The aim of the question in this part is to evaluate that the student has some basic knowledge of the key aspects of the lecture material and can attempt to solve familiar problems.

Question 2 (6 marks)

```
1 PROGRAM maxsum ( maxint, value : INT )
2 INT result := 0 ; i := 0 ;
3 IF value < 0
4 THEN value := - value ;
5 WHILE ( i < value ) AND ( result <= maxint )
6   { i := i + 1 ;
7     result := result + i ;
8   }
9 IF result <= maxint
10 THEN OUTPUT ( result )
11 ELSE OUTPUT ( "too large" )
12 END.
```

- 1) Draw the flow graph (graph node) for the maxsum procedure. [4 Marks]
- 2) Determine the cyclomatic complexity of the flow graph. [2 Marks]



P+1 so $4 + 1 = 5$

III. Unfamiliar Problems Solving

Objectives. The aim of the question in this part is to evaluate that the student has some basic knowledge of the key aspects of the lecture material and can attempt to solve unfamiliar problems.

Question 4 (4 marks)

Can you give reasons why testing adds value to the software product?

The add two values

Real value:

The information that could have in software testing we cannot find it anywhere except in testing

Another value is a moral value of the product.