Testing Techniques Exercises



An employee has £4000 of salary tax free. The next £1500 is taxed at 10% The next £28000 is taxed at 22%

Any further amount is taxed at 40%

Which of these groups of numbers would fall into the same equivalence class?

- a) £4800; £14000; £28000
- b) £5200; £5500; £28000
- c) £28001; £32000; £35000
- d) £5800; £28000; £32000



A program validates a numeric field as follows:

values less than 10 are rejected, values between 10 and 21 are accepted, values greater than or equal to 22 are rejected.

which of the following input values cover all of the equivalence partitions?

- a. 10,11,21
- b. 3,20,21
- c. 3,10,22
- d. 10,21,22



A program validates a numeric field as follows:

values less than 10 are rejected, values between 10 and 21 are accepted, values greater than or equal to 22 are rejected. Which of the following covers the MOST boundary values?

- a. 9,10,11,22
- b. b. 9,10,21,22
- c. c. 10,11,21,22
- d. d. 10,11,20,21



Order numbers on a stock control system can range between 10000 and 99999 inclusive. Which of the following inputs might be a result of designing tests for only valid equivalence classes and valid boundaries:

- a) 1000, 5000, 99999
- b) 9999, 50000, 100000
- c) 10000, 50000, 99999
- d) 10000, 99999
- e) 9999, 10000, 50000, 99999, 10000



Minimum Test Required for Statement Coverage : Disc = 0

Order-qty = 0 Read Order-qty

If Order-qty >=20 then Disc = 0.05

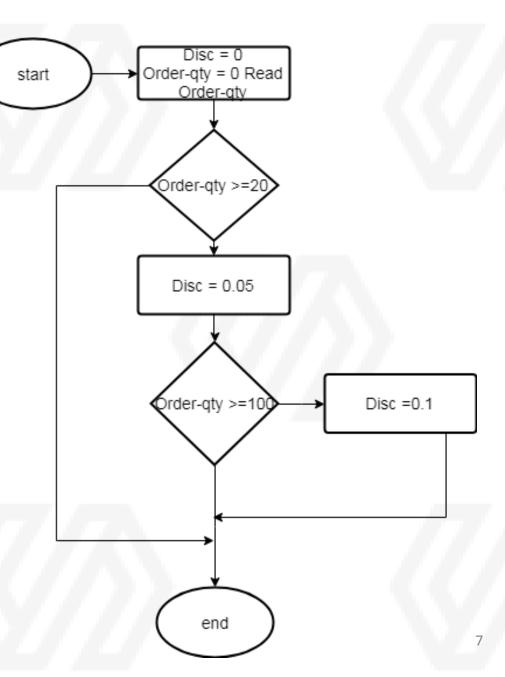
If Order-qty >=100 then Disc =0.1

End if End if

- a) Statement coverage is 4
- b) Statement coverage is 1
- c) Statement coverage is 3
- d) Statement Coverage is 2



Answer 5





An employee's bonus is to be calculated. It cannot become negative, but it can be calculated to zero. The bonus is based on the duration of the employment. An employee can be employed for less than or equal to 2 years, more than 2 years but less than 5 years, 5 to 10 years, or longer than 10 years. Depending on this period of employment, an employee will get either no bonus or a bonus of 10%, 25% or 35%.

How many equivalence partitions are needed to test the calculation of the bonus?

a) 3. b) 5. c) 2. d) 4.



Analyze the following highly simplified procedure:

Ask: "What type of ticket do you require, single or return?" IF the customer wants 'return'

Ask: "What rate, Standard or Cheap-day?" IF the customer replies 'Cheap-day'

Say: "That will be £11:20" ELSE

Say: "That will be £19:50" ENDIF

ELSE

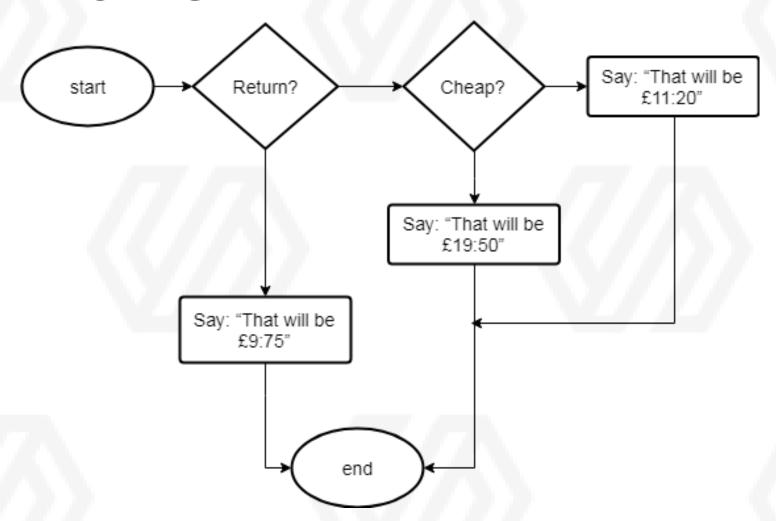
Say: "That will be £9:75" ENDIF

Now decide the minimum number of tests that are needed to ensure that all the questions have been asked, all combinations have occurred and all replies given.

a)3 b)4 c)5 d)6



Answer 7





An input field takes the year of birth between 1900 and 2004. The boundary values for testing this field are:

- a. 0,1900,2004,2005
- b. 1900, 2004
- c. 1899,1900,2004,2005
- d. 1899, 1900, 1901,2003,2004,2005



For the code fragment given below, which answer correctly represents minimum tests required for statement and branch coverage respectively?

```
Discount rate=1;

Fare = 1000;

If ((person == "senior citizen") and ("travel month = January"))

Bonuspoints = 100+Bonuspoints

If (class=="first")

discountRate = .5;

Fare = fare * discountRate;
```



Answer 9

a.Statement Coverage = 1, Branch Coverage = 2

- b. Statement Coverage =2, Branch Coverage = 2
- c. Statement Coverage = 1, Branch Coverage = 3
- d. Statement Coverage =2, Branch Coverage = 4

