MODULE O ROBUST PROGRAMS · O7

Choosing test data

Original practice questions · 21 marks · ~25 minutes · OCR J277 specification 2.3.2

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. The marks for each part are shown in brackets [ ]. Use the OCR names for types of test data: **normal**, **boundary**, **invalid** and **erroneous**. Where you are asked for test data, give an actual value, not a description. The total for this worksheet is **21 marks**.

1

Total: 3 marks

(a) State what is meant by **normal** test data. **[1]**

(b) Explain the difference between **invalid** test data and **erroneous** test data. **[2]**

2

Total: 5 marks

An indoor climbing centre takes bookings for groups. The booking program asks for the group size. The group size must be a **whole number** from **2 to 12** inclusive.

(a) Complete the table. For each value of test data, write the type of test data and whether the program should **accept** or **reject** it. **[5]**

Test data (group size)	Type of test data	Accept or reject?
8		
2		
12		
20		
"ten"		

3 **Total: 4 marks**

A cycling club's website asks each new member to choose a username. A username must be from **6 to 12 characters** long (inclusive).

(a) Give **two** different usernames that are **boundary** test data and that should be accepted. **[2]**

(b) Give **one** username that is **invalid** test data for this rule. Explain why it is invalid test data rather than erroneous test data. **[2]**

4 **Total: 5 marks**

A shop's fridge has a temperature setting. The setting must be a whole number from **1 to 8** inclusive. A programmer has written this code to validate the setting.

```
01 valid = false
02 while valid == false
03     setting = int(input("Enter setting (1 to 8)"))
04     if setting > 1 and setting <= 8 then
05         valid = true
06     else
07         print("Setting must be 1 to 8")
08     endif
09 endwhile
10 print("Setting saved")
```

(a) The program is run four times. A different value is entered each time: **5**, **8**, **1** and **9**. Identify the value that shows the program does **not** work correctly. **[1]**

(b) Describe what the program does when the value you identified in (a) is entered, and what it should do instead. **[2]**

(c) State the type of test data that found this error. **[1]**

(d) Give **one** example of **erroneous** test data for this program. **[1]**

5 **Total: 4 marks**

A bakery's online ordering program asks how many loaves are wanted. Only whole numbers from **1 to 50** inclusive should be accepted. The programmer tests the program using only these three values: **10**, **20** and **30**.

(a) Explain why this testing is **not** enough. Include examples of other test data the programmer should use. **[4]**

Total for this worksheet: 21 marks