MODULE M PROGRAMMING · M22

Procedures

Original practice questions · 22 marks · ~25 minutes · OCR J277 spec 2.2.3, 2.3.1

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. The marks for each part are shown in brackets [ ]. The total for this worksheet is **22 marks**. Code is written in OCR Exam Reference Language. All data on this sheet is made up.

1

Total: 4 marks

(a) Tick (✓) **one** box in each row to show whether each statement about procedures is true or false. **[3]**

Statement	True	False
A procedure must have at least one parameter.		
A procedure can be called more than once in the same program.		
The code inside a procedure only runs when the procedure is called.		

(b) State **one** difference between a procedure and a function. **[1]**

2 **Total: 6 marks**

A ticket printer at a craft fair runs this program.

```
01 procedure printLine()
02     print("----------")
03 endprocedure
04 procedure printHeader()
05     printLine()
06     print("Spring Craft Fair")
07 endprocedure
08 printHeader()
09 for ticket = 1 to 2
10     print("Ticket " + str(ticket))
11     printLine()
12 next ticket
13 print("Enjoy your visit")
```

(a) Write the output when this program is run. Write one line of output on each answer line. You may not need to use all the lines. **[4]**

(b) Describe what happens when line 08 is run. **[2]**

3 **Total: 4 marks**

A self-service machine in a library shows the same menu several times while it is being used. The menu is these three lines:

```
1 Borrow
2 Return
3 Renew
```

(a) Write a procedure called `showMenu()` that outputs the three lines of the menu, in order. **[3]**
You must use either:

- OCR Exam Reference Language, or
- a high-level programming language that you have studied.

(b) Write the line of code that calls the procedure `showMenu()`. **[1]**

4 **Total: 8 marks**

The entry gate at a gym is opened by a member card or by a code. The program that controls the gate contains three lines of code that are repeated.

```
01 method = input("Enter CARD or CODE")
02 if method == "CARD" then
03     print("Card accepted")
04     print("Gate opening")
05     print("Please walk through")
06     print("Gate closing")
07 elseif method == "CODE" then
08     print("Code accepted")
09     print("Gate opening")
10     print("Please walk through")
11     print("Gate closing")
12 else
13     print("Please ask at reception")
14 endif
```

(a) Rewrite the program so that the three repeated lines are in a procedure called `openGate()`, and the procedure is called wherever those lines are needed. The program must still produce the same output for every input. **[4]**

You must use either:

- OCR Exam Reference Language, or
- a high-level programming language that you have studied.

(b) Explain **two** benefits of using the procedure `openGate()` in this program. **[4]**

1

2

Total for this worksheet: 22 marks