



FACULTY OF LIBERAL ARTS & SCIENCES

Campus	Maritime Greenwich
School	Computing & Mathematical Sciences
Level	4
Academic Stage	Undergraduate
TITLE OF PAPER	Programming Foundations – MOCK PAPER 1
COURSE CODE	COMP1753
Time	1 hour 30 minutes

Answer ALL questions

You may use your log book and a text book during the exam. You may also use a computer and online Python documentation as reference material.

To submit your answers, go to the COMP1753 Moodle page and enter your solutions in the “mock exam 1” submission link.

Answer all questions

1. Which of the following are keywords in Python (choose 2)?

- ☒ A. and
- ☐ B. do
- ☐ C. elseif
- ☐ D. var
- ☒ E. break

[5 marks]

2. Which of the following are legal variable names (choose 2)?

- ☐ A. #five_pence_piece
- ☐ B. five pence piece
- ☐ C. 5_pence_piece
- ☒ D. five_pence_piece
- ☒ E. fivepencepiece

[5 marks]

3. How many times will xx appear if printx is called with the parameter i being set to 0 (choose 1)?

```
def printx(i):  
    while i < 3:  
        print("xx")  
        i += 1  
    return i
```

- ☐ A. xx will not appear
- ☐ B. xx will appear 2 times
- ☒ C. xx will appear 3 times
- ☐ D. xx will appear 4 times
- ☐ E. xx will go on printing forever

[5 marks]

4. Identify all correct list declarations (choose 2).

- A. alphabet = "A", "B", "C"
- ☒ B. alphabet = ["A", "B", "C"]
- C. alphabet = {"A", "B", "C"}
- D. alphabet = "ABC"
- ☒ E. alphabet = []

[5 marks]

5. What will be printed out when you run the following code (choose 1)?

```
nums = ["1", "2", "3", "4", "5"]  
print(nums[1] + nums[2])
```

- A. 12
- B. "1""2"
- ☒ C. 23
- D. "2""3"
- E. There will be a run-time error

[5 marks]

6. Identify all legal Python operators (choose 2).

- ☒ A. +=
- B. =+
- ☒ C. !=
- D. +-
- E. <>

[5 marks]

7. Identify the lines containing a legal Python comment (choose 2).

- ☒ A. # This is a comment
- B. // This is a comment
- C. " This is a comment "
- ☒ D. """This is a comment"""
- E. / * This is a comment */

[5 marks]

8. What value will be printed if f1 is called (choose 1)?

```
def f1():  
    result = f2(4)  
    print(result)  
  
def f2(par):  
    if par < 3:  
        return par  
    elif par == 3:  
        return par * 2  
    else:  
        return par * 3
```

- A. There will be a run-time error because f1 does not return anything
- B. 4
- C. 8
- ☒ D. 12
- E. 16

[5 marks]

9. How do you declare a function in Python (choose 1)?

- A. def func()
- B. def = func()
- C. def: func()
- ☒ D. def func():
- E. func():

[5 marks]

10. How do you invoke (call) a function named "func" (choose 1)?

- ☒ A. func()
- B. func.invoke()
- C. call func()
- D. call function func()
- E. call.func()

[5 marks]

11. What will be printed out if this code is run (choose 1)?

```
helloWorld = ["hello", "world", "!"]  
print(helloWorld[3])
```

- ☒ A. There will be a run-time error
- ☐ B. helloWorld[3]
- ☐ C. hello world !
- ☐ D. !
- ☐ E. undefined

[5 marks]

The following code is used for questions 12 and 13.

```
01     n = 4  
02     for i in range(1, n+1):  
03         output = ""  
04         for j in range(1, 6):  
05             output += f" {j * i}"  
06         print(output)
```

12. What will be output when the code is run (choose 1)?

- A. 1
2 4
3 6 9
4 8 12 16
- B. 1 2 3 4
2 4 6 8
3 6 9 12
4 8 12 16
- C. 1 2 3 4 5
1 2 3 4 5
1 2 3 4 5
1 2 3 4 5
- ☒ D. 1 2 3 4 5
2 4 6 8 10
3 6 9 12 15
4 8 12 16 20
- E. There will be a run-time error

[5 marks]

13. Assuming any run-time errors are fixed, the output still has a formatting problem where the numbers 10 and above take up two spaces, whilst numbers below 10 take up 1 space. What should be done to fix this and make all the numbers line up (choose 1)?

A. The following code should be inserted between lines 04 and 05

```
if j * i > 10:  
    output += " "
```

B. The following code should be inserted between lines 04 and 05

```
if j * i >= 10:  
    output += " "
```

☒ C. The following code should be inserted between lines 04 and 05

```
if j * i < 10:  
    output += " "
```

D. The following code should be inserted between lines 04 and 05

```
if j * i <= 10:  
    output += " "
```

E. There is no way to fix this

[5 marks]

14. What will be printed out when you run the following code (choose 1)?

```
sum = 0  
for count in range(3):  
    sum = sum + 3  
print(f"The value of sum = {sum}")
```

A. There will be a run-time error

B. The value of sum = 0

C. The value of sum = 3

D. The value of sum = 6

☒ E. The value of sum = 9

[5 marks]

The following code is used for questions 15 and 16. It is part of a program which calculates the cost of tickets.

The user inputs the number and type of tickets that they require and the program calculates the cost and prints the result.

```
number = int(input("How many tickets? "))
if number <= 0:
    print("Please enter a positive number")
    return
cost = 0
type = input("What type? ")
if type == "S": # Standard
    cost = 8
elif type == "C": # Concession
    cost = 6
elif type == "P": # Premium
    cost = 10
else:
    print(f"Ticket type {type} unrecognised")
    return
if number > 5: # discount
    cost -= 1
cost *= number
print(f"That will be £{cost:.2f}")
```

15. What is the output if the user enters “6” and “Premium” (choose 1)?

- A. There will be a run-time error
- B. That will be £10.00
- C. That will be £54.00
- D. That will be £60.00
- ☒ E. Ticket type Premium unrecognised

[5 marks]

16. What is the output if the user enters “10” and “C” (choose 1)?

- A. There will be a run-time error
- ☒ B. That will be £50.00
- C. That will be £60.00
- D. That will be £10.00
- E. Ticket type C unrecognised

[5 marks]

17. What will be printed out when you run the following code (choose 1)?

```
n = 2
for i in range(2, 0, -1):
    n = n + n
print(f"The value of n = {n}")
```

- A. There will be a run-time error
- B. The value of n = 2
- C. The value of n = 4
- ☒ D. The value of n = 8
- E. The loop will never finish executing

[5 marks]

The following code is used for questions 18, 19 and 20.

It is part of a program which interacts with files.

```
def my_function(dirname, search):
    files = os.listdir(dirname)
    for file in files:
        path = dirname + "\\\" + file
        if os.path.isdir(path):
            print(path)
            my_function(path, search)
        elif path.endswith(".py"):
            if search in file.lower():
                print("FOUND: " + path)

try:
    root_path = os.getcwd()
    search = input("Filename? ").lower()
    if os.path.isdir(root_path):
        my_function(root_path, search)
except OSError as err:
    print(err)
    print("Stopping, can't access files.")
```


18. What does this code do (choose 2)?

- A. It lists any folders it finds
- ☒ B. It lists any files it finds
- C. It searches for files containing the search string
- D. It searches for files with names that match the search string
- ☒ E. It searches for files with names that contain the search string

[5 marks]

19. What programming techniques are used in this code (choose 2)?

- A. Boolean variables
- B. Dictionaries
- ☒ C. Lists
- ☒ D. Iteration (loops)
- E. Sets

[5 marks]

20. What would happen if the line

`my_function(path, search)`

in the middle of the program, was commented out (choose 1)?

- A. The code would not run because of a syntax error
- B. The code would still work but there would be a run-time error
- C. The code would still work because this line does nothing
- D. The code would still work but not report any files it finds
- ☒ E. The code would still work but only for files in the current folder

[5 marks]