**Python**

Module 1 Lesson 6

Name: Date:

**Instructions:**

1. Students are given 1 hour to complete this test.
2. For the duration of the test, teachers are not allowed to help the students with the answer.
3. Students are to score at least 70% on the test to pass. If they fail, they will have to redo the test again in the next lesson.

| | |
|---|---|
| Section A – MCQ | / 10 |
| Section B – Complete the Code | / 10 |
| Section C – Short Answer Question | / 10 |
| Section D – Open ended Question | / 20 |
| | / 50 |

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**Section A: (10 marks)**

**This is a multiple-choice answer section.** Write your answer is the bottom right of each question.

Question 1:

What would the output of the following code be?

| Code | |
|---|---|
| 1 | X = 'python' |
| 2 | print(X[::-1]) |

A) python

B) nohtyp

C) thonpy

D) ptoyhn

Question 2:

How many lines of output?

| Code | |
|---|---|
| 1 | def welcome(name): |
| 2 | print("Hello", name) |
| 3 | |
| 4 | welcome("Alice") |
| 5 | welcome("Bob") |
| 6 | welcome("Carl") |

A) 1

B) 2

C) 3

D) 4

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**Section A: (10 marks)**

Question 3:

How many lines of output will there be for the following code?

| Code | |
|---|---|
| 1 | def compute(x, y): |
| 2 | print(x*3) |
| 3 | print(5*y) |
| 4 | compute(1, 2) |

A) 1 line

B) 2 lines

C) 3 lines

D) No output

Question 4:

What is the datatype for the result 10/2?

A) int

B) str

C) float

D) byte

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**Section A: (10 marks)**

Question 5:

What does X represent in the following function?

| Code | |
|---|---|
| 1 | X = 5 + 10 % 2 |
| 2 | print(X) |

A) 10

B) 5

C) 2

D) 1

Question 6:

For function parameters, which kind of brackets do we use?

A) Round Brackets “( )”

B) Angle Brackets “< >”

C) Curly Brackets “{ }”

D) Square Brackets “[ ]”

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**Section A: (10 marks)**

Question 7:

Which example means 2 power 3?

A) 2*3

B) 2**3

C) 3**2

D) 3*2

Question 8:

What is the difference between % and //?

A) % refers to floor division while // refers to modulus

B) // refers to floor division while % refers to modulus

C) // gives the remainder while % gives the quotient

D) // and % are the same operator

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**Section A: (10 marks)**

Question 9:

How many arguments can there be in a function?

A) 1

B) 2

C) 5

D) Infinite

Question 10:

How many types of arguments are there?

A) One, Required Arguments

B) Two, Required Arguments and Keyword Arguments

C) Three, Required Arguments, Keyword Arguments and Default Arguments

D) Four, Required Arguments, Keyword Arguments, Default Arguments and Important Arguments

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**Section B: (10 marks)**

**This is the debugging section.** In the next few questions, there are **bugs in the code giving an incorrect output**. **The scenarios are shown in each question. Read the requirements carefully.**

Identify the bugs and correct them in the table on the right. Each correction is worth 2 marks.

Question 11: (4 marks)

The function *add()* is supposed to take in 2 arguments *x & y* **and print** the sum of the 2 arguments *x + y*.

Find the **2 mistakes** and correct them.

add(1,2) should print "The answer is 3"

add(2,3) should print "The answer is 5"

| Faulty Code | |
|---|---|
| 1 | def add(x,y): |
| 2 | ans = x, y |
| 3 | print(the answer is ans) |
| 4 | |
| 5 | add(1, 2) |
| 6 | add(2, 3) |

| Corrected Code | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |

Question 12: (6 marks)

The function *minus()* is supposed to take in 2 arguments *x & y* and **print** *x -y*

Find the **3 mistakes** and correct them.

minus(3,2) should **print** 1

minus(5,3) should **print** 2

| Faulty Code | |
|---|---|
| 1 | def minus(x,y) |
| 2 | ans = a - b |
| 3 | print(ANS) |
| 4 | |
| 5 | minus(3, 2) |
| 6 | minus(5, 3) |

| Corrected Code | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |

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**Section C: (10 marks)**

**This section is a short coding question section.** Write the python function as stated in the questions.

Marks are allocated in the question.

Question 13: (1 mark)

Write a **python code** to print **remainder** of 23 divided by 3.

| **Input** | **Output** |
|---|---|
| x = 23<br>y = 3 | The remainder of **23** divided by **3** is **2** |

Question 14: (1 mark)

Write a **python code** to find the **quotient** when 18 is divided by 7.

| **Input** | **Output** |
|---|---|
| x = 18<br>y = 7 | The quotient of **18** divided by **7** is **2** |

Question 15: (2 marks)

Write a **python code** to find the **type** of the result when 8 is divided by 2.

| **Input** | **Output** |
|---|---|
| x = 8<br>y = 2 | The type when **8** is divided by **2** is **<class 'float'** |

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**Section C: (10 marks)**

Question 16: (2 marks)

Write a **python code** to **get the output 'gnidoc evol I**' given string *str1*.

| **Input** | **Output** |
|---|---|
| str1 = "I love coding!" | !gnidoc evol I |

Question 17: (2 marks)

Write a **python code** to **get the output 'cakecakecake'** given string *str2*.

| **Input** | **Output** |
|---|---|
| str2 = "I love cake" | cakecakecake |

Question 18: (2 marks)

Write a **python code** to **get the output 'InvertedInverted'** given string *str3*.

| **Input** | **Output** |
|---|---|
| str3 = "detrevnI" | InvertedInverted |

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**Section D: (20 marks)**

**This section is a long coding question section.**

Marks are allocated in the question.

Question 19: (10 marks)

Teacher Mary has **12** students. She is planning to buy sweets to give out to her students. However, she is only able to purchase sweets from the following grocers.

Grocer A: 120 sweets

Grocer B: 150 sweets

Grocer C: 172 sweets

Grocer D: 111 sweets

Grocer E: 78 sweets

Write a **python function** to determine how many sweets each student gets, and how many sweets Teacher Mary will have left if she buys from these grocers.

| **Sample Function Calls** | **Sample Output** |
|---|---|
| sweets('A', 120) | Teacher Mary will have **0** sweets left over after giving **10** sweets to her students if she were to buy from Grocer **A** |
| sweets('B', 150) | Teacher Mary will have **6** sweets left over after giving **12** sweets to her students if she were to buy from Grocer **B** |
| sweets('C', 172) | Teacher Mary will have **4** sweets left over after giving **14** sweets to her students if she were to buy from Grocer **C** |
| sweets('D', 111) | Teacher Mary will have **3** sweets left over after giving **9** sweets to her students if she were to buy from Grocer **D** |
| sweets('E', 78) | Teacher Mary will have **6** sweets left over after giving **6** sweets to her students if she were to buy from Grocer **E** |

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**Section D: (20 marks)**

**This section is a long coding question section.**

Marks are allocated in the question.

Question 20: (10 marks)

John works part time to earn some pocket money. However, he clocks in different working hours over 4 weeks. He earns $**10** an hour for his work.

Week 1: 5 hours * $10 = $50

Week 2: 21 hours * $10 = $210

Week 3: 19 hours * $10 = $190

Week 4: 2 hours * $10 = $20

Write a **python function** to calculate the amount of money he earns in a week.

| **Sample Function Calls** | **Sample Output** |
|---|---|
| salary(1, 5) | In Week 1, John earns $**50** |
| salary(2, 21) | In Week 2, John earns $**210** |
| salary(3, 19) | In Week 3, John earns $**190** |
| salary(4, 2) | In Week 4, John earns $**20** |