MOSHOOD ABIOLA POLYTECHNIC, ABEOKUTA
SCHOOL OF SCIENCE & TECHNOLOGY
COMPUTER SCIENCE DEPARTMENT
1ST SEMESTER 2023/2024 EXAMINATION

COURSE CODE: COM 315 **COURSE TITLE: PYTHON PROGRAMMING LANGUAGE**
COURSE UNIT: 3 **TIME ALLOWED: 3HRS**
CLASSES WRITING PAPER: HND I COMPUTER SCIENCE (FT & PT)

INSTRUCTION: WRITE ONLY YOUR MATRIC. NUMBER ON THIS PAPER AND NOTHING ELSE.

SECTION A: ATTEMPT ANY FOUR (4) QUESTIONS

1a. Indentation is an important feature in Python. Disuss. (3 marks)

i. State four (4) rules of (i) above (4 marks)
ii. Write a Python program illustrating indentation (3 marks)

b(i). Unlike other programming languages like C# or Java, Python is a dynamically-typed language. Explain. (3 marks)
(ii). State how you can know the data type of a variable in Python. (1 mark)
c. Give any three (3) examples in Python illustrating multiple variable assignment. (6 marks)

2a. Describe any two (2) Python IDE. (4 marks)
b. State any two (2) Python naming convention rules with appropriate examples. (4 marks)
c. List any eight (8) Python keywords (8 marks)
d. Write a one line and several lines comment in Python (4 marks)

3a. Write on these Python Data types with examples

- Scalar
- Sequence
- Set
- Number (4 marks each)

b. Write a Python function to calculate Factorial of any given number. (4 marks)

4a. Differentiate between the following with examples: List, Tuple and Dictionary. (6 marks)

b. Given subject ='Computer Science'. State the output of the following:

```
>>subject[1]
>>subject[-10]
>>subject[8:2]
>>subject[:4]
```

(1 mark each)

c. Given names = ['Bola', 'kolade', 8, 35.7, 'Mapoly', 'Computer', '34']. State the output (contents of **names**) for the following:

>>del names[3]

>>names.append('School')

>>names.pop() (2 marks each)

d. Rewrite names as a dictionary using numbers (digit) as keys. (4 marks)

5a. Describe the Python construct for the following with examples:

- IF-ELSE
- CONTUNUE –NEXT
- WHILE-LOOP-ELSE
- NESTED FOR LOOP (3 marks each)

b. You are driving a little too fast, and a police officer stops you. Write a program to return one of 3 possible results: "No ticket", "Small ticket", or "Big Ticket". If your speed is 60 or less, the result is "No Ticket". If speed is between 61 and 80 inclusive, the result is "Small Ticket". If speed is 81 or more, the result is "Big Ticket". (8 marks)

SECTION B: ATTEMPT ANY ONE (1) QUESTION

1a. You are on a long trip and arrive at a gas station. It's 100km to the next station. Write a program to figure out if you need to buy gas here or if you can wait for the next station.

Note: the program should ask these questions:

i. How big is your tank in L?
ii. How full is your tank in %?
iii. How many km/L does your car get? 10mks

b. Explain the meaning of each these python statements and write out what will be output

i. Range (1,8)
ii. Range (8)
iii. Range (2,9,2)
Range (10.0,-2) 6mks

c. MyName= "ADEBOWASIPO"

Write a python program to turn **MyName** to a list and count how many consonants are present in MyName. 4mks