

## Module 2: Python Fundamentals

### Python Comments:

Comments are any text to the right of # symbol and is mainly useful as notes for the reader of the program.

Comments explain:

- ☐ Assumptions
- ☐ Important Decisions
- ☐ Important Details
- ☐ Problems you're trying to solve

### Python Keywords:

Python uses keywords to recognize the structure of the program and hence they cannot be used for any other purpose.

<b>and</b>	<b>as<sup>b</sup></b>	<b>assert<sup>c</sup></b>	<b>break</b>
<b>class</b>	<b>continue</b>	<b>def</b>	<b>del</b>
<b>elif</b>	<b>else</b>	<b>except</b>	<b>exec<sup>d</sup></b>
<b>finally</b>	<b>for</b>	<b>from</b>	<b>global</b>
<b>if</b>	<b>import</b>	<b>in</b>	<b>is</b>
<b>lambda</b>	<b>nonlocal<sup>e</sup></b>	<b>not</b>	<b>or</b>
<b>pass</b>	<b>print<sup>d</sup></b>	<b>raise</b>	<b>return</b>
<b>try</b>	<b>while</b>	<b>with<sup>b</sup></b>	<b>yield<sup>f</sup></b>

a. **None** became a constant in Python 2.4; **None**, **True**, **False** became keywords in version 3.0.

b. New in Python 2.6.

c. New in Python 1.5.

d. Became built-in function and removed as keyword in Python 3.0.

e. New in Python 3.0.

f. New in Python 2.3.

### Identifier:

Identifier is a name given to programming elements like variables, functions, strings, etc.

Identifier Rules:

- ☐ Name can contain any combinations of letters, \_ and digits.
- ☐ Name cannot begin with digit.
- ☐ Names are case - sensitive.
- ☐ Keywords cannot be used identifiers.

### Data Types:

Python has following data types:

Numbers - int, float	String - str
Boolean - bool	List - list
Tuple - tuple	Set - set
Dictionary - dict	

Note 1: Python does not have char datatype

Note 2: Python does not support any constant declaration

## Module 2: Python Fundamentals

Q1) you develop a python application for your company. You want to add notes to your code so other team members will understand it. What should you do?

Options:

- A. Place the notes after the # sign on any line
- B. Place the notes after the last line of code separated by a blank line
- C. Place the notes before the first line of code separated by a blank line
- D. Place the notes inside of parentheses on any time

Solution:

Q2) You create a function to calculate the power of a number by using Python Practice Test. You need to ensure that the function is documented with comments.

You create the following code. Line numbers are included for reference only.

```
01 # The calc_power function calculates exponents
02 # x is the base
03 # y is the exponent
04 # The value of x raised to the y power is returned
05 def calc_power(x, y):
06     comment = "#Return the value"
07     return x**y # raise x to the y power
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

Options	Yes	No
Lines 01 through 04 will be ignored for syntax checking.	<input type="radio"/>	<input type="radio"/>
The pound sign (#) is optional for lines 02 and 03.	<input type="radio"/>	<input type="radio"/>
The string in line 06 will be interpreted as a comment.	<input type="radio"/>	<input type="radio"/>
Line 07 contains an inline comment.	<input type="radio"/>	<input type="radio"/>

Q3) Woodgrove Bank is migrating their legacy bank transaction code to Python Practice Test. You have been hired to document the migrated code. Which documentation syntax is correct?

Options:

A. Returns the current balance of the bank account def get_balance(): return balance
B. def get_balance(): /*Returns the current balance of the bank account*/ return balance
C. //Returns the current balance of the bank account def get_balance(): return balance
D. def get_balance(): #Returns the current balance of the bank account return balance

Solution:

Q4) All keywords in Python are in

Options:

- |                |                      |
|----------------|----------------------|
| a) lower case  | b) UPPER CASE        |
| c) Capitalized | d) None of the above |

Solution:

Q5) Which of the following only contains keywords?

Options:

- |                |                             |
|----------------|-----------------------------|
| A. try & catch | B. and, or & in             |
| C. while & do  | D. if, elif , elseif & else |

Solution:

Q6) Which of the following does not contain keywords?

Options:

- A. True & False
- B. try, except & finally
- C. is, not & or
- D. break, continue & exit

Solution:

Q7) Which of the following is invalid identifier rules? Select all that apply.

Options:

- A. Name can contain \$.
- B. Name can begin with digit.
- C. Keyword cannot be used as identifiers.
- D. Names are case sensitive

Solution:

Q8) Which of the following is an invalid variable?

Options:

- a) my\_string\_1
- b) 1st\_string
- c) repeat
- d) \_

Solution:

Q9) What is the result of the following :

A) **type(+1E10)**

Options: 1) int 2) float 3) str 4) bool

B) **type(5.0)**

Options: 1) int 2) float 3) str 4) bool

C) **type("True")**

Options: 1) int 2) float 3) str 4) bool

D) **type(False)**

Options: 1) int 2) float 3) str 4) bool

Q10) You are writing a Python Program. The program collects customer data and stores it in a database. You need to ensure that the program handles the data correctly so it can be stored in the database correctly.

```
age = 2;          minor = False;
name = "Contoso"; weight = 123.5;   zip = "81000"
```

What are the data types of the above declaration?

Options:

- A. int, bool, char[], float, char[]
- B. int, bool, str, double and char
- C. int, boolean, string, float and int
- D. int, bool, str, float and str

Solution: