"Variable Names"

1. Is Python case sensitive when dealing with identifiers?

a) yes

b) no

c) machine dependent

d) none of the mentioned

View Answer
Answer: a
Explanation: Case is always significant.

2. What is the maximum possible length of an identifier?

a) 31 characters

b) 63 characters

c) 79 characters

d) none of the mentioned

View Answer
Answer: d
Explanation: Identifiers can be of any length.

3. Which of the following is invalid?

a) _a = 1

b) __a = 1

c) __str__ = 1

d) none of the mentioned

View Answer
Answer: d
Explanation: All the statements will execute successfully but at the cost of reduced readability.

4. Which of the following is an invalid variable?

a) my_string_1

b) 1st_string

c) foo

d) _

View Answer
Answer: b
Explanation: Variable names should not start with a number.

5. Why are local variable names beginning with an underscore discouraged?

a) they are used to indicate a private variables of a class

b) they confuse the interpreter

c) they are used to indicate global variables

d) they slow down execution

View Answer
Answer: a
Explanation: As Python has no concept of private variables, leading underscores are used to indicate variables that must not be accessed from outside the class.

6. Which of the following is not a keyword?

a) eval

b) assert

c) nonlocal

d) pass

View Answer
Answer: a
Explanation: eval can be used as a variable.

7. All keywords in Python are in

a) lower case

b) UPPER CASE

c) Capitalized

d) None of the mentioned

View Answer
Answer: d
Explanation: True, False and None are capitalized while the others are in lower case.

8. Which of the following is true for variable names in Python?

a) unlimited length

b) all private members must have leading and trailing underscores

c) underscore and ampersand are the only two special characters allowed

d) none of the mentioned

View Answer
Answer: a
Explanation: Variable names can be of any length.

9. Which of the following is an invalid statement?

a) abc = 1,000,000

b) a b c = 1000 2000 3000

c) a,b,c = 1000, 2000, 3000

d) a_b_c = 1,000,000

View Answer
Answer: b
Explanation: Spaces are not allowed in variable names.

10. Which of the following cannot be a variable?

a) __init__

b) in

c) it

d) on

View Answer
Answer: b
Explanation: in is a keyword.

Basic Operators

1. Which is the correct operator for power(x^y)?

a) X^y

b) X**y

c) X^^y

d) None of the mentioned

View Answer
Answer: b
Explanation: In python, power operator is x**y i.e. 2**3=8.

2. Which one of these is floor division?

a) /

b) //

c) %

d) None of the mentioned

View Answer
Answer: b
Explanation: When both of the operands are integer then python chops out the fraction part and gives you the round off value, to get the accurate answer use floor division. This is floor division. For ex, 5/2 = 2.5 but both of the operands are integer so answer of this expression in python is 2.To get the 2.5 answer, use floor division.

3. What is the order of precedence in python?

i) Parentheses

ii) Exponential

iii) Multiplication

iv) Division

v) Addition

vi) Subtraction

a) i,ii,iii,iv,v,vi

b) ii,i,iii,iv,v,vi

c) ii,i,iv,iii,v,vi

d) i,ii,iii,iv,vi,v

View Answer
Answer: a
Explanation: For order of precedence, just remember this PEMDAS (similar to BODMAS)

4. What is the answer to this expression, 22 % 3 is?

a) 7

b) 1

c) 0

d) 5

View Answer
Answer: b
Explanation: Modulus operator gives the remainder. So, 22%3 gives the remainder, that is, 1.

5. Mathematical operations can be performed on a string. State whether true or false.

a) True

b) False

View Answer
Answer: b
Explanation: You can't perform mathematical operation on string even if the string is in the form: '1234…'.

6. Operators with the same precedence are evaluated in which manner?

a) Left to Right

b) Right to Left

c) Can't say

d) None of the mentioned

View Answer
Answer: a
Explanation: None.

7. What is the output of this expression, 3*1**3?

a) 27

b) 9

c) 3

d) 1

View Answer
Answer: c
Explanation: First this expression will solve 1**3 because exponential has higher precedence than multiplication, so 1**3 = 1 and 3*1 = 3. Final answer is 3.

8. Which one of the following has the same precedence level?

a) Addition and Subtraction

b) Multiplication, Division and Addition

c) Multiplication, Division, Addition and Subtraction

d) Addition and Multiplication

View Answer
Answer: a
Explanation: "Addition and Subtraction" are at the same precedence level. Similarly, "Multiplication and Division"

are at the same precedence level. However, Multiplication and Division operators are at a higher precedence level than Addition and Subtraction operators.

9. The expression Int(x) implies that the variable x is converted to integer. State whether true or false.

a) True

b) False

View Answer
Answer: a
Explanation: None.

10. Which one of the following has the highest precedence in the expression?

a) Exponential

b) Addition

c) Multiplication

d) Parentheses

View Answer
Answer: d
Explanation: Just remember: PEMDAS, that is, Parenthesis, Exponentiation, Division, Multiplication, Addition, Subtraction. Note that the precedence order of Division and Multiplication is the same. Likewise, the order of Addition and Subtraction is also the same.

Data Types

1. Which of these in not a core data type?

a) Lists

b) Dictionary

c) Tuples

d) Class

View Answer
Answer: d
Explanation: Class is a user defined data type.

2. Given a function that does not return any value, What value is thrown by default when executed in shell.

a) int

b) bool

c) void

d) None

View Answer
Answer: d
Explanation: Python shell throws a NoneType object back.

3. Following set of commands are executed in shell, what will be the output?
```
1.  >>>str="hello"
2.  >>>str[:2]
3.  >>>
```

a) he

b) lo

c) olleh

d) hello

View Answer
Answer: a
Explanation: We are printing only the 1st two bytes of string and hence the answer is "he".

4. Which of the following will run without errors ?

a) round(45.8)

b) round(6352.898,2,5)

c) round()

d) round(7463.123,2,1)

View Answer
Answer: a
Explanation: Execute help(round) in the shell to get details of the parameters that are passed into the round function.

5. What is the return type of function id?

a) int

b) float

c) bool

d) dict

View Answer
Answer: a
Explanation: Execute help(id) to find out details in python shell.id returns a integer value that is unique.

6. In python we do not specify types,it is directly interpreted by the compiler, so consider the following operation to

be performed.

```
1.   >>>x = 13 ? 2
```

objective is to make sure x has a integer value, select all that apply (python 3.xx)

a) x = 13 // 2

b) x = int(13 / 2)

c) x = 13 % 2

d) All of the mentioned

View Answer
Answer: d
Explanation: // is integer operation in python 3.0 and int(..) is a type cast operator.

7. What error occurs when you execute?

apple = mango

a) SyntaxError

b) NameError

c) ValueError

d) TypeError

8. Carefully observe the code and give the answer.

```
1.  def example(a):
2.      a = a + '2'
3.      a = a*2
4.      return a
5.  >>>example("hello")
```

a) indentation Error

b) cannot perform mathematical operation on strings

c) hello2

d) hello2hello2

9. What data type is the object below ?

L = [1, 23, 'hello', 1].

a) list

b) dictionary

c) array

d) tuple

10. In order to store values in terms of key and value we use what core data type.

a) list

b) tuple

c) class

d) dictionary

11. Which of the following results in a SyntaxError ?

a) '"Once upon a time…", she said.'

b) "He said, 'Yes!'"

c) '3\'

d) '''That's okay'''

Answer: c
Explanation: Carefully look at the colons.
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12. The following is displayed by a print function call:
    1. tom
    2. dick
    3. harry

Select all of the function calls that result in this output

a) print('''tom

\ndick

\nharry''')

b) print('''tomdickharry''')

c) print('tom\ndick\nharry')

d) print('tom

dick

harry')

View Answer
Answer: c
Explanation: The \n adds a new line.

13. What is the average value of the code that is executed below ?
    1. >>>grade1 = 80
    2. >>>grade2 = 90
    3. >>>average = (grade1 + grade2) / 2

a) 85.0

b) 85.1

c) 95.0

d) 95.1

View Answer
Answer: a
Explanation: Cause a decimal value of 0 to appear as output.

14. Select all options that print

hello-how-are-you

a) print('hello', 'how', 'are', 'you')

b) print('hello', 'how', 'are', 'you' + '-' * 4)

c) print('hello-' + 'how-are-you')

d) print('hello' + '-' + 'how' + '-' + 'are' + 'you')

View Answer
Answer: c
Explanation: Execute in the shell.

15. What is the return value of trunc() ?

a) int

b) bool

c) float

d) None

View Answer
Answer: a
Explanation: Execute help(math.trunc) to get details.

Precedence

1. The value of the expressions 4/(3*(2-1)) and 4/3*(2-1) is the same. State whether true or false.

a) True

b) False

View Answer

2. The value of the expression:
4 + 3 % 5

a) 4

b) 7

c) 2

d) 0

View Answer
Answer: b
Explanation: The order of precedence is: %, +. Hence the expression above, on simplification results in $4 + 3 = 7$. Hence the result is 7.

3. Evaluate the expression given below if A= 16 and B = 15.
A % B // A

a) 0.0

b) 0

c) 1.0

d) 1

View Answer
Answer: b
Explanation: The above expression is evaluated as: 16%15//16, which is equal to 1//16, which results in 0.

4. Which of the following operators has its associativity from right to left?

a) +

b) //

c) %

d) **

View Answer
Answer: d
Explanation: All of the operators shown above have associativity from left to right, except exponentiation operator (**) which has its associativity from right to left.

5. What is the value of x if:
x = int(43.55+2/2)

a) 43

b) 44

c) 22

d) 23

View Answer

Answer: b
Explanation: The expression shown above is an example of explicit conversion. It is evaluated as int(43.55+1) = int(44.55) = 44. Hence the result of this expression is 44.

6. What is the value of the following expression?
2+4.00, 2**4.0

a) (6.0, 16.0)

b) (6.00, 16.00)

c) (6, 16)

d) (6.00, 16.0)

View Answer

Answer: a
Explanation: The result of the expression shown above is (6.0, 16.0). This is because the result is automatically rounded off to one decimal place.

7. Which of the following is the truncation division operator?

a) /

b) %

c) //

d) |

View Answer

Answer: c
Explanation: // is the operator for truncation division. It it called so because it returns only the integer part of the quotient, truncating the decimal part. For example: 20//3 = 6.

8. What are the values of the following expressions:
2**(3**2)
(2**3)**2
2**3**2

a) 64, 512, 64

b) 64, 64, 64

c) 512, 512, 512

d) 512, 64, 512

View Answer

Answer: d
Explanation: Expression 1 is evaluated as: 2**9, which is equal to 512.Expression 2 is evaluated as 8**2, which is equal to 64. The last expression is evaluated as 2**(3**2). This is because the associativity of ** operator is from right to left. Hence the result of the third expression is 512.

9. What is the value of the following expression:
8/4/2, 8/(4/2)

a) (1.0, 4.0)

b) (1.0, 1.0)

c) (4.0. 1.0)

d) (4.0, 4.0)

View Answer
Answer: a
Explanation: The above expressions are evaluated as: 2/2, 8/2, which is equal to (1.0, 4.0).

10. What is the value of the following expression:
float(22//3+3/3)

a) 8

b) 8.0

c) 8.3

d) 8.33

View Answer
Answer: b
Explanation: The expression shown above is evaluated as: float(7+1) = float(8) = 8.0. Hence the result of this expression is 8.0.

1. What is the output of the following expression:
print(4.00/(2.0+2.0))

a) Error

b) 1.0

c) 1.00

d) 1

View Answer
Answer: b
Explanation: The result of the expression shown above is 1.0 because print rounds off digits.

2. Consider the expression given below. The value of X is:
X = 2+9*((3*12)-8)/10

a) 30.0

b) 30.8

c) 28.4

d) 27.2

View Answer
Answer: d
Explanation: The expression shown above is evaluated as: 2+9*(36-8)/10, which simplifies to give 2+9*(2.8), which is equal to 2+25.2 = 27.2. Hence the result of this expression is 27.2.

3. Which of the following expressions involves coercion when evaluated in Python?

a) 4.7 – 1.5

b) 7.9 * 6.3

c) 1.7 % 2

d) 3.4 + 4.6

View Answer

Answer: c

Explanation: Coercion is the implicit (automatic) conversion of operands to a common type. Coercion is automatically performed on mixed-type expressions. The expression 1.7 % 2 is evaluated as 1.7 % 2.0 (that is, automatic conversion of int to float).

4. What is the value of the following expression:

24//6%3, 24//4//2

a) (1,3)

b) (0,3)

c) (1,0)

d) (3,1)

View Answer

Answer: a

Explanation: The expressions are evaluated as: 4%3 and 6//2 respectively. This results in the answer (1,3). This is because the associativity of both of the expressions shown above is left to right.

5. Which among the following list of operators has the highest precedence?

+, -, **, %, /, <<, >>, |

a) <<, >>

b) **

c) |

d) %

View Answer

Answer: b

Explanation: The highest precedence is that of the exponentiation operator, that is of **.

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6. What is the value of the expression:

float(4+int(2.39)%2)

a) 5.0

b) 5

c) 4.0

d) 4

View Answer

Answer: c

Explanation: The above expression is an example of explicit conversion. It is evaluated as: float(4+int(2.39)%2) = float(4+2%2) = float(4+0) = 4.0. Hence the result of this expression is 4.0.

7. Which of the following expressions is an example of type conversion?

a) 4.0 + float(3)

b) 5.3 + 6.3

c) 5.0 + 3

d) 3 + 7

View Answer
Answer: a
Explanation: Type conversion is nothing but explicit conversion of operands to a specific type. Options 'b' and 'c' are examples of implicit conversion whereas option 'a' is an example of explicit conversion or type conversion.

8. Which of the following expressions results in an error?

a) float('10')

b) int('10')

c) float('10.8')

d) int('10.8')

View Answer
Answer: d
Explanation: All of the above examples show explicit conversion. However the expression int('10.8') results in an error.

9. What is the value of the expression:
4+2**5//10

a) 3

b) 7

c) 77

d) 0

View Answer
Answer: b
Explanation: The order of precedence is: **, //, +. The expression 4+2**5//10 is evaluated as 4+32//10, which is equal to 4+3 = 7. Hence the result of the expression shown above is 7.

10. The expression 2**2**3 is evaluates as: (2**2)**3. State whether this statement is true or false.

a) True

b) False

View Answer
Answer: b
Explanation: The value of the expression (2**2)**3 = 4**3 = 64. When the expression 2**2**3 is evaluated in python, we get the result as 256, because this expression is evaluated as 2**(2**3). This is because the associativity of exponentiation operator (**) is from right to left and not from left to right.