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CBSE - GR-XII - COMPUTER SCIENCE WITH PYTHON
(2021 - 2022)

TERM- 1 BOARD EXAMINATIONS

UNIT-1 PYTHON MCQ'S
(CHAPTER WISE AND TOPIC WISE)

CHAPTER-1 - PYTHON REVISION TOUR-1

MULTIPLE CHOICE QUESTIONS

1. Which keyword can be used in any place in Python code to tell interpreter “to do nothing” and move to next instruction

skip

continue

next

pass

Correct answer

pass

2. Are there tools available to help find bugs, or perform static analysis?

Yes, PyErrs.

Yes, PyChecker and Pylint.

No, you must find the bugs on your own.

Yes, PyStats.

Correct answer

Yes, PyChecker and Pylint.

3. Python was created by _____.

James Gosling

Steve Jobs

Guido van Rossum

Google

Guido van Rossum

What is used to define a block of code (body of loop, function etc.) in Python?

Curly braces

Parenthesis

Indentation

Quotation

4. A Python paragraph comment uses the style _____.

```
// comments //  
/ comments /  
" comments "  
/# comments #/
```

Correct answer

"" comments ""

5. What does the expression string1 + string2 do?

Repeats string1 string2 times (string2 must be in numeric format).

Concatenates string1 and string2.

It's a syntax error.

Adds string1 to string2 (both must be in numeric format).

Correct answer

Concatenates string1 and string2.

6. Python is compiled language. True or False?

True

False

Correct answer

False

7. Which of these should you include in order to pass variables to a script?

from sys import getarg

from system import argv

from sys import args

from sys import argv

Correct answer

from sys import argv

8. Which of the following statements is true?

Python is an interpreted language.

Python is a high level programming language.

Python is an object-oriented language.

All of the above.

Correct answer

All of the above.

9. In Python, 'Hello', is the same as "Hello"

True

False

10. What is the correct file extension for Python files?

.pyth

.pt

.pyt

.py

Correct answer

.py

11. In Python, a syntax error is detected by the _____ at _____.

compiler/at compile time

interpreter/at runtime

compiler/at runtime

interpreter/at compile time

Correct answer

interpreter/at runtime

12. Which of the following is correct?

Comments are for programmers for better understanding of the program.

Python Interpreter ignores comment.

You can write multi-line comments in Python using triple quotes, either ''' or ''''.

All the above

Correct answer

All the above

13. Is it possible to link a Python program to code written in C?

Yes; the C code can be in a form of a dynamically or a statically linked library.

No, it is impossible.

Yes, but the C code must be provided in a form of a dynamically linked library.

Yes, but C code must be provided in a form of statically linked library.

Correct answer

Yes; the C code can be in a form of a dynamically or a statically linked library.

14. Which of the following is correct?

Python Interpreter ignores comment.

Comments are for programmers for better understanding of the program.

You can write multi-line comments in Python using triple quotes, either ''' or ''''.

All of the above

Correct answer

All of the above

15. Is it possible to check for more than one error in one except line?

Yes, if the exception types are enclosed in parentheses.

No, it is not possible.

Yes, if the exception types are enclosed in square brackets.

Yes, if the exception types are enclosed in curly braces.

Correct answer

Yes, if the exception types are enclosed in parentheses.

16. Python syntax is case-sensitive.

True

False

17. A _____ error does not cause the program to abort, but produces incorrect results.

syntax

runtime

logical

Correct answer

logical

18. _____ is interpreted.

Python

C++

Ada

Pascal

19. Which of the following statements is true?

Python 3 is a newer version, but it is backward compatible with Python 2.

Python 3 is a newer version, but it is not backward compatible with Python 2.

A Python 2 program can always run on a Python 3 interpreter.

A Python 3 program can always run on a Python 2 interpreter.

Correct answer

Python 3 is a newer version, but it is not backward compatible with Python 2.

20. A Python line comment begins with _____.

//

/

#

\$\$

21. What is a correct syntax to output "Hello World" in Python?

print("Hello World")

echo("Hello World");

echo "Hello World"

p("Hello World")

22. _____ is an object-oriented programming language.

Java

C++

Python

All the above

Correct answer

All the above

23.How do you insert comments in Python code?

#This is a comment

/This is a comment/

//This is a comment

//This is a comment#

Correct answer

#This is a comment

24.Which of the following is not a keyword?

eval

assert

nonlocal

pass

Correct answer

eval

25.What is the output of the following code?

```
xx = 25
if False:
    xx = 75

def var_test():
    if True:
        xx = 35
print(var_test())
```

25

75

35

None

Correct answer

None

26.Which of the following is not a keyword?

open

lambda

is

except

Correct answer

open

27.Select the correct output of the following code.

```
1 x = 15
2 x = "Python"
3 print(x)
```

Python

15

Blank

Correct answer

Python

28.All keywords available in Python are in

Uppercase

Lowercase

Both uppercase and lowercase

CamelCase

Correct answer

Both uppercase and lowercase

29.Is Python case sensitive when dealing with identifiers?

Yes

None of the above

No

machine dependent

Correct answer

Yes

30.Which of the following is not a variable?

in

on

it

__init__

Correct answer

in

31.Which of the following are Python reserved words (keywords):

default

and

goto

class

None

Correct answer

class

32.All keywords in Python are in _____

Lower case

Upper case

None of the mentioned

Capitalized

Correct answer

None of the mentioned

33.From the execution of the statements $n = 300$, $m = n$ how many objects and references will be created?

Two objects, two references

One object, two references

Two objects, one reference

One object, one reference

Correct answer

One object, two references

34.What is the output of the following code?

```
var1 = 15
var2 = 25
var3 = "30"

print(var1 + var2 + var3)
```

70

63

152530

TypeError: unsupported operand type(s) for +: 'int' and 'str'

Correct answer

TypeError: unsupported operand type(s) for +: 'int' and 'str'

35.What Python built-in function returns the unique number assigned to an object:

refnum()

id()

ref()

identity()

Correct answer

id()

36.Which of the following is valid ?

`_var = 'python'`
`__var = 'python'`
`_name_ = 'python'`

All the above

Correct answer

All the above

37. In Python, a variable may be assigned a value of one type, but later it can be assigned a value of a different type:

True

False

38. What is the maximum possible length of an identifier or an attribute ?

32

64

73

Any length

Correct answer

Any length

39. How to swap two variables in one line ?

`x = y`

`x ^= y ^= x ^= y`

`x, y = y, x`

`(x ^= y), (y ^= x), (x ^= y)`

Correct answer

`x, y = y, x`

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

31 characters

63 characters

79 characters

None of the above

41. What is the output of the following code?


```
def var_test():  
    b = 63  
    return b  
  
print(var_test())
```

0

63

Error

None

42. Which of the following is an invalid statement?

num = 1,000,000

x y z = 1 2 3

x,y,z = 1, 2, 3

x_y_z = 1,000,000

Correct answer

x y z = 1 2 3

43. Which of the following cannot be a variable ?

name

def

at

on

Correct answer

def

44. Which of the following cannot be a variable?

__init__

in

it

on

Correct answer

in

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

they are used to indicate a private variables of a class

they confuse the interpreter

they are used to indicate global variables

they slow down execution

Correct answer

they are used to indicate a private variables of a class

46. Which of the following is not a keyword?

pass
class
max
def

47. Which of the following are valid Python variable names:

ver1.3
return
home_address
route66
Age
4square

48. What is the output of the following code?

```
xx = 50
def var_test():
    xx = 100
    return xx
print(var_test())
```

50
100
Error
None
Correct answer
100

49. What is the output of the following code?

```
a = 75
def var_test():
    return a

print(var_test())
```

75
0

Error
None
Correct answer
75

50. What is the output of the following code?

```
def var_test():  
    xx = 99  
    return xx  
  
var_test()  
print(xx)
```

0

70

Error

None

Correct answer

Error

51. Which of the following is an invalid variable?

odd_num_1

1_odd_num

num

Correct answer

1_odd_num

52. What is the output of the following code?

```
var_test = "Jhons" * 3 * 2  
print(var_test)
```

JhonsJhonsJhonsJhons

Jhons

JhonsJhonsJhonsJhonsJhonsJhons

Syntax Error

Correct answer

JhonsJhonsJhonsJhonsJhonsJhons

53. In Python, a variable must be declared before it is assigned a value:

True

False

54. What is the output of the following code?

```
xx = 15  
  
def var_test():  
    xx = 25  
    var_test()  
    print(xx)
```

25
15
Error
None

55. Is Python case sensitive while dealing with identifiers?

Yes
No
OS dependent
None of the above
Correct answer
Yes

56. What is the output of the following code?

```
xx = 15

if True:
    xx = 25

print(xx)
```

25
15
Error
None
Correct answer
25

57. Output of `print(f"Python {3 + .2}")`

3.2
3+.2
Shows error
Python 3.2
Correct answer
Python 3.2

58. Which of the following is an invalid variable?

`_var_`
`lvar`
`_var_1`
All the above
Correct answer
lvar

59. Which of the following is an invalid statement?

```
a_b_c = 100
abc = 100, 'python'
a b c = 1 00
a, b, c = 1, 0, 0
```

60. Which of the following statements assigns the value 100 to the variable x in Python:

```
let x = 100
x := 100
x ← 100
x = 100
x << 100
Correct answer
x = 100
```

61. In Python if a variable is assigned a value anywhere within the function's body, it's assumed to be a local unless explicitly declared as global.

True
False

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

all private members must have leading and trailing underscores
underscore and ampersand are the only two special characters allowed
unlimited length
none of the mentioned

Correct answer
unlimited length

63. Which of the following is not a complex number?

```
a = 2 + 3j
a = complex(2, 3)
a = 2 + 3l
a = 2 + 3J
```

Correct answer
a = 2 + 3l

64. Boolean type is a subtype of Integer data type in Python

True
False

Correct answer
True

65. What is the result of round(0.5) - round(-0.5)

1.0

2.0

0.0

None of the mentioned

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

int

bool

void

None

Correct answer

None

67. Select all immutable basic data types:

Dictionary

String

Integer

Set

Float

List

Tuple

68. What gets printed?

```
p = "abb "  
q = 2  
print(p + q)
```

abb

abb abb

abb 2

2

Error

Correct answer

Error

69. What gets printed

```
axa = {}  
print(type(axa))
```

<class 'set'>

<class 'dict'>

<class 'list'>

<class 'tuple'>
<class 'object'>

70. In order to store values in terms of key and value which core data type is used.

list
tuple
class
dictionary
Correct answer
dictionary

71. What will be the output of the following Python code snippet?

```
def example(x):  
    x = x + '2'  
    x = x*2  
    return x  
>>>example("hello")
```

indentation Error
cannot perform mathematical operation on strings

hello2
hello2hello2
Correct answer
indentation Error

72. If x and y are strings, which of the following is equivalent to [x] + [y] ?

[x].extend([y])
[x,y]
[x + y]
[x].append(y)
Correct answer
[x,y]

73. What gets printed?

```
def x(): pass  
print(type(x()))  
<class 'function'>  
<class 'tuple'>  
<class 'NoneType'>  
<class 'str'>  
<class 'type'>
```

74. Which of the following is incorrect?

a = 0b101

a = 0x4f5

a = 19023

a = 03964

75. In order to execute an operation over arguments of different data types, convert all of them to the same type beforehand.

True

False

Correct answer

False

76. What gets printed?

```
axx = (5, 6, 7)
print(type(axx))
```

<class 'int'>

<class 'list'>

<class 'tuple'>

<class 'dict'>

<class 'set'>

77. What should the below code print?

```
print(type(2j))
```

<class 'complex'>

<class 'unicode'>

<class 'int'>

<class 'float'>

<class 'dict'>

Correct answer

<class 'complex'>

78. Select all valid basic data types in Python 3

Double

String

Integer

Boolean

Float

Decimal
Union
Complex number
Correct answers
String
Integer
Float
Complex number

79. Select all numeric data types in Python

String
Integer
Double
Float
Complex number

80. What error occurs when you execute the following Python code snippet?

```
dog = cat
```

SyntaxError
NameError
ValueError
TypeError
Correct answer
NameError

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

int
bool
float
None

Correct answer
int

82. What gets printed?

```
print(type(2/3))
```

<class 'int'>
<class 'number'>
<class 'float'>
<class 'double'>
<class 'tuple'>

Correct answer

<class 'float'>

83. What is the output of `print 0.2 + 0.3 == 0.5`?

True

False

Error

Correct answer

True

84. Which of the following is incorrect?

`float('inf')`

`float('nan')`

`float('56'+ '78')`

`float('12+34')`

Correct answer

`float('12+34')`

85. Complex numbers in Python have real and imaginary parts. In Python they are represented as:

One Integer and one floating point number

Each is floating point number

Each is Integer

Both are strings

86. List in Python can hold elements of same type only. True or False?

True

False

Correct answer

False

87. Strings in Python should be en-quoted in double quotation marks ("). True or False?

True

False

Correct answer

False

88. What data type is the object below?

```
P = [2, 22, 'python', 2]
```

list
dictionary
array
tuple

89. What is the output of the following code?

```
print(type(lambda:None))
```

<class 'NoneType'>

<class 'tuple'>

<class 'type'>

<class 'function'>

<class 'bool'>

Correct answer

<class 'function'>

90. Which of the following data types can be used as keys in dictionaries in Python?

Select all that apply

List

Set

Integer

String

Dictionary

Any type of value

Correct answer

Any type of value

91. What does ~~~~~6 evaluate to?

6

-5

-11

11

Correct answer

6

92. Which of the following results in a SyntaxError?

"""Once upon a time... ", she said.'

"He said, 'Yes!'"

'3\'

"""That's okay"""

93. In Python types are directly interpreted by the compiler, so check the following operation to be performed.

a = 15 ? 3

Objective is to make sure a has a integer value, select all that apply (Python 3.xx)

a = 15 // 3

a = int(15 / 3)

a = 15 % 3

All of the mentioned

Correct answer

All of the mentioned

94. Only immutable data types can be used as keys for dictionaries in Python. True or False?

True

False

95. What does 3 ^ 8 evaluate to?

81

24

11

5

Correct answer

11

96. What is the type of inf?

Boolean

Integer

Float

Complex

97. Which of the following can be used as a dictionary key?

list

set

dictionary

tuple

None of the above

98. Which of the following will run without errors?

round(45.8)

round(6352.898, 2, 5)

round()

round(7463.123,2,1)

Correct answer
round(45.8)

99. What is the return type of function id?

int
float
bool
dict

Correct answer
int

100. What does ~5 evaluate to?

-5
-7
-6
5

Correct answer
-6

101. Which of these is not a core data type?

Lists
Dictionary
Tuples
Class

Correct answer
Class

102. What is the output of the following code?

```
print(type([2,3]))
```

<class 'tuple'>
<class 'int'>
<class 'set'>
<class 'complex'>
<class 'list'>

Correct answer
<class 'list'>

OBJECTIVE TYPE QUESTIONS:

01. In which year was the Python language developed?

- A. 1995
- B. 1972
- C. 1981
- D. 1989

View Answer

Answer : D

Explanation: Python language was developed by Guido van Rossum in 1989 (late 1980s).

02. Who developed the Python language?

- A. Zim Den
- B. Guido van Rossum
- C. Niene Stom
- D. Wick van Rossum

View Answer

Answer : B

Explanation: Python language was developed by Guido van Rossum in the Netherlands in the late 1980s.

03. How many keywords are there in python 3.7?

- A. 32
- B. 33
- C. 31
- D. 30

View Answer

Answer : B

Explanation: There are 33 keywords in Python 3.7. Keywords are reserved words of the programming language that can not be used as variables and that have by default some meaning in that language. So, Option B is correct.

04. Which one of the following is the correct extension of the Python file?

- A. .py
- B. .python
- C. .p
- D. None of these

View Answer

Answer : A

Explanation: “.py” is the extension of the python file.

05. What is output for – min(“hello world”)

- A. e
- B. a blank space character
- C. w
- D. hello world

View Answer

Answer : B

Explanation: python considers a blank space character as the minimum value in a string.

06. How to output the string “May the odds favor you” in Python?

- A. print(“May the odds favor you”)
- B. echo(“May the odds favor you”)
- C. System.out(“May the odds favor you”)
- D. printf(“May the odds favor you”)

View Answer

Answer : A

Explanation: print() function is used to display something to the user in python.

07. In which year was the Python 3.0 version developed?

- A. 2005
- B. 2000
- C. 2010
- D. 2008

View Answer

Answer : D

Explanation: Python 3.0 version was developed on December 3, 2008.

08. Which character is used in Python to make a single line comment?

- A. /
- B. //
- C. #
- D. ?

View Answer

Answer : C

Explanation: “#” character is used in the Python to make a single-line comment.

09. Python is often described as a:

- A. Batteries excluded language
- B. Gear included language
- C. Batteries included language
- D. Gear excluded language

View Answer

Answer : C

Explanation: Python programming language is often described as a “batteries included” language due to its comprehensive standard library

10. What do we use to define a block of code in Python language?

- A. Indentation
- B. Key
- C. Brackets
- D. None of these

View Answer

Answer : A

Explanation: Python uses indentation to define blocks of code. Indentations are simply spaces or tabs used as an indicator that is part of the indent code child as Curly braces are used in the C programming language.

11. Mathematical operations can be performed on a string in Python? State whether true or false:

- A. False
- B. True

View Answer

Answer : A

Explanation: We can't perform mathematical operations on the string even if the string is in the form: '1234...'.

12. . Which one of the following is not a python's predefined data type?

- A. List
- B. Dictionary
- C. Tuple
- D. Class

View Answer

Answer : D

Explanation: Class is not a python's predefined data type. But we can create classes on our own.

13. . Which of the following has more precedence?

- A. +
- B. ()
- C. /
- D. -

View Answer

Answer : B

Explanation: () has more precedence in python programming language.

14. In which language is Python written?

- A. English
- B. PHP
- C. C
- D. All of the above

View Answer

Answer : C

Explanation: Python is written in the C programming language, and it is also called CPython.

15. Do we need to compile a program before execution in Python?

- A. No
- B. Yes

View Answer

Answer : A

Explanation: We don't need to compile a program before execution in Python.

16. How to convert the uppercase letters in the string to lowercase in Python?

- A. lowercase()
- B. capilaize()
- C. lower()
- D. toLower()

View Answer

Answer : C

Explanation: lower() function is used to convert string into lower case in python.

17. How to capitalize only the first letter of a sentence in Python?

- A. uppercase() method
- B. capitalize() method
- C. upper() method
- D. None of the above

View Answer

Answer : B

Explanation: capitalize() method is used to capitalize only the first letter of a sentence in Python.

18. How to convert the lowercase letters in the string to uppercase in Python?

- A. uppercase()
- B. toUpper()
- C. capitalize()
- D. upper()

View Answer

Answer : D

Explanation: upper() function is used to convert the lowercase letters in the string to uppercase in Python.

19. How to check whether all the characters in a string is printable?

- A. print() method
- B. printable() method
- C. isprintable() method
- D. echo() method

View Answer

Answer : C

Explanation: isprintable() method.

20. How to swap case in Python i.e. lowercase to uppercase and vice versa?

- A. casefold() method
- B. case() method
- C. convert() method
- D. swapcase() method

View Answer

Answer : D

Explanation: swapcase().

01. In the Python statement $x = a + 5 - b$:

a and b are _____

$a + 5 - b$ is _____

- A. terms, a group
- B. operators, a statement
- C. operands, an expression
- D. operands, an equation

View Answer

Answer : C

Explanation: The objects that operators act on are called operands. An expression involving operators and operands is called an expression So, option C is correct.

02. Which is the correct operator for power(xy)?

- 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. $2^{**}5=32$.

03. What is the output of the following addition (+) operator

```
a = [10, 20]
b = a
b += [30, 40]
print(a)
print(b)
```

- A. [10, 20, 30, 40]
[10, 20, 30, 40]
- B. [10, 20]
[10, 20, 30, 40]
- C. [10, 20, 10, 20]
[10, 20, 30, 40]
- D. [10, 20]
[30, 40]

View Answer

Answer : A

Explanation: Because since b and a reference to the same object, when we use the addition assignment operator += on b, it changes both a and b.

04. Which function overloads the >> operator?

- A. more()
- B. gt()
- C. ge()

D. None of the above

View Answer

Answer : D

Explanation: rshift() function overloads the >> operator

05. What is the value of the expression 100 / 25?

- A. 4
- B. 4.0
- C. 0
- D. 25

View Answer

Answer : B

Explanation: The result of standard division is always float. The value of 100 // 25 (integer division) is 4.

06. Which one of these is floor division?

- A. //
- B. /
- C. %
- D. None of the above

View Answer

Answer : A

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 integers so the answer of this expression in Python is 2. To get the 2.5 as an answer, use floor division.

07. What is the output of the following assignment operator

```
a = 10
b = a -= 2
print(b)
```

- A. 8
- B. 10
- C. Syntax Error
- D. No error but no output too

View Answer

Answer : C

Explanation: `b = a -= 2` expression is Invalid

08. Which operator is overloaded by the or() function?

- A. ||
- B. |
- C. //
- D. /

View Answer

Answer : B

Explanation: or() function overloads the bitwise OR operator “|”.

09. Should you use the == operator to determine whether objects of type float are equal?

A. Nope, not a good idea.

B. Sure! Go for it.

View Answer

Answer : A

Explanation: Internal representation of float objects is not precise, so they can't be relied on to equal exactly what you think they will:

```
>>> 1.1 + 2.2 == 3.3
```

False

You should instead compute whether the numbers are close enough to one another to satisfy a specified tolerance:

```
>>> tolerance = 0.00001
```

```
>>> abs((1.1 + 2.2) - 3.3) < tolerance
```

True

10. What is the order of precedence in python?

i) Parentheses

ii) Exponential

iii) Multiplication

iv) Division

v) Addition

vi) Subtraction

A. ii,i,iii,iv,v,vi

B. ii,i,iv,iii,v,vi

C. i,ii,iii,iv,vi,v

D. i,ii,iii,iv,v,vi

View Answer

Answer : D

Explanation: For order of precedence, just remember this PEMDAS-Parentheses>

Exponential> Multiplication> Division> Addition> Subtraction (similar to BODMAS).

11. What is the output of the following code

```
x = 6
y = 2
print(x ** y)
print(x // y)
```

A. 66

0

B. 36

0

- C. $\frac{66}{3}$
- D. $\frac{36}{3}$

View Answer

Answer : D

Explanation: The Exponent (**) operator performs exponential (power) calculation. so here $6 ** 2$ means $6*6 = 36$ The // is the Floor Division operator so $6//2=3$

12. What is the output of the following program :

```
i = 0
while i < 3:
    print i
    i++
    print i+1
```

- A. 0 2 1 3 2 4
- B. 0 1 2 3 4 5
- C. Error
- D. 1 0 2 4 3 5

View Answer

Answer : C

Explanation: Python Programming language does not support '++' operator.

13. Suppose the following statements are executed:

```
a = 100
b = 200
```

What is the value of the expression *a and b*?

- A. True
- B. 0
- C. False
- D. 200
- E. 100

View Answer

Answer : D

Explanation: None

14. 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

15. Which of the following operators has the highest precedence?

- A. not
- B. &
- C. *
- D. +

View Answer

Answer : C

Explanation: None

16. Given a function that does not return any value, what value is shown when executed at the shell?

- A. int
- B. bool
- C. void
- D. None

View Answer

Answer : D

Explanation: Python explicitly defines the None object that is returned if no value is specified.

17. The function sqrt() from the math module computes the square root of a number. Will the highlighted line of code raise an exception?

```
x = -100
from math import sqrt
x > 0 and sqrt(x)
```

- A. Yes
- B. No
- C. void
- D. None

View Answer

Answer : B

Explanation: In the highlighted line, $x > 0$ is False. The expression is already known to be falsy at that point. Due to short-circuit evaluation, $\text{sqrt}(x)$ (which would raise an exception) is not evaluated.

18. 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.

19. What is the output of the following code

```
print(bool(0), bool(3.14159), bool(-3), bool(1.0+1j))
```

- A. True True False True
- B. False True True True
- C. True True False True
- D. False True False True

View Answer

Answer : B

Explanation: If we pass A zero value to the bool() constructor, it will treat it as false. Any non-zero value is true.

20. What is the output of the expression print(-18 // 4)

- A. -4
- B. -5
- C. 4
- D. 5

View Answer

Answer : B

Explanation: In the case of the floor division operator(/), when the result is negative, the result is rounded down to the next smallest (big negative) integer.

01. Which of the following statements assigns the value 25 to the variable x in Python:

- A. $x \leftarrow 25$
- B. $x = 25$
- C. $x := 25$
- D. `int x = 25`
- E. $x << 25$

View Answer

Answer : B

02. In Python, a variable may be assigned a value of one type, and then later assigned a value of a different type:

- A. False
- B. True

View Answer

Answer : B

Explanation: Variables are not statically typed in Python, as they are in some other programming languages.

03. Which one of the following is the correct way of declaring and initializing a variable, x with the value 7?

- A. `int x`
`x=7`
- B. `int x=7`
- C. `x=7`
- D. `declare x=7`

View Answer

Answer : C

Explanation: The correct way of declaring and initializing a variable, x with the value 7 is `x=7`.

04. What will be the output of statement `22**2**2`**

- A. 16
- B. 256
- C. 32768
- D. 65536

View Answer

Answer : D

Explanation: The statement is equivalent to 2^{16} . So, Option D is correct.

05. Which of the following statement is False?

- A. Variable names can be arbitrarily long.
- B. They can contain both letters and numbers.
- C. Variable name can begin with underscore.
- D. Variable name can begin with number.

View Answer

Answer : D

Explanation: Variable name can not begin with the number, it can only begin with a letter or underscore.

06. What is the output of the following code: print 9//2

- A. 4
- B. 4.5
- C. 4.0
- D. Error

View Answer

Answer : A

Explanation: Floor Division operator “//” – The division of operands where the result is the quotient in which the digits after the decimal point are removed. So in this case we get 4 as the answer. So, Option A is correct.

07. Which of the following is not a valid variable name in Python?

- A. _var
- B. var_name
- C. var11
- D. 5var

View Answer

Answer : D

Explanation: 5var is not a valid variable name in python.

08. What is the maximum length of an identifier in python?

- A. 32
- B. 31
- C. 63
- D. None of the above

View Answer

Answer : D

Explanation: In python, the Identifier can be of any length. So, Option D is correct.

09. Which of the following declarations is incorrect?

- A. None Of the below
- B. _x = 2
- C. __x = 3
- D. __xyz__ = 5

View Answer

Answer : A

Explanation: All declarations will execute successfully but at the expense of low readability.

10. What is the result of round(0.5) – round(-0.5)?

- A. 1.0
- B. 2.0
- C. 0
- D. None Of the above

View Answer

Answer : B

Explanation: Python rounds off numbers away from 0 when the number to be rounded off is exactly halfway through. `round(0.5)` is 1 and `round(-0.5)` is -1 So, $1 - (-1) = 2.0$

11. In Python, a variable must be declared before it is assigned a value:

- A. True
- B. False

View Answer

Answer : B

Explanation: Variables need not be declared or defined in advance in Python programming. To create a variable, you just assign it a value.

12. Why does the name of local variables start with an underscore discouraged?

- A. To identify the variable
- B. It confuses the interpreter
- C. It indicates a private variable of a class
- D. None of these

View Answer

Answer : C

Explanation: Since there is no concept of private variables in Python language, majorly underscore is used to denote variables that cannot be accessed from outside the class.

13. Which of the following will run without errors?

- A. `round(75.8)`
- B. `round()`
- C. `round(5352.898,9,5)`
- D. `round(6463.123,2,6)`

View Answer

Answer : A

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

14. Which of the following is a valid variable?

- A. `var@`
- B. `32var`
- C. `in`
- D. `abc_x`

View Answer

Answer : D

Explanation: Variable name should not be a keyword, cannot begin with a digit, and should not contain any special symbol. Hence D is the correct identifier or variable. So, Option D is correct.

15. Is Python case sensitive when dealing with identifiers?

- A. Yes
- B. No

- C. Machine dependent
- D. None of the above

View Answer

Answer : A

Explanation: Case is always significant.

16. In which data type, indexing is not valid?

- A. List
- B. String
- C. Dictionary
- D. None of the above

View Answer

Answer : C

Explanation: Indexing is not valid in dictionary.

17. Select the correct example of complex datatype in Python

- A. $3 + 2j$
- B. $-100j$
- C. $5j$
- D. All of the above are correct

View Answer

Answer : D

Explanation: All of the above are complex data types in python

18. What is output of: $35 == 35.0$

- A. False
- B. True
- C. 33
- D. None of the above

View Answer

Answer : B

Explanation: comparison operator ($==$) evaluates true and false. And in python, we need not specify whether the number is int or float.

19. $l = [4, 8, 9, 2.6, 5]$ is a type of which data type in python?

- A. List
- B. Tuple
- C. Set
- D. None of these

View Answer

Answer : A

Explanation: List in python is created by writing values inside [].

20. How can we create an empty list in python?

- A. `list=()`
- B. `list.null`
- C. `null.list`

D. list=[]

View Answer

Answer : D

Explanation: List in python is created by writing values inside []. So, for creating an empty list just leave the list as [].

21. If x=3.123, then int(x) will give ?

- A. 3.1
- B. 0
- C. 1
- D. 3

View Answer

Answer : D

Explanation: int() will convert the float value into integer value.

22. Which of the following is the example of typecasting?

- A. int(5)
- B. str(5)
- C. str(xyz)
- D. All of the above

View Answer

Answer : D

Explanation: All

23. What is type casting in python?

- A. Declaration of data type
- B. Destroy data type
- C. Change data type property
- D. None of the above

View Answer

Answer : C

Explanation: Type casting means changing the property of data types.

24. In Python 3, the maximum value for an integer is $2^{63} - 1$:

- A. True
- B. False

View Answer

Answer : B

Explanation: In Python 2, there was an internal limit to how large an integer value could be. But that limit was removed in Python 3.

This means there is no explicitly defined limit, but the amount of available address space forms a practical limit depending on the machine Python runs on.

25. Which of the following is not a data type in python?

- A. List
- B. Tuple
- C. Dictionary

D. Book

View Answer

Answer : D

Explanation: Book is not a data type

26. Which of the following is a valid way to specify the string literal foo'bar in Python:

- A. "foo'bar"
- B. 'foo"bar'
- C. 'foo'bar'
- D. None of the above

View Answer

Answer : A

27. Correct way to declare a variable x of float data type in python:

- A. x = 2.5
- B. float x = 2.5
- C. float(2.5)
- D. All of the above

View Answer

Answer : A

Explanation: We just write the variable name and can assign any type of value and then the type of variable will change according to the value we assign in it.

28. All keywords in Python are in ____

- A. None of the below
- B. lower case
- C. UPPER CASE
- D. Capitalized

View Answer

Answer : A

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

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

- A. Underscore and ampersand are the only two special characters allowed
- B. All private members must have leading and trailing underscores
- C. Unlimited length
- D. none of the mentioned

View Answer

Answer : C

Explanation: Variable names can be of any length.

30. What does ~4 evaluate to?

- A. -4
- B. -5
- C. -3
- D. +3

View Answer

Answer : B

Explanation: $\sim x$ is equivalent to $-(x+1)$.

31. In order to store values in terms of key and value we use that core data type in python?

- A. List
- B. Class
- C. Dictionary
- D. Tupple

View Answer

Answer : C

Explanation: Dictionary is the collection of keys and their value.

32. How can we get 6 from the given list: list=[9,5,6,3]

- A. list[-2]
- B. list[-1]
- C. list[3]
- D. None of the above

View Answer

Answer : A

Explanation: list[-2] will give the second last element of the list.

Questions and Answers – Variable Names

1. Is Python case sensitive when dealing with identifiers?

- a) yes
- b) no
- c) machine dependent
- d) none of the mentioned

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

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

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) `_`

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

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

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

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

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

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

Answer: b

Explanation: in is a keyword.

Python Questions and Answers – 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

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

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

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

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.

- a) True
- b) False

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

Answer: a

Explanation: None.

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

- a) 27
- b) 9
- c) 3
- d) 1

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

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 $\text{Int}(x)$ implies that the variable x is converted to integer.

- a) True
- b) False

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

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.

Python Questions and Answers – Core Data types

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

- a) Lists
- b) Dictionary
- c) Tuples
- d) Class

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

Answer: d

Explanation: Python shell throws a NoneType object back.

3. What will be the output of the following Python code?

- 1. `>>>str="hello"`
- 2. `>>>str[:2]`
- 3. `>>>`
- a) he
- b) lo
- c) olleh
- d) hello

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)`

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

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

Answer: d

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

7. What error occurs when you execute the following Python code snippet?

`apple = mango`

- a) `SyntaxError`
- b) `NameError`
- c) `ValueError`
- d) `TypeError`

Answer: b

Explanation: Mango is not defined hence name error.

8. What will be the output of the following Python code snippet?

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

Answer: a

Explanation: Python codes have to be indented properly.

9. What data type is the object below?

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

- a) list
- b) dictionary

- c) array
- d) tuple

Answer: a

Explanation: List data type can store any values within it.

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

Answer: d

Explanation: Dictionary stores values in terms of keys and values.

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.

12. The following is displayed by a print function call. Select all of the function calls that result in this output.

- 1. tom
- 2. dick
- 3. harry

a)

```
print("tom
\dick
\nharry")
```

b) `print("""tomdickharry""")`

c) `print('tom\dick\nharry')`

d)

```
print('tom
dick
harry')
```

Answer: c

Explanation: The \n adds a new line.

13. What is the average value of the following Python code snippet?

- 1. `>>>grade1 = 80`
- 2. `>>>grade2 = 90`
- 3. `>>>average = (grade1 + grade2) / 2`

- a) 85.0
- b) 85.1
- c) 95.0
- d) 95.1

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')`

Answer: c

Explanation: Execute in the shell.

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

- a) int
- b) bool
- c) float
- d) None

Answer: a

Explanation: Execute `help(math.trunc)` to get details.

Python Questions and Answers – Numeric Types

1. What is the output of `print 0.1 + 0.2 == 0.3`?

- a) True
- b) False
- c) Machine dependent
- d) Error

Answer: b

Explanation: Neither of 0.1, 0.2 and 0.3 can be represented accurately in binary. The round off errors from 0.1 and 0.2 accumulate and hence there is a difference of **5.5511e-17** between $(0.1 + 0.2)$ and 0.3.

2. Which of the following is not a complex number?

- a) `k = 2 + 3j`
- b) `k = complex(2, 3)`
- c) `k = 2 + 3l`
- d) `k = 2 + 3J`

Answer: c

Explanation: **l** (or **L**) stands for long.

3. What is the type of `inf`?

- a) Boolean
- b) Integer
- c) Float
- d) Complex

Answer: c

Explanation: Infinity is a special case of floating point numbers. It can be obtained by `float('inf')`.

4. What does `~4` evaluate to?

- a) -5
- b) -4
- c) -3
- d) +3

Answer: a

Explanation: `~x` is equivalent to `-(x+1)`.

5. What does `~~~~~5` evaluate to?

- a) +5
- b) -11
- c) +11
- d) -5

Answer: a

Explanation: $\sim x$ is equivalent to $-(x+1)$.

6. Which of the following is incorrect?

- a) $x = 0b101$
- b) $x = 0x4f5$
- c) $x = 19023$
- d) $x = 03964$

Answer: d

Explanation: Numbers starting with a 0 are octal numbers but 9 isn't allowed in octal numbers.

7. What is the result of `cmp(3, 1)`?

- a) 1
- b) 0
- c) True
- d) False

Answer: a

Explanation: `cmp(x, y)` returns 1 if $x > y$, 0 if $x == y$ and -1 if $x < y$.

8. Which of the following is incorrect?

- a) `float('inf')`
- b) `float('nan')`
- c) `float('56'+'78')`
- d) `float('12+34')`

Answer: d

Explanation: '+' cannot be converted to a float.

9. What is the result of `round(0.5) - round(-0.5)`?

- a) 1.0
- b) 2.0
- c) 0.0
- d) Value depends on Python version

Answer: d

Explanation: The behavior of the `round()` function is different in Python 2 and Python 3. In Python 2, it rounds off numbers away from 0 when the number to be rounded off is exactly halfway through. `round(0.5)` is 1 and `round(-0.5)` is -1 whereas in Python 3, it rounds off numbers towards nearest even number when the number to be rounded off is exactly halfway through. See the below output.

Here's the runtime output for Python version 2.7 interpreter.

```
$ python
```

```
Python 2.7.17 (default, Nov 7 2019, 10:07:09)
```

```
>>> round(0.5)
```

1.0

```
>>> round(-0.5)
```

-1.0

```
>>>
```

In the above output, you can see that the round() functions on 0.5 and -0.5 are moving away from 0 and hence “ $\text{round}(0.5) - (\text{round}(-0.5)) = 1 - (-1) = 2$ ”

Here’s the runtime output for Python version 3.6 interpreter.

```
$ python3
```

```
Python 3.6.8 (default, Oct 7 2019, 12:59:55)
```

```
>>> round(0.5)
```

0

```
>>> round(-0.5)
```

0

```
>>> round(2.5)
```

2

```
>>> round(3.5)
```

4

```
>>>
```

In the above output, you can see that the round() functions on 0.5 and -0.5 are moving towards 0 and hence “ $\text{round}(0.5) - (\text{round}(-0.5)) = 0 - 0 = 0$ ”. Also note that the round(2.5) is 2 (which is an even number) whereas round(3.5) is 4 (which is an even number).

10. What does $3 \wedge 4$ evaluate to?

a) 81

b) 12

c) 0.75

d) 7

Answer: d

Explanation: \wedge is the Binary XOR operator.

Python Questions and Answers – Operator Precedence and Associativity – 1

1. The value of the expressions $4/(3*(2-1))$ and $4/3*(2-1)$ is the same.

- a) True
- b) False

Answer: a

Explanation: Although the presence of parenthesis does affect the order of precedence, in the case shown above, it is not making a difference. The result of both of these expressions is 1.333333333. Hence the statement is true.

2. What will be the value of the following Python expression?

$4 + 3 \% 5$

- a) 4
- b) 7
- c) 2
- d) 0

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

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) **

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 will be the value of x in the following Python expression?

$x = \text{int}(43.55 + 2/2)$

- a) 43
- b) 44

- c) 22
- d) 23

Answer: b

Explanation: The expression shown above is an example of explicit conversion. It is evaluated as $\text{int}(43.55+1) = \text{int}(44.55) = 44$. 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)

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) |

Answer: c

Explanation: // is the operator for truncation division. It is 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 Python 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

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)

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

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.

Python Questions and Answers – Precedence and Associativity – 2

1. What will be the output of the following Python expression?

```
print(4.00/(2.0+2.0))
```

- a) Error
- b) 1.0
- c) 1.00
- d) 1

Answer: b

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

2. What will be the value of X in the following Python expression?

```
X = 2+9*((3*12)-8)/10
```

- a) 30.0
- b) 30.8
- c) 28.4
- d) 27.2

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) $3.4 + 4.6$

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 will be the output of the following Python expression?

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

- a) (1,3)
- b) (0,3)
- c) (1,0)
- d) (3,1)

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) %

Answer: b

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

6. What will be the value of the following Python expression?

- `float(4+int(2.39)%2)`
a) 5.0
b) 5
c) 4.0
d) 4

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`

Answer: a

Explanation: Type conversion is nothing but explicit conversion of operands to a specific type. Options `5.3 + 6.3` and `5.0 + 3` are examples of implicit conversion whereas option `4.0 + float(3)` 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')`

Answer: d

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

9. What will be the value of the following Python expression?

- `4+2**5//10`

- a) 3
- b) 7
- c) 77
- d) 0

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: $(2**2)**3$.

- a) True
- b) False

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.

Python Questions and Answers – Bitwise – 1

1. What will be the output of the following Python code snippet if x=1?

```
x<<2
```

- a) 8
- b) 1
- c) 2
- d) 4

Answer: d

Explanation: The binary form of 1 is 0001. The expression `x<<2` implies we are performing bitwise left shift on x. This shift yields the value: 0100, which is the binary form of the number 4.

2. What will be the output of the following Python expression?

```
bin(29)
```

- a) '0b10111'
- b) '0b11101'
- c) '0b11111'
- d) '0b11011'

Answer: b

Explanation: The binary form of the number 29 is 11101. Hence the output of this expression is '0b11101'.

3. What will be the value of x in the following Python expression, if the result of that expression is 2?

```
x>>2
```

- a) 8
- b) 4
- c) 2
- d) 1

Answer: a

Explanation: When the value of x is equal to 8 (1000), then `x>>2` (bitwise right shift) yields the value 0010, which is equal to 2. Hence the value of x is 8.

4. What will be the output of the following Python expression?

```
int(1011)?
```

- a) 1011
- b) 11
- c) 13
- d) 1101

Answer: a

Explanation: The result of the expression shown will be 1011. This is because we have not specified the base in this expression. Hence it automatically takes the base as 10.

5. To find the decimal value of 1111, that is 15, we can use the function:

- a) `int(1111,10)`
- b) `int('1111',10)`
- c) `int(1111,2)`
- d) `int('1111',2)`

Answer: d

Explanation: The expression `int('1111',2)` gives the result 15. The expression `int('1111', 10)` will give the result 1111.

6. What will be the output of the following Python expression if `x=15` and `y=12`?

- `x & y`
- a) `b1101`
 - b) `0b1101`
 - c) `12`
 - d) `1101`

Answer: c

Explanation: The symbol '`&`' represents bitwise AND. This gives 1 if both the bits are equal to 1, else it gives 0. The binary form of 15 is 1111 and that of 12 is 1100. Hence on performing the bitwise AND operation, we get 1100, which is equal to 12.

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

- a) `int(1011)`
- b) `int('1011',23)`
- c) `int(1011,2)`
- d) `int('1011')`

Answer: c

Explanation: The expression `int(1011,2)` results in an error. Had we written this expression as `int('1011',2)`, then there would not be an error.

8. Which of the following represents the bitwise XOR operator?

- a) `&`
- b) `^`
- c) `|`
- d) `!`

Answer: b

Explanation: The `^` operator represent bitwise XOR operation. `&`: bitwise AND, `|` : bitwise OR and `!` represents bitwise NOT.

9. What is the value of the following Python expression?

- `bin(0x8)`
- a) `'0bx1000'`
 - b) `8`

- c) 1000
- d) '0b1000'

Answer: d

Explanation: The prefix 0x specifies that the value is hexadecimal in nature. When we convert this hexadecimal value to binary form, we get the result as: '0b1000'.

10. What will be the output of the following Python expression?

0x35 | 0x75

- a) 115
- b) 116
- c) 117
- d) 118

Answer: c

Explanation: The binary value of 0x35 is 110101 and that of 0x75 is 1110101. On OR-ing these two values we get the output as: 1110101, which is equal to 117. Hence the result of the above expression is 117.

Python Questions and Answers – Bitwise – 2

1. It is not possible for the two's complement value to be equal to the original value in any case.

- a) True
- b) False

Answer: b

Explanation: In most cases the value of two's complement is different from the original value. However, there are cases in which the two's complement value may be equal to the original value. For example, the two's complement of 10000000 is also equal to 10000000. Hence the statement is false.

2. The one's complement of 110010101 is:

- a) 001101010
- b) 110010101
- c) 001101011
- d) 110010100

Answer: a

Explanation: The one's complement of a value is obtained by simply changing all the 1's to 0's and all the 0's to 1's. Hence the one's complement of 110010101 is 001101010.

3. Bitwise _____ gives 1 if either of the bits is 1 and 0 when both of the bits are 1.

- a) OR
- b) AND
- c) XOR
- d) NOT

Answer: c

Explanation: Bitwise XOR gives 1 if either of the bits is 1 and 0 when both of the bits are 1.

4. What will be the output of the following Python expression?

4^12

- a) 2
- b) 4
- c) 8
- d) 12

Answer: c

Explanation: ^ is the XOR operator. The binary form of 4 is 0100 and that of 12 is 1100. Therefore, 0100^1100 is 1000, which is equal to 8.

5. Any odd number on being AND-ed with _____ always gives 1. Hint: Any even number on being AND-ed with this value always gives 0.

- a) 10
- b) 2
- c) 1
- d) 0

Answer: c

Explanation: Any odd number on being AND-ed with 1 always gives 1. Any even number on being AND-ed with this value always gives 0.

6. What will be the value of the following Python expression?

`bin(10-2)+bin(12^4)`

- a) 0b10000
- b) 0b10001000
- c) 0b1000b1000
- d) 0b10000b1000

Answer: d

Explanation: The output of `bin(10-2)` = 0b1000 and that of `bin(12^4)` is 0b1000. Hence the output of the above expression is: 0b10000b1000.

7. Which of the following expressions can be used to multiply a given number 'a' by 4?

- a) `a<<2`
- b) `a<<4`
- c) `a>>2`
- d) `a>>4`

Answer: a

Explanation: Let us consider an example wherein `a=2`. The binary form of 2 is 0010. When we left shift this value by 2, we get 1000, the value of which is 8. Hence if we want to multiply a given number 'a' by 4, we can use the expression: `a<<2`.

8. What will be the output of the following Python code if `a=10` and `b =20`?

```
a=10
b=20
a=a^b
b=a^b
a=a^b
print(a,b)
```

- a) 10 20
- b) 10 10
- c) 20 10
- d) 20 20

Answer: c

Explanation: The code shown above is used to swap the contents of two memory locations using bitwise XOR operator. Hence the output of the code shown above is: 20 10.

9. What is the two's complement of -44?

- a) 1011011
- b) 11010100
- c) 11101011
- d) 10110011

Answer: b

Explanation: The binary form of -44 is 00101100. The one's complement of this value is 11010011. On adding one to this we get: 11010100 (two's complement).

10. What will be the output of the following Python expression?

~100?

- a) 101
- b) -101
- c) 100
- d) -100

Answer: b

Explanation: Suppose we have an expression $\sim A$. This is evaluated as: $-A - 1$. Therefore, the expression ~ 100 is evaluated as $-100 - 1$, which is equal to -101.

Python Questions and Answers – Boolean

1. What will be the output of the following Python code snippet?

```
bool('False')
```

```
bool()
```

a)

True

True

b)

False

True

c)

False

False

d)

True

False

Answer: d

Explanation: The Boolean function returns true if the argument passed to the bool function does not amount to zero. In the first example, the string 'False' is passed to the function bool. This does not amount to zero and hence the output is true. In the second function, an empty list is passed to the function bool. Hence the output is false.

2. What will be the output of the following Python code snippet?

```
['hello', 'morning'][bool("")]
```

a) error

b) no output

c) hello

d) morning

Answer: c

Explanation: The line of code shown above can be simplified to state that 'hello' should be printed if the argument passed to the Boolean function amounts to zero, else 'morning' will be printed.

3. What will be the output of the following Python code snippet?

```
not(3>4)
```

```
not(1&1)
```

a)

True

True

b)

True

False

c)

False

True
d)
False
False

Answer: b

Explanation: The function not returns true if the argument amounts to false, and false if the argument amounts to true. Hence the first function returns false, and the second function returns false.

4. What will be the output of the following Python code?

```
['f', 't'][bool('spam')]
```

a) t
b) f
c) No output
d) Error

Answer: a

Explanation: The line of code can be translated to state that 'f' is printed if the argument passed to the Boolean function amount to zero. Else 't' is printed. The argument given to the Boolean function in the above case is 'spam', which does not amount to zero. Hence the output is t.

5. What will be the output of the following Python code?

```
l=[1, 0, 2, 0, 'hello', '', []]
```

```
list(filter(bool, l))
```

a) Error
b) [1, 0, 2, 0, 'hello', '', []]
c) [1, 0, 2, 'hello', '', []]
d) [1, 2, 'hello']

Answer: d

Explanation: The code shown above returns a new list containing only those elements of the list l which do not amount to zero. Hence the output is: [1, 2, 'hello'].

6. What will be the output of the following Python code if the system date is 21st June, 2017 (Wednesday)?

```
[] or {}
```

```
{ } or []
```

a)
[]
{ }
b)
[]
[]
c)
{ }

```
[]  
d)  
  {}  
  {}
```

Answer: c

Explanation: The code shown above shows two functions. In both the cases the right operand is returned. This is because each function is evaluated from left to right. Since the left operand is false, it is assumed that the right operand must be true and hence the right operand is returned in each of the above case.

7. What will be the output of the following Python code?

```
class Truth:  
    pass  
x=Truth()  
bool(x)  
a) pass  
b) true  
c) false  
d) error
```

Answer: b

Explanation: If the truth method is not defined, the object is considered true. Hence the output of the code shown above is true.

8. What will be the output of the following Python code?

```
if (9 < 0) and (0 < -9):  
    print("hello")  
elif (9 > 0) or False:  
    print("good")  
else:  
    print("bad")  
a) error  
b) hello  
c) good  
d) bad
```

Answer: c

Explanation: The code shown above prints the appropriate option depending on the conditions given. The condition which matches is (9>0), and hence the output is: good.

9. Which of the following Boolean expressions is not logically equivalent to the other three?

- a) not(-6<0 or -6>10)
- b) -6>=0 and -6<=10
- c) not(-6<10 or -6==10)

d) not(-6>10 or -6==10)

Answer: d

Explanation: The expression not(-6<0 or -6>10) returns the output False.

The expression -6>=0 and -6<=10 returns the output False.

The expression not(-6<10 or -6==10) returns the output False.

The expression not(-6>10 or -6==10) returns the output True.

10. What will be the output of the following Python code snippet?

not(10<20) and not(10>30)

a) True

b) False

c) Error

d) No output

Answer: b

Explanation: The expression not(10<20) returns false. The expression not(10>30) returns true. The and operation between false and true returns false. Hence the output is false.

Python Question and Answers – Formatting – 1

1. What will be the output of the following Python code snippet?

```
X="hi"  
print("05d"%X)  
a) 00000hi  
b) 000hi  
c) hi000  
d) error
```

Answer: d

Explanation: The code snippet shown above results in an error because the above formatting option works only if 'X' is a number. Since in the above case 'X' is a string, an error is thrown.

2. What will be the output of the following Python code snippet?

```
X="san-foundry"  
print("%56s",X)  
a) 56 blank spaces before san-foundry  
b) 56 blank spaces before san and foundry  
c) 56 blank spaces after san-foundry  
d) no change
```

Answer: a

Explanation: The formatting option `print("%Ns",X)` helps us add 'N' number of spaces before a given string 'X'. Hence the output for the code snippet shown above will be 56 blank spaces before the string "san-foundry".

3. What will be the output of the following Python expression if `x=456`?

```
print("%-06d"%x)  
a) 000456  
b) 456000  
c) 456  
d) error
```

Answer: c

Explanation: The expression shown above results in the output 456.

4. What will be the output of the following Python expression if `X=345`?

```
print("%06d"%X)  
a) 345000  
b) 000345  
c) 000000345  
d) 345000000
```

Answer: b

Explanation: The above expression returns the output 000345. It adds the required

number of zeroes before the given number in order to make the number of digits 6 (as specified in this case).

5. Which of the following formatting options can be used in order to add 'n' blank spaces after a given string 'S'?

- a) `print("-ns"%S)`
- b) `print("-ns"%S)`
- c) `print("%ns"%S)`
- d) `print("%-ns"%S)`

Answer: d

Explanation: In order to add 'n' blank spaces after a given string 'S', we use the formatting option: `("%-ns"%S)`.

6. What will be the output of the following Python expression if X = -122?

`print("-%06d"%x)`

- a) -000122
- b) 000122
- c) -00122
- d) -00122

Answer: c

Explanation: The given number is -122. Here the total number of digits (including the negative sign) should be 6 according to the expression. In addition to this, there is a negative sign in the given expression. Hence the output will be - -00122.

7. What will be the output of the following Python expression if the value of x is 34?

`print("%f"%x)`

- a) 34.00
- b) 34.0000
- c) 34.000000
- d) 34.00000000

Answer: c

Explanation: The expression shown above normally returns the value with 6 decimal points if it is not specified with any number. Hence the output of this expression will be: 34.000000 (6 decimal points).

8. What will be the output of the following Python expression if x=56.236?

`print("%.2f"%x)`

- a) 56.00
- b) 56.24
- c) 56.23
- d) 0056.236

Answer: b

Explanation: The expression shown above rounds off the given number to the number

of decimal places specified. Since the expression given specifies rounding off to two decimal places, the output of this expression will be 56.24. Had the value been $x=56.234$ (last digit being any number less than 5), the output would have been 56.23.

9. What will be the output of the following Python expression if $x=22.19$?

```
print("%5.2f"%x)
```

- a) 22.1900
- b) 22.00000
- c) 22.19
- d) 22.20

Answer: c

Explanation: The output of the expression above will be 22.19. This expression specifies that the total number of digits (including the decimal point) should be 5, rounded off to two decimal places.

10. The expression shown below results in an error.

```
print("-%5d0",989)
```

- a) True
- b) False

Answer: b

Explanation: The expression shown above does not result in an error. The output of this expression is -%5d0 989. Hence this statement is incorrect.

Python Question and Answers – Formatting – 2

1. What will be the output of the following Python code snippet?

```
'%d %s %g you' %(1, 'hello', 4.0)
```

- a) Error
- b) 1 hello you 4.0
- c) 1 hello 4 you
- d) 1 4 hello you

Answer: c

Explanation: In the snippet of code shown above, three values are inserted into the target string. When we insert more than one value, we should group the values on the right in a tuple. The % formatting expression operator expects either a single item or a tuple of one or more items on its right side.

2. The output of which of the codes shown below will be: “There are 4 blue birds.”?

- a) ‘There are %g %d birds.’ %4 %blue
- b) ‘There are %d %s birds.’ %(4, blue)
- c) ‘There are %s %d birds.’ %[4, blue]
- d) ‘There are %d %s birds.’ 4, blue

Answer: b

Explanation: The code ‘There are %d %s birds.’ %(4, blue) results in the output: There are 4 blue birds. When we insert more than one value, we should group the values on the right in a tuple.

3. What will be the output of the python code shown below for various styles of format specifiers?

```
x=1234
```

```
res='integers:...%d...%-6d...%06d' %(x, x, x)
```

```
res
```

- a) ‘integers:... 1234... 1234 ...001234’
- b) ‘integers... 1234... 1234... 123400’
- c) ‘integers:... 1234... 1234...001234’
- d) ‘integers:... 1234... 1234...001234’

Answer: a

Explanation: The code shown above prints 1234 for the format specified %d, ‘1234 ’ for the format specifier %-6d (minus ‘-’ sign signifies left justification), and 001234 for the format specifier %06d. Hence the output of this code is: ‘integers:...1234...1234 ...001234’

4. What will be the output of the following Python code snippet?

```
x=3.3456789
```

```
'%f | %e | %g' %(x, x, x)
```

- a) Error
- b) ‘3.3456789 | 3.3456789+00 | 3.345678’

- c) '3.345678 | 3.345678e+0 | 3.345678'
d) '3.345679 | 3.345679e+00 | 3.34568'

Answer: d

Explanation: The %f %e and %g format specifiers represent floating point numbers in different ways. %e and %E are the same, except that the exponent is in lowercase. %g chooses the format by number content. Hence the output of this code is: '3.345679 | 3.345679e+00 | 3.34568'.

5. What will be the output of the following Python code snippet?

```
x=3.3456789
```

```
'%-6.2f | %05.2f | %+06.1f' %(x, x, x)
```

- a) '3.35 | 03.35 | +003.3'
b) '3.3456789 | 03.3456789 | +03.3456789'
c) Error
d) '3.34 | 03.34 | 03.34+'

Answer: a

Explanation: The code shown above rounds the floating point value to two decimal places. In this code, a variety of addition formatting features such as zero padding, total field width etc. Hence the output of this code is: '3.35 | 03.35 | +003.3'.

6. What will be the output of the following Python code snippet?

```
x=3.3456789
```

```
'%s' %x, str(x)
```

- a) Error
b) ('3.3456789', '3.3456789')
c) (3.3456789, 3.3456789)
d) ('3.3456789', 3.3456789)

Answer: b

Explanation: We can simply convert strings with a %s format expression or the str built-in function. Both of these methods have been shown in this code. Hence the output is:) ('3.3456789', '3.3456789')

7. What will be the output of the following Python code snippet?

```
'%(qty)d more %(food)s' % {'qty':1, 'food': 'spam'}
```

- a) Error
b) No output
c) '1 more foods'
d) '1 more spam'

Answer: d

Explanation: String formatting also allows conversion targets on the left to refer to the keys in a dictionary coded on the right and fetch the corresponding values. In the code shown above, (qty) and (food) in the format string on the left refers to keys in the

dictionary literal on the right and fetch their assorted values. Hence the output of the code shown above is: 1 more spam.

8. What will be the output of the following Python code snippet?

```
a='hello'
```

```
q=10
```

```
vars()
```

a) {'a' : 'hello', 'q' : 10,plus built-in names set by Python....}

b) {..... Built in names set by Python..... }

c) {'a' : 'hello', 'q' : 10}

d) Error

Answer: a

Explanation: The built in function vars() returns a dictionary containing all the variables that exist in the place. Hence the output of the code shown above is: {'a' : 'hello', 'q' : 10,plus built-in names set by Python....}

9. What will be the output of the following Python code?

```
s='{0}, {1}, and {2}'
```

```
s.format('hello', 'good', 'morning')
```

a) 'hello good and morning'

b) 'hello, good, morning'

c) 'hello, good, and morning'

d) Error

Answer: c

Explanation: Within the subject string, curly braces designate substitution targets and arguments to be inserted either by position or keyword. Hence the output of the code shown above: 'hello, good, and morning'.

10. What will be the output of the following Python code?

```
s='%s, %s & %s'
```

```
s%('mumbai', 'kolkata', 'delhi')
```

a) mumbai kolkata & delhi

b) Error

c) No output

d) 'mumbai, kolkata & delhi'

Answer: d

Explanation: In the code shown above, the format specifier %s is replaced by the designated substitution. Hence the output of the code shown above is: 'mumbai, kolkata & delhi'.

11. What will be the output of the following Python code?

```
t = '%(a)s, %(b)s, %(c)s'
```

```
t % dict(a='hello', b='world', c='universe')
```

- a) 'hello, world, universe'
- b) 'hellos, worlds, universes'
- c) Error
- d) hellos, world, universe

Answer: a

Explanation: Within the subject string, curly braces represent substitution targets and arguments to be inserted. Hence the output of the code shown above: 'hello, world, universe'.

12. What will be the output of the following Python code?

```
'{a}, {0}, {abc}'.format(10, a=2.5, abc=[1, 2])
```

- a) Error
- b) '2.5, 10, [1, 2]'
- c) 2.5, 10, 1, 2
- d) '10, 2.5, [1, 2]'

Answer: b

Explanation: Since we have specified that the order of the output be: {a}, {0}, {abc}, hence the value of associated with {a} is printed first followed by that of {0} and {abc}. Hence the output of the code shown above is: '2.5, 10, [1, 2]'.

13. What will be the output of the following Python code?

```
'{0:.2f}'.format(1.234)
```

- a) '1'
- b) '1.234'
- c) '1.23'
- d) '1.2'

Answer: c

Explanation: The code shown above displays the string method to round off a given decimal number to two decimal places. Hence the output of the code is: '1.23'.

14. What will be the output of the following Python code?

```
'%x %d' %(255, 255)
```

- a) 'ff, 255'
- b) '255, 255'
- c) '15f, 15f'
- d) Error

Answer: a

Explanation: The code shown above converts the given arguments to hexadecimal and decimal values and prints the result. This is done using the format specifiers %x and %d respectively. Hence the output of the code shown above is: 'ff, 255'.

15. The output of the two codes shown below is the same.

i. '{0:.2f}'.format(1/3.0)

ii. '%.2f%(1/3.0)

a) True

b) False

Answer: a

Explanation: The two codes shown above represent the same operation but in different formats. The output of both of these functions is: '0.33'. Hence the statement is true.

Python Questions and Answers – Advanced Formatting Tools

1. What will be the output of the following Python code?

```
l=list('HELLO')  
'first={ 0[0]}, third={ 0[2]}'.format(l)  
a) 'first=H, third=L'  
b) 'first=0, third=2'  
c) Error  
d) 'first=0, third=L'
```

Answer: a

Explanation: In the code shown above, the value for first is substituted by l[0], that is H and the value for third is substituted by l[2], that is L. Hence the output of the code shown above is: 'first=H, third=L'. The list l= ['H', 'E', 'L', 'L', 'O'].

2. What will be the output of the following Python code?

```
l=list('HELLO')  
p=l[0], l[-1], l[1:3]  
'a={ 0}, b={ 1}, c={ 2}'.format(*p)  
a) Error  
b) "a='H', b='O', c=(E, L)"  
c) "a=H, b=O, c=['E', 'L']"  
d) Junk value
```

Answer: c

Explanation: In the code shown above, the value for a is substituted by l[0], that is 'H', the value of b is substituted by l[-1], that is 'O' and the value for c is substituted by l[1:3]. Here the use of *p is to unpack a tuple items into individual function arguments.

3. The formatting method {1:<10} represents the _____ positional argument, _____ justified in a 10 character wide field.

- a) first, right
- b) second, left
- c) first, left
- d) second, right

Answer: b

Explanation: The formatting method {1:<10} represents the second positional argument, left justified in a 10 character wide field.

4. What will be the output of the following Python code?

```
hex(255), int('FF', 16), 0xFF  
a) [0xFF, 255, 16, 255]  
b) ('0xff', 155, 16, 255)  
c) Error
```


d) ('0xff', 255, 255)

Answer: d

Explanation: The code shown above converts the value 255 into hexadecimal, that is, 0xff. The value 'FF' into integer. Hence the output of the code shown is: ('0xff', 255, 255).

5. The output of the two codes shown below is the same.

i. `bin((2**16)-1)`

ii. `'{}'.format(bin((2**16)-1))`

a) True

b) False

Answer: a

Explanation: The output of both of the codes shown above is '0b1111111111111111'. Hence the statement is true.

6. What will be the output of the following Python code?

`'{a}{b}{a}'.format(a='hello', b='world')`

a) 'hello world'

b) 'hello' 'world' 'hello'

c) 'helloworldhello'

d) 'hello' 'hello' 'world'

Answer: c

Explanation: The code shown above prints the values substituted for a, b, a, in the same order. This operation is performed using the format function. Hence the output of the code is: 'helloworldhello'.

7. What will be the output of the following Python code?

`D=dict(p='san', q='foundry')`

`'{p}{q}'.format(**D)`

a) Error

b) sanfoundry

c) san foundry

d) {'san', 'foundry'}

Answer: b

Explanation: The code shown above prints the values substituted for p and q in the same order. Note that there is no blank space between p and q. Hence the output is: sanfoundry.

8. What will be the output of the following Python code?

`'The {} side {1} {2}'.format('bright', 'of', 'life')`

a) Error

b) 'The bright side of life'

c) 'The {bright} side {of} {life}'

d) No output

Answer: a

Explanation: The code shown above results in an error. This is because we have switched from automatic field numbering to manual field numbering, that is, from {} to {1}. Hence this code results in an error.

9. What will be the output of the following Python code?

```
'{0:f}, {1:2f}, {2:05.2f}'.format(1.23456, 1.23456, 1.23456)
```

a) Error

b) '1.234560, 1.22345, 1.23'

c) No output

d) '1.234560, 1.234560, 01.23'

Answer: d

Explanation: In the code shown above, various formatting options are displayed using the format option. Hence the output of this code is: '1.234560, 1.234560, 01.23'

10. What will be the output of the following Python code?

```
'%.2f%s' % (1.2345, 99)
```

a) '1.2345', '99'

b) '1.2399'

c) '1.234599'

d) 1.23, 99

Answer: b

Explanation: In this code, we must notice that since multiple values haven been given, they should be enclosed in a tuple. Since the formatting format is %.2f, the value 1.2345 is reduced to two decimal places. Hence the output of the code shown above: '1.2399'.

11. What will be the output of the following Python code?

```
'%s' %((1.23,),)
```

a) '(1.23,)'

b) 1.23,

c) (1.23)

d) '1.23'

Answer: a

Explanation: The formatting expression accepts either a single substitution value, or a tuple of one or more items. Since single item can be given either by itself or within the tuple, a tuple to be formatted must be provided as a tested tuple. Hence the output of the code is: >>> '%s' %((1.23,),).

12. What will be the output of the following two codes?

i. '{0}'.format(4.56)

ii. '{0}'.format([4.56,])

- a) '4.56', '4.56,'
- b) '4.56', '[4.56]'
- c) 4.56, [4.56,]
- d) 4.56, [4.56,]

Answer: b

Explanation: The code shown above shows the formatting option on the same value, that is 4.56, where in the second case, the value is enclosed in a list. Hence the output of the code shown above is:

'4.56', '[4.56]'

Python Questions and Answers – While and For Loops – 1

1. What will be the output of the following Python code?

```
x = ['ab', 'cd']
for i in x:
    i.upper()
print(x)
a) ['ab', 'cd']
b) ['AB', 'CD']
c) [None, None]
d) none of the mentioned
```

Answer: a

Explanation: The function `upper()` does not modify a string in place, it returns a new string which isn't being stored anywhere.

2. What will be the output of the following Python code?

```
x = ['ab', 'cd']
for i in x:
    x.append(i.upper())
print(x)
a) ['AB', 'CD']
b) ['ab', 'cd', 'AB', 'CD']
c) ['ab', 'cd']
d) none of the mentioned
```

Answer: d

Explanation: The loop does not terminate as new elements are being added to the list in each iteration.

3. What will be the output of the following Python code?

```
i = 1
while True:
    if i%3 == 0:
        break
    print(i)

    i += 1
a) 1 2
b) 1 2 3
c) error
d) none of the mentioned
```

Answer: c

Explanation: `SyntaxError`, there shouldn't be a space between `+` and `=` in `+=`.

4. What will be the output of the following Python code?

```
i = 1
while True:
    if i%007 == 0:
        break
    print(i)
    i += 1
```

a) 1 2 3 4 5 6
b) 1 2 3 4 5 6 7
c) error
d) none of the mentioned

Answer: a

Explanation: Control exits the loop when i becomes 7.

5. What will be the output of the following Python code?

```
i = 5
while True:
    if i%0011 == 0:
        break
    print(i)
    i += 1
```

a) 5 6 7 8 9 10
b) 5 6 7 8
c) 5 6
d) error

Answer: b

Explanation: 0011 is an octal number.

6. What will be the output of the following Python code?

```
i = 5
while True:
    if i%009 == 0:
        break
    print(i)
    i += 1
```

a) 5 6 7 8
b) 5 6 7 8 9
c) 5 6 7 8 9 10 11 12 13 14 15
d) error

Answer: d

Explanation: 9 isn't allowed in an octal number.

7. What will be the output of the following Python code?

```
i = 1
while True:
```

```
if i%2 == 0:  
    break  
print(i)  
i += 2
```

- a) 1
- b) 1 2
- c) 1 2 3 4 5 6 ...
- d) 1 3 5 7 9 11 ...

Answer: d

Explanation: The loop does not terminate since i is never an even number.

8. What will be the output of the following Python code?

```
i = 2  
while True:  
    if i%3 == 0:  
        break  
    print(i)  
    i += 2
```

- a) 2 4 6 8 10 ...
- b) 2 4
- c) 2 3
- d) error

Answer: b

Explanation: The numbers 2 and 4 are printed. The next value of i is 6 which is divisible by 3 and hence control exits the loop.

9. What will be the output of the following Python code?

```
i = 1  
while False:  
    if i%2 == 0:  
        break  
    print(i)  
    i += 2
```

- a) 1
- b) 1 3 5 7 ...
- c) 1 2 3 4 ...
- d) none of the mentioned

Answer: d

Explanation: Control does not enter the loop because of False.

10. What will be the output of the following Python code?

```
True = False  
while True:  
    print(True)
```

break

- a) True
- b) False
- c) None
- d) none of the mentioned

Answer: d

Explanation: SyntaxError, True is a keyword and it's value cannot be changed.

Python Questions and Answers – While and For Loops – 2

1. What will be the output of the following Python code?

```
i = 0
while i < 5:
    print(i)
    i += 1
    if i == 3:
        break
```

else:

```
    print(0)
```

a) 0 1 2 0

b) 0 1 2

c) error

d) none of the mentioned

Answer: b

Explanation: The else part is not executed if control breaks out of the loop.

2. What will be the output of the following Python code?

```
i = 0
while i < 3:
    print(i)
    i += 1
```

else:

```
    print(0)
```

a) 0 1 2 3 0

b) 0 1 2 0

c) 0 1 2

d) error

Answer: b

Explanation: The else part is executed when the condition in the while statement is false.

3. What will be the output of the following Python code?

```
x = "abcdef"
while i in x:
    print(i, end=" ")
```

a) a b c d e f

b) abcdef

c) i i i i i ...

d) error

Answer: d

Explanation: NameError, i is not defined.

4. What will be the output of the following Python code?

```
x = "abcdef"
i = "i"
while i in x:
    print(i, end=" ")
```

- a) no output
- b) i i i i i ...
- c) a b c d e f
- d) abcdef

Answer: a

Explanation: "i" is not in "abcdef".

5. What will be the output of the following Python code?

```
x = "abcdef"
i = "a"
while i in x:
    print(i, end = " ")
```

- a) no output
- b) i i i i i ...
- c) a a a a a ...
- d) a b c d e f

Answer: c

Explanation: As the value of i or x isn't changing, the condition will always evaluate to True.

6. What will be the output of the following Python code?

```
x = "abcdef"
i = "a"
while i in x:
    print('i', end = " ")
```

- a) no output
- b) i i i i i ...
- c) a a a a a ...
- d) a b c d e f

Answer: b

Explanation: As the value of i or x isn't changing, the condition will always evaluate to True.

7. What will be the output of the following Python code?

```
x = "abcdef"
i = "a"
while i in x:
    x = x[:-1]
    print(i, end = " ")
```


- a) i i i i i
- b) a a a a a
- c) a a a a a
- d) none of the mentioned

Answer: b

Explanation: The string x is being shortened by one character in each iteration.

8. What will be the output of the following Python code?

```
x = "abcdef"
i = "a"
while i in x[:-1]:
    print(i, end = " ")
```

- a) a a a a a
- b) a a a a a a
- c) a a a a a a ...
- d) a

Answer: c

Explanation: String x is not being altered and i is in x[:-1].

9. What will be the output of the following Python code?

```
x = "abcdef"
i = "a"
while i in x:
    x = x[1:]
    print(i, end = " ")
```

- a) a a a a a a
- b) a
- c) no output
- d) error

Answer: b

Explanation: The string x is being shortened by one character in each iteration.

10. What will be the output of the following Python code?

```
x = "abcdef"
i = "a"
while i in x[1:]:
    print(i, end = " ")
```

- a) a a a a a a
- b) a
- c) no output
- d) error

Answer: c

Explanation: i is not in x[1:].

Python Questions and Answers – While and For Loops – 3

1. What will be the output of the following Python code?

```
x = 'abcd'
for i in x:
    print(i)
    x.upper()
```

- a) a B C D
- b) a b c d
- c) A B C D
- d) error

Answer: b

Explanation: Changes do not happen in-place, rather a new instance of the string is returned.

2. What will be the output of the following Python code?

```
x = 'abcd'
for i in x:
    print(i.upper())
```

- a) a b c d
- b) A B C D
- c) a B C D
- d) error

Answer: b

Explanation: The instance of the string returned by upper() is being printed.

3. What will be the output of the following Python code?

```
x = 'abcd'
for i in range(x):
    print(i)
```

- a) a b c d
- b) 0 1 2 3
- c) error
- d) none of the mentioned

Answer: c

Explanation: range(str) is not allowed.

4. What will be the output of the following Python code?

```
x = 'abcd'
for i in range(len(x)):
    print(i)
```

- a) a b c d
- b) 0 1 2 3
- c) error

d) 1 2 3 4

Answer: b

Explanation: i takes values 0, 1, 2 and 3.

5. What will be the output of the following Python code?

```
x = 'abcd'
for i in range(len(x)):
    print(i.upper())
```

a) a b c d
b) 0 1 2 3
c) error
d) 1 2 3 4

Answer: c

Explanation: Objects of type int have no attribute upper().

6. What will be the output of the following Python code snippet?

```
x = 'abcd'
for i in range(len(x)):
    i.upper()
print (x)
```

a) a b c d
b) 0 1 2 3
c) error
d) none of the mentioned

Answer: c

Explanation: Objects of type int have no attribute upper().

7. What will be the output of the following Python code snippet?

```
x = 'abcd'
for i in range(len(x)):
    x[i].upper()
print (x)
```

a) abcd
b) ABCD
c) error
d) none of the mentioned

Answer: a

Explanation: Changes do not happen in-place, rather a new instance of the string is returned.

8. What will be the output of the following Python code snippet?

```
x = 'abcd'
for i in range(len(x)):
```

```
i[x].upper()
print (x)
a) abcd
b) ABCD
c) error
d) none of the mentioned
```

Answer: c

Explanation: Objects of type int aren't subscriptable. However, if the statement was `x[i]`, an error would not have been thrown.

9. What will be the output of the following Python code snippet?

```
x = 'abcd'
for i in range(len(x)):
    x = 'a'
    print(x)
a) a
b) abcd abcd abcd
c) a a a a
d) none of the mentioned
```

Answer: c

Explanation: `range()` is computed only at the time of entering the loop.

10. What will be the output of the following Python code snippet?

```
x = 'abcd'
for i in range(len(x)):
    print(x)
    x = 'a'
a) a
b) abcd abcd abcd abcd
c) a a a a
d) none of the mentioned
```

Answer: d

Explanation: `abcd a a a` is the output as `x` is modified only after 'abcd' has been printed once.

Python Questions and Answers – While and For Loops – 4

1. What will be the output of the following Python code?

```
x = 123
```

```
for i in x:
```

```
    print(i)
```

a) 1 2 3

b) 123

c) error

d) none of the mentioned

Answer: c

Explanation: Objects of type int are not iterable.

2. What will be the output of the following Python code?

```
d = {0: 'a', 1: 'b', 2: 'c'}
```

```
for i in d:
```

```
    print(i)
```

a) 0 1 2

b) a b c

2 c 1 b c) 0 a

d) none of the mentioned

Answer: a

Explanation: Loops over the keys of the dictionary.

3. What will be the output of the following Python code?

```
d = {0: 'a', 1: 'b', 2: 'c'}
```

```
for x, y in d:
```

```
    print(x, y)
```

a) 0 1 2

b) a b c

2 c 1 b c) 0 a

d) none of the mentioned

Answer: d

Explanation: Error, objects of type int aren't iterable.

4. What will be the output of the following Python code?

```
d = {0: 'a', 1: 'b', 2: 'c'}
```

```
for x, y in d.items():
```

```
    print(x, y)
```

a) 0 1 2

b) a b c

2 c 1 b c) 0 a

d) none of the mentioned

Answer: c

Explanation: Loops over key, value pairs.

5. What will be the output of the following Python code?

```
d = {0: 'a', 1: 'b', 2: 'c'}
```

```
for x in d.keys():
```

```
    print(d[x])
```

a) 0 1 2

b) a b c

2 c 1 b c) 0 a

d) none of the mentioned

Answer: b

Explanation: Loops over the keys and prints the values.

6. What will be the output of the following Python code?

```
d = {0: 'a', 1: 'b', 2: 'c'}
```

```
for x in d.values():
```

```
    print(x)
```

a) 0 1 2

b) a b c

2 c 1 b c) 0 a

d) none of the mentioned

Answer: b

Explanation: Loops over the values.

7. What will be the output of the following Python code?

```
d = {0: 'a', 1: 'b', 2: 'c'}
```

```
for x in d.values():
```

```
    print(d[x])
```

a) 0 1 2

b) a b c

2 c 1 b c) 0 a

d) none of the mentioned

Answer: d

Explanation: Causes a KeyError.

8. What will be the output of the following Python code?

```
d = {0, 1, 2}
```

```
for x in d.values():
```

```
    print(x)
```

a) 0 1 2

b) None None None

c) error

d) none of the mentioned

Answer: c

Explanation: Objects of type set have no attribute values.

9. What will be the output of the following Python code?

```
d = {0, 1, 2}
```

```
for x in d:
```

```
    print(x)
```

a) 0 1 2

b) {0, 1, 2} {0, 1, 2} {0, 1, 2}

c) error

d) none of the mentioned

Answer: a

Explanation: Loops over the elements of the set and prints them.

10. What will be the output of the following Python code?

```
d = {0, 1, 2}
```

```
for x in d:
```

```
    print(d.add(x))
```

a) 0 1 2

b) 0 1 2 0 1 2 0 1 2 ...

c) None None None

d) None of the mentioned

Answer: c

Explanation: Variable x takes the values 0, 1 and 2. set.add() returns None which is printed.

11. What will be the output of the following Python code?

```
for i in range(0):
```

```
    print(i)
```

a) 0

b) no output

c) error

d) none of the mentioned

Answer: b

Explanation: range(0) is empty.

Python Questions and Answers – While and For Loops – 5

1. What will be the output of the following Python code?

```
for i in range(2.0):
```

```
    print(i)
```

- a) 0.0 1.0
- b) 0 1
- c) error
- d) none of the mentioned

Answer: c

Explanation: Object of type float cannot be interpreted as an integer.

2. What will be the output of the following Python code?

```
for i in range(int(2.0)):
```

```
    print(i)
```

- a) 0.0 1.0
- b) 0 1
- c) error
- d) none of the mentioned

Answer: b

Explanation: range(int(2.0)) is the same as range(2).

3. What will be the output of the following Python code?

```
for i in range(float('inf')):
```

```
    print (i)
```

- a) 0.0 0.1 0.2 0.3 ...
- b) 0 1 2 3 ...
- c) 0.0 1.0 2.0 3.0 ...
- d) none of the mentioned

Answer: d

Explanation: Error, objects of type float cannot be interpreted as an integer.

4. What will be the output of the following Python code?

```
for i in range(int(float('inf'))):
```

```
    print (i)
```

- a) 0.0 0.1 0.2 0.3 ...
- b) 0 1 2 3 ...
- c) 0.0 1.0 2.0 3.0 ...
- d) none of the mentioned

Answer: d

Explanation: OverflowError, cannot convert float infinity to integer.

5. What will be the output of the following Python code snippet?
for i in [1, 2, 3, 4][::-1]:
 print (i)
a) 1 2 3 4
b) 4 3 2 1
c) error
d) none of the mentioned

Answer: b

Explanation: [::-1] reverses the list.

6. What will be the output of the following Python code snippet?
for i in ".join(reversed(list('abcd'))):
 print (i)
a) a b c d
b) d c b a
c) error
d) none of the mentioned

Answer: b

Explanation: ‘.join(reversed(list(‘abcd’))) reverses a string.

7. What will be the output of the following Python code snippet?
for i in 'abcd'[::-1]:
 print (i)
a) a b c d
b) d c b a
c) error
d) none of the mentioned

Answer: b

Explanation: [::-1] reverses the string.

8. What will be the output of the following Python code snippet?
for i in "":
 print (i)
a) None
b) (nothing is printed)
c) error
d) none of the mentioned

Answer: b

Explanation: The string does not have any character to loop over.

9. What will be the output of the following Python code snippet?
x = 2
for i in range(x):

```
x += 1
print (x)
```

a) 0 1 2 3 4 ...
b) 0 1
c) 3 4
d) 0 1 2 3

Answer: c

Explanation: Variable x is incremented and printed twice.

10. What will be the output of the following Python code snippet?

```
x = 2
for i in range(x):
    x -= 2
    print (x)
```

a) 0 1 2 3 4 ...
b) 0 -2
c) 0
d) error

Answer: b

Explanation: The loop is entered twice.

Python Questions and Answers – While and For Loops – 6

1. What will be the output of the following Python code?

```
for i in range(10):
```

```
    if i == 5:
```

```
        break
```

```
    else:
```

```
        print(i)
```

```
else:
```

```
    print("Here")
```

a) 0 1 2 3 4 Here

b) 0 1 2 3 4 5 Here

c) 0 1 2 3 4

d) 1 2 3 4 5

Answer: c

Explanation: The else part is executed if control doesn't break out of the loop.

2. What will be the output of the following Python code?

```
for i in range(5):
```

```
    if i == 5:
```

```
        break
```

```
    else:
```

```
        print(i)
```

```
else:
```

```
    print("Here")
```

a) 0 1 2 3 4 Here

b) 0 1 2 3 4 5 Here

c) 0 1 2 3 4

d) 1 2 3 4 5

Answer: a

Explanation: The else part is executed if control doesn't break out of the loop.

3. What will be the output of the following Python code?

```
x = (i for i in range(3))
```

```
for i in x:
```

```
    print(i)
```

a) 0 1 2

b) error

c) 0 1 2 0 1 2

d) none of the mentioned

Answer: a

Explanation: The first statement creates a generator object.

4. What will be the output of the following Python code?

```
x = (i for i in range(3))
for i in x:
    print(i)
for i in x:
    print(i)
a) 0 1 2
b) error
c) 0 1 2 0 1 2
d) none of the mentioned
```

Answer: a

Explanation: We can loop over a generator object only once.

5. What will be the output of the following Python code?

```
string = "my name is x"
for i in string:
    print (i, end=" ", )
a) m, y, , n, a, m, e, , i, s, , x,
b) m, y, , n, a, m, e, , i, s, , x
c) my, name, is, x,
d) error
```

Answer: a

Explanation: Variable i takes the value of one character at a time.

6. What will be the output of the following Python code?

```
string = "my name is x"
for i in string.split():
    print (i, end=" ", )
a) m, y, , n, a, m, e, , i, s, , x,
b) m, y, , n, a, m, e, , i, s, , x
c) my, name, is, x,
d) error
```

Answer: c

Explanation: Variable i takes the value of one word at a time.

7. What will be the output of the following Python code snippet?

```
a = [0, 1, 2, 3]
for a[-1] in a:
    print(a[-1])
a) 0 1 2 3
b) 0 1 2 2
c) 3 3 3 3
d) error
```

Answer: b

Explanation: The value of a[-1] changes in each iteration.

8. What will be the output of the following Python code snippet?

```
a = [0, 1, 2, 3]
```

```
for a[0] in a:
```

```
    print(a[0])
```

a) 0 1 2 3

b) 0 1 2 2

c) 3 3 3 3

d) error

Answer: a

Explanation: The value of a[0] changes in each iteration. Since the first value that it takes is itself, there is no visible error in the current example.

9. What will be the output of the following Python code snippet?

```
a = [0, 1, 2, 3]
```

```
i = -2
```

```
for i not in a:
```

```
    print(i)
```

```
    i += 1
```

a) -2 -1

b) 0

c) error

d) none of the mentioned

Answer: c

Explanation: SyntaxError, not in isn't allowed in for loops.

10. What will be the output of the following Python code snippet?

```
string = "my name is x"
```

```
for i in ''.join(string.split()):
```

```
    print (i, end=" ",)
```

a) m, y, , n, a, m, e, , i, s, , x,

b) m, y, , n, a, m, e, , i, s, , x

c) my, name, is, x,

d) error

Answer: a

Explanation: Variable i takes the value of one character at a time.

CHAPTER-2 - PYTHON REVISION TOUR-2 (STRING, LIST, TUPLE, DICTIONARY, MODULE)

MULTIPLE CHOICE QUESTIONS:

1. What will be the output of the following Python code?

```
print("abbcabcacabb".count('abb', 2, 11))
```

2

0

1

error

Correct answer

0

2. What will be the output of the following Python code snippet?

```
print('2.3'.isnumeric())
```

True

False

None

Error

Correct answer

False

3. What will be the output of the following Python code?

```
print('*', "qrst".center(6), '*', sep="")
```

qrst

qrst

qrst

qrst

Correct answer

qrst

4. What will be the output of the following Python code?

```
print('xy10'.isalnum())
```

True

False

None

Error

5. What will be the output of the following Python code snippet?


```
print('Xy!4'.swapcase())
```

XY!@

xy12

xY!4

xY1@

Correct answer

xY!4

6. What will be the output of the following Python code?

```
print("abbcabababb".count('bb'))
```

2

0

error

none of the mentioned

7. What will be the output of the following Python statement?

```
"pqrs"[2:]
```

p

pq

rs

sr

Correct answer

rs

8. What will be the output of the following Python code snippet?

```
print('mnopqr22'.replace('op', '22'))
```

mn22qr

mn22qr22

mnopqr22

none of the mentioned

Correct answer

mn22qr22

9. What will be the output of the following Python code snippet?

```
print('The sum of {0} and {1} is {2}'.format(5, 12, 17))
```

Error

The sum of 5 and 12 is 17

The sum of 0 and 1 is 2

None of the mentioned

10. What will be the output of the following Python code snippet?

```
print('Python Exercises'.istitle())
```

True
False
None
Error

Correct answer

True

11. What will be the output of the following Python code snippet?

```
print('+88'.zfill(4))
```

0+88
0088
+088
++88

Correct answer

+088

12. Which of the following statement prints hello\example\test.txt?

```
print("hello\example\test.txt")  
print("hello\\example\\test.txt")  
print("hello\"example\"test.txt")  
print("hello\"example\"test.txt")
```

Correct answer

print("hello\\example\\test.txt")

13. What will be the output of the following Python code snippet?

```
print('pq\nrs\ntv'.splitlines())
```

['pq', 'rs', 'tv']
['pq\n', 'rs\n', 'tv\n']
['pq\n', 'rs\n', 'tv']
['pq', 'rs', 'tv\n']

Correct answer

['pq', 'rs', 'tv']

14. What will be the output of the following Python code snippet?

```
print('pq rs tu'.title())
```

Pq rs tu
Pq rs tU

Pq Rs Tu

None of the mentioned

Correct answer

Pq Rs Tu

15. `print(0xA + 0xB + 0xC):`

0xA0xB0xC

Error

0x22

33

Correct answer

33

16. What will be the output of the following Python code snippet?

```
print('abbabbababaab'.replace('ab', '10', 100))
```

10b10b1010a10

abbabbababaab

none of the mentioned

error

Correct answer

10b10b1010a10

17. To concatenate two strings to a third what statements are applicable?

`s3 = s1 . s2`

`s3 = s1.add(s2)`

`s3 = s1.__add__(s2)`

`s3 = s1 s2`

18. What will be the output of the following Python code?

```
example="waterworld"
example[::-1].startswith("d")
```

terwarldwo

True

-1

None

19. What will be the output of the following Python code?

```
example = "beautiful world"
example[3] = 'b'
print example
```

snow
beautiful world
Error
beabtiful world
Correct answer
Error

20. What will be the output of the following Python code snippet?

```
print('pqtv'.partition('rs'))
```

('pqtv')
('pqtv', 'rs', '')
('pqtv', '', '')
error

21. What will be the output of the following Python code?

```
print("Python {0!r} and {0!s}".format('fbb', 'bin'))
```

Python fbb and fbb
Python 'fbb' and fbb
Python fbb and 'bin'
Error
Correct answer
Python 'fbb' and fbb

22. What will be the output of the following Python code snippet?

```
print('mnopqropstop'.split('op'))
```

['mn', 'qr', 'st']
['mn', 'qr', 'st', '']
('mn', 'qr', 'st')
('mn', 'qr', 'st', '')
Correct answer
['mn', 'qr', 'st', '']

23. What will be the output of the "hello" + 1 + 2 + 3?

hello123
hello
Error
hello6

24. What will be the output of the following Python code snippet?

```
print("".isdigit())
```

True
False
None
Error

25. What will be the output of the following Python code?

```
print('xy'.isalpha())
```

True
False
None
Error
Correct answer
True

26. What will be the output of the following Python code?

```
print('wxyz'.partition('yz'))
```

error
('wx', 'yz')
('wx', 'yz', '')
none of the mentioned

Correct answer
('wx', 'yz', '')

27. What will be the output of the following Python code snippet?

```
print('pq rs-tu'.title())
```

Pq rs-tu
Pq Rs-tu
Pq Rs-Tu

28. None of the mentioned

29. What will be the output of the following Python code snippet?

```
print(''.isspace())
```

True
False
None
Error

30. What will be the output of the following Python code snippet?

```
print('__faa__'.isidentifier())
```

True

False

None

Error

Correct answer

True

31. What will be the output of the following Python code snippet?

```
print('str1'.isidentifier())
```

True

False

None

Error

Correct answer

True

32. What will be the output of the following Python code?

```
print("abbcabcbacabb".count('abb', -10, -1))
```

2

0

1

error

Correct answer

0

33. What will be the output of the following Python code snippet?

```
print('mnopqropstop'.split('op', 0))
```

['mnopqropstop']

'mnopqropstop'

error

none of the mentioned

Correct answer

['mnopqropstop']

34. What will be the output of the following Python code snippet?

```
print('{:,}'.format(2223334445))
```

2,223,334,445

222,333,444,5

223334445

Error

Correct answer

2,223,334,445

35. What will be the output of the following Python code?

```
print('*', "qrstv".center(7), '*')
```

qrstv

qrstv

qrstv

qrstv

Correct answer

qrstv

36. What is "Hello".replace("l", "e")?

Heeeo

Heelo

Heleo

None

Correct answer

Heeeo

37. What will be the output of the following Python code?

```
str1="redrose"  
str1[::-1]
```

esorder

red

rose

redrose

Correct answer

esorder

38. What will be the output of the following Python code?

```
print('x'.maketrans('XYZ', '234'))
```

{88: 50, 89: 51, 90: 52}

{80: 50, 81: 51, 82: 52}

432

234

Correct answer

{88: 50, 89: 51, 90: 52}

39. What will be the output of the following Python code?


```
print("pqrstv".center(7, '1'))
```

1pqrstv

pqrstv1

pqrstv

error

Correct answer

1pqrstv

40. What will be the output of the following Python code snippet?

```
print('The sum of {0:b} and {1:x} is {2:o}'.format(2, 12, 14))
```

The sum of 2 and 12 is 14

The sum of 10 and c is 16

The sum of 10 and a is c

Error

41. What will be the output of the following Python code?

```
max("who are you")
```

error

u

t

y

Correct answer

y

42. What will be the output of the following Python statement?

```
print('x\95\x98')
```

Error

95

98

Option 2

x\95~

\x95\x98

Correct answer

x\95~

43. What will be the output of the following Python code?

```
print('Python!2@#Tutorial'.istitle())
```

True

False

None

error

Correct answer

True

44. What is the default value of encoding in encode()?

ascii

qwerty

utf-8

utf-16

Correct answer

utf-8

45. What will be the output of the following Python code?

```
print("mnopqr".center(10, '12'))
```

12mnopqr12

mnopqr1212

1212mnopqr

error

Correct answer

error

46. What will be the output of the following Python code?

```
print('2Xy@'.lower())
```

x

2xy@

xy

y

47. What will be the output of the following Python code?

```
print("""  
\tboo""").lstrip()
```

\tboo

boo

\boo

none of the mentioned

Correct answer

boo

48. What will be the output of the following Python code?

```
print('*', "mnopqr".center(7), '*', sep="")
```

mnopqr
mnopqr
mnopqr
mnopqr

Correct answer

mnopqr

49. What will be the output of the following Python code?

```
print (r"\nworld")
```

a new line and world
\nworld
the letter r and then world
error

Correct answer

\nworld

50. What will be the output of the following Python code?

```
print('{0:.2%}'.format(2/5))
```

0.33
40.40%
40.00%
42.00%

Correct answer

40.00%

51. What will be the output of the following Python code snippet?

```
print('2@ f'.isprintable())
```

True
False
None
Error

Correct answer

True

52. To return the length of string s what command do we execute?

s.__len__()
len(s)
size(s)
s.size()

Correct answer

s.__len__()

53. What will be the output of the following Python statement?

```
"x"+"yz"
```

x

yz

yzx

xyz

Correct answer

xyz

54. What will be the output of the following Python code snippet?

```
print('0pq'.isdigit())
```

True

False

None

Error

55. What will be the output of the following Python code?

```
print("mn\top\tqr".expandtabs())
```

mn op qr

mnopqr

mn\top\tqr

mn op qr

Correct answer

mn op qr

56. What will be the output of the following Python code snippet?

```
print('xyz'.islower())
```

True

False

None

Error

Correct answer

True

57. Given a string example="hello" what is the output of example.count('l')?

2

1

None

0

Correct answer

2

58. What will be the output of the following Python code?

```
print("pqrpqrprpq".endswith("pq", 0, 2))
```

0

1

True

False

Correct answer

False

59. Say s="hello" what will be the return value of type(s)?

int

bool

str

String

60. What will be the output of the following Python code snippet?

```
print('{:,}'.format('3334445556'))
```

3,334,445,556

333,444,555,6

3334445556

Error

Correct answer

Error

61. What will be the output of the following Python code?

```
print('x Y'.isalpha())
```

True

False

None

Error

Correct answer

False

62. What will be the output of the following Python code?

```
print("mnopqr".center(0))
```

op
mnopqr
error
none of the mentioned

Correct answer

mnopqr

63.To check whether string s1 contains another string s2, use _____

s1.__contains__(s2)
s2 in s1
s1.contains(s2)
si.in(s2)

Correct answer

s1.__contains__(s2)

64.What will be the output of the following Python code?

```
print("Python {0} and {1}".format('faa', 'bin'))
```

Python faa and bin

Python ('faa', 'bin') and ('faa', 'bin')

Error

None of the mentioned

Correct answer

Error

65.What will be the output of the following Python code?

```
print("pqqrpqrpqq".count('pqq', 0, 100))
```

2

0

1

error

Correct answer

2

66.Suppose s is "\t\tWorld\n", what is s.strip()?

\t\tworld\n

\t\tWorld\n

\t\tWORLD\n

World

Correct answer
World

67. What will be the output of the following Python code snippet?

```
print('pqrtvs'.replace('rs', '10'))
```

pq1tvo
pqrtvs
pq1tvs

pq12ts2

Correct answer
pqrtvs

68. What will be the output of the following Python code snippet?

```
print('xy'.zfill(4))
```

00xy
x00y

xy00
x0y0

Correct answer
00xy

69. What will be the output of the following Python code snippet?

```
print('pqtv'.replace('rs', '10'))
```

pqtv
10
error

none of the mentioned

Correct answer
pqtv

70. What will be the output of the following Python code?

```
example = "python"  
example.rfind("n")
```

4
3
5
0

Correct answer
5

71.What will be the output of the following Python code?

```
print("pqr XYZ".capitalize())
```

pqr xyz
PQR XYZ
Pqr xyz

Pqr Xyz

72.What will be the output of the following Python code snippet?

```
print('mnopqropstop'.split('op', 2))
```

['mn', 'qr', 'stop']
['mn', 'qropstop']
['qropstop', 'mn']
none of the mentioned

Correct answer

['mn', 'qr', 'stop']

73.What will be the output of the following Python code snippet?

```
print('pqrs'.translate({'p': '2', 'q': '3', 'r': '4', 's': '5'}))
```

pqrs
2345
error
none of the mentioned

Correct answer

pqrs

74.What will be the output of the following Python code?

```
print("Python {} and {}".format('fbb', 'bin'))
```

Python { } and { }
Python fbb and bin
Error

Python and

Correct answer

Python fbb and bin

75.What will be the output of the following Python code snippet?

```
print('wxyz'.translate('w'.maketrans('wxy', 'xyz')))
```

xyzz
wxyz

xzyz
zxyz

Correct answer

xyzz

76. What will be the output of the following Python code?

```
print("S", end = ' ')
```

```
print("R", end = ' ')
```

```
print("Q", end = ' ')
```

```
print("P", end = ' ')
```

SRQP

S R Q P

P Q R S

p q r s

Correct answer

S R Q P

77. What will be the output of the following Python code snippet?

```
print('rs'.partition('rs'))
```

('rs')

("")

('rs', "", "")

("", 'rs', "")

Correct answer

('', 'rs', '')

78. What will be the output of the following Python code?

```
print('{0:.2}'.format(2/3))
```

0.677777

0.67

0.6777:.2

Error

Correct answer

0.67

79. What will be the output of the following Python code?

```
class Name:
    def __init__(self, firstName, mi, lastName):
        self.firstName = firstName
        self.mi = mi
        self.lastName = lastName

firstName = "Robin"
name = Name(firstName, 'F', "Smith")
firstName = "Jack"
name.lastName = "Roy"
print(name.firstName, name.lastName)
```

Jack Roy

Robin Roy

Jack Smith

Robin Smith

Correct answer

Robin Roy

80. What will be the output of the following Python code snippet?

```
print('mnopqropstop'.split('op', -1))
```

['mn', 'qr', 'st']

['mn', 'qr', 'st', '']

('mn', 'qr', 'st',)

['mn', 'qr', 'st']

81. What will be the output of the following Python code snippet?

```
print('pen'.isidentifier())
```

True

False

None

Error

Correct answer

True

82. What will be the output of the following Python code?

```
print("pqrstv".center())
```

rs
pqrstv

error
none of the mentioned

Correct answer

error

83. What will be the output of the following Python statement?

```
print('black' 'berry')
```

Error

Output equivalent to print 'black\berry'

blackberry

black berry

Correct answer

blackberry

84. What will be the output of the following Python code?

```
print("Python {name1} and {name2}".format(name1='faa', name2='bin'))
```

Python faa and bin

Python {name1} and {name2}

Error

Python and

Correct answer

Python faa and bin

85. What will be the output of the following Python code?

```
print("abbcabcacabb".count('bb', 2))
```

2

0

1

none of the mentioned

Correct answer

1

86. What will be the output of the following Python code?

```
print('zyx'.maketrans('xyz', '234'))
```

{120: 50, 121: 51, 122: 52}

{97: 49, 98: 50, 99: 51}

{100: 50, 101: 51, 102: 52}

234

Correct answer

{120: 50, 121: 51, 122: 52}

87. What will be the output of the following Python code?

```
print("efghij".find("gh") == "gh" in "efghij")
```

True

False

Error

None of the mentioned

88. Suppose x is 6 and y is 4, x + y is same as _____

x.__add__(y)

x.__add__(y)

x.__Add(y)

x.__ADD(y)

Correct answer

x.__add__(y)

89. What arithmetic operators cannot be used with strings?

+

-

All of the mentioned

Correct answer

-

90. What will be the output of the following Python code snippet?

```
print('{:}$'.format(2223334445))
```

2,223,334,445

222,333,444,5

2223334445

Error

91. What will be the output of the following Python code?

```
print("pqqrprprpq".endswith("pqq"))
```

1
True

3
2

92. What function do you use to read a string?

```
input("Enter a string")  
eval(input("Enter a string"))  
enter("Enter a string")  
eval(enter("Enter a string"))
```

Correct answer
input("Enter a string")

93. What will be the output of the following Python code snippet?

```
print('{:}'.format(3334445556))
```

3,334,445,556
333,444,555,6
3334445556
Error

94. What will be the output of the following Python code snippet?

```
print('PythonExercises'.istitle())
```

True
False
None
Error

95. What will be the output of the following Python code snippet?

```
print('15'.isnumeric())
```

True
False
None
Error

Correct answer
True

96. What will be the output of the following Python code?

```
class X:
    def __init__(self, param):
        self.o1 = param

class Y(X):
    def __init__(self, param):
        self.o2 = param

obj = Y(22)
print "%d %d" % (obj.o1, obj.o2)
```

None None

None 22

22 None

Error is generated

Correct answer

Error is generated

97. What will be the output of the following Python code?

```
example = "hello world"
print("%s" % example[4:7])
```

w

world

he

rl

98. What will be the output of the following Python statement?

```
chr(ord('P'))
```

P

p

Error

b

Correct answer

P

99. What will be the output of the following Python code snippet?

```
print('\f'.isspace())
```

True

False

None

Error

Correct answer

True

100. What will be the output of the following Python code?

```
print("pqrstv".center(7, 1))
```

1pqrstv
pqrstv1
pqrstv
error

101. What will be the output of the following Python code?

```
class test:  
    def __init__(self, id):  
        self.id = str(id)  
        id="144"  
  
x = tester(12)  
print(x.id)
```

224
Error
12
None

Correct answer

12

102. What will be the output of the following Python code?

```
print("pq\trs\ttv".expandtabs('+'))
```

pq+rs+tv
pq+++++++rs+++++++tv
pq rs tv
None of the mentioned

Correct answer

None of the mentioned

103. What will be the output of the following Python code?

```
print('mnopqrstuv'.partition('op'))
```

('mn', 'op', 'qrstuv')
('mn', 'op', 'qrstuv')
('mnopqr', 'st', 'uv')
error

104. What will be the output of the following Python code?

```
print("xyxyxyxy".find("x"))
```

4

0

Error

True

Correct answer

0

105. What will be the output of the following Python code snippet?

```
print('y@ 2'.islower())
```

True

False

None

Error

Correct answer

True

106. If a class defines the `__str__(self)` method, for an object `obj` for the class, you can use which command to invoke the `__str__` method.

`obj.__str__()`

`str(obj)`

`print obj`

all of the mentioned

Correct answer

all of the mentioned

107. What will be the output of the following Python statement?

```
print(chr(ord('p')+1))
```

a

q

r

Q

Correct answer

q

108. What will be the output of the following Python code?

```
print("Python {1} and {0}".format('bin', 'fab'))
```

Python bin and fab

Python fab and bin

Error

None of the mentioned

Correct answer
Python fab and bin

109. What will be the output of the following Python code?

```
str1 = 'python'  
str2 = ','  
str3 = 'string'  
str1[-1:]
```

nthopy

python

h

n

Correct answer

n

110. What will be the output of the following Python statement?(python 3.xx)

```
print(format("Python", "10s"), end = '#')  
print(format(100, "4d"), end = '#')  
print(format(900.666, "3.2f"))
```

Python# 100#900.66

Python#100# 900.67

Python # 100#900.67

Python#100#900.67

Correct answer

Python # 100#900.67

111. What will be the output of the following Python code?

```
print("mnopqr".find("op"))
```

True

2

3

None of the mentioned

Correct answer

2

112. What will be the output of the following Python code?

```
print('pqrstv'.partition('rs'))
```

('pq', 'tv')

('pqtv')

('pq', 'rs', 'tv')

2

113. What will be the output of the following Python code?

```
print('pqqrppqpqq'.lstrip('pqq'))
```

error
rppqpqq
r
pqr

Correct answer
rppqpqq

114. What will be the output of the following Python code?

```
example = "world"  
example.find("d")
```

Error
-1
4
0

Correct answer
4

115. What will be the output of the following Python code?

```
print("xyz. PQR".capitalize())
```

xyz. PQR
XYZ. PQR
Xyz. pqr

Xyz. Pqr

116. What will be the output of the following Python code?

```
print("Python {0[0]} and {0[1]}".format(('fff', 'bbb')))
```

Python fff and bbb
Python ('fff', 'bbb') and ('fff', 'bbb')
Error
None of the mentioned

Correct answer
Python fff and bbb

117. The format function, when applied on a string returns _____

Error

int
bool
str

118. What will be the output of the following Python code?

```
print('pqppqqrppq'.lstrip('pq'))
```

rppq
rq
rppqrqrp

none of the mentioned

Correct answer

rppq

119. What will be the output of the following Python code?

```
print('xyz'.encode())
```

xyz
'xyz'
b'xyz'
h'xyz'

Correct answer

b'xyz'

120. What will be the output of the following Python code?

```
print("Python {name1} and {name2}".format('fff', 'bin'))
```

Python fff and bin
Python {name1} and {name2}
Error
Python and

Correct answer

Error

121. What will be the output of the following Python code?

```
print("pq\trs\ttu".expandtabs(4))
```

pq rs tu
pqrstu
pq\trs\ttu

pq rs tu

Correct answer

pq rs tu

122. What will be the output of the following Python code?

```
print("Python {0} and {1}".format('fff', 'bin'))
```

Python fff and bin

Python {0} and {1} fff bin

Error

Python 0 and 1

Correct answer

Python fff and bin

123. What will be the output of the following Python code?

```
print("pqqrprprpq".count('qq', 1))
```

2

0

1

none of the mentioned

Correct answer

2

124. What will be the output of the following Python code?

```
print('xy,14'.isalnum())
```

True

False

None

Error

Correct answer

False

125. What will be the output of the following Python code snippet?

```
print('abbabbababaab'.replace('ab', '10', 0))
```

abbabbababaab

10b10b1010a10

12babbababaab

babbababaab12

Correct answer

abbabbababaab

126. What will be displayed by `print(ord('b') - ord('a'));`?

1

0

-1

2

Correct answer

1

127. Suppose `y` is 345.3546, what is `format(y, "10.3f")` (_ indicates space).

__345.355

___345.355

____345.355

_____345.354

Correct answer

___345.355

129. What will be the output of the following Python code?

```
x={f: 'X' + str(f) for f in range(5)}  
print(x)
```

An exception is thrown

{0: 'X0', 1: 'X1', 2: 'X2', 3: 'X3', 4: 'X4'}

{0: 'X', 1: 'X', 2: 'X', 3: 'X', 4: 'X'}

{0: '0', 1: '1', 2: '2', 3: '3', 4: '4'}

Correct answer

{0: 'X0', 1: 'X1', 2: 'X2', 3: 'X3', 4: 'X4'}

130. What will be the output of the following Python code snippet?

```
x = {"jack":40, "henry":45}  
print("jack" in x)
```

True

False

None

Error

Correct answer

True

131. What will be the output of the following Python code?

```
x={"x":1,"y":2,"z":3}  
y=dict(zip(x.values(),x.keys()))  
print(y)
```

{1: 'x', 2: 'y', 3: 'z'}

An exception is thrown

{'x': 'y', 'z': 'z'}

{1: 'x', 2: 'y', 3: 'z'}

Correct answer

{1: 'x', 2: 'y', 3: 'z'}

132. What will be the output of the following Python code snippet?

```
import collections
x=collections.Counter([3,3,4,4,4,5])
y=collections.Counter([3,3,4,5,5])
print(x|y)
```

Counter({4: 4, 3: 3, 5: 3})

Counter({4: 3, 3: 2, 5: 2})

Counter({4: 3})

Counter({5: 3})

Correct answer

Counter({4: 3, 3: 2, 5: 2})

133. What will be the output of the following Python code snippet?

```
x={}
x['x']=2
x['y']=[3,4,5]
print(x)
```

{'x': 2, 'y': [3, 4, 5]}

Exception is thrown

{'x': [2], 'y': 3}

{'y': [2], 'x': [3]}

134. What will be the output of the following Python code snippet?

```
t = {1:'J', 2:'K', 3:'L'}
t = {}
print(len(t))
```

0

None

An exception is thrown

3

135. What will be the output of the following Python code?

```
f={}
print(f.fromkeys([2,3,4],"check"))
```

Syntax error

“check”

```
{2: 'check', 3: 'check', 4: 'check'}  
{2:None,3:None,4:None}
```

Correct answer

```
{2: 'check', 3: 'check', 4: 'check'}
```

136. What will be the output of the following Python code?

```
x={1:"P",2:"Q",3:"R"}  
x.clear()  
print(x)
```

None

```
{ None:None, None:None, None:None}  
{1:None, 2:None, 3:None}  
{ }
```

Correct answer

```
{ }
```

137. If b is a dictionary, what does any(b) do?

Returns True if any key of the dictionary is true
Returns False if dictionary is empty
Returns True if all keys of the dictionary are true

Method any() doesn't exist for dictionary

Correct answer

Returns True if any key of the dictionary is true

138. What will be the output of the following Python code snippet?

```
import collections  
x=collections.Counter([2,2,3,4])  
y=collections.Counter([2,3,3,4,4,4])  
print(x&y)
```

Counter({2: 15, 4: 1, 3: 1})

Counter({2: 1, 3: 1, 4: 1})

Counter({4: 2})

Counter({4: 1})

Correct answer

Counter({2: 1, 3: 1, 4: 1})

139. What will be the output of the following Python code snippet?

```
x = {}  
x[1] = 1  
x['1'] = 2  
x[1]=x[1]+1  
count = 0  
for f in x:  
    count += x[f]  
print(count)
```

1
2
4

140. Error, the keys can't be a mixture of letters and numbers

141. What will be the output of the following Python code snippet?

```
x = {}  
x[2] = 2  
x['2'] = 3  
x[2.0]=5  
count = 0  
for f in x:  
    count += x[f]  
print(count)
```

8

6

5

An exception is thrown

142. What will be the output of the following Python code snippet?

```
x={1:"P",2:"Q",3:"R"}  
del x
```

method del doesn't exist for the dictionary

del deletes the values in the dictionary

del deletes the entire dictionary

del deletes the keys in the dictionary

Correct answer

del deletes the entire dictionary

143. What will be the output of the following Python code snippet?

```
import collections
y=collections.Counter([3,3,4,5,5,5])
print(y.most_common(2))
```

```
Counter({5: 4, 4: 4, 3: 2})
{3:2}
[(5, 3), (3, 2)]
{4:3}
```

Correct answer

[(5, 3), (3, 2)]

144. What will be the output of the following Python code?

```
count={}
count[(2,3,5)] = 6
count[(5,3,2)] = 8
count[(2,3)] = 7
count[(5,3,2)] = 3
tot = 0
for f in count:
    tot=tot+count[f]
print(len(count)+tot)
```

25

17

19

Tuples can't be made keys of a dictionary

Correct answer

19

145. What will be the output of the following Python code?

```
x={1:"P",2:"Q",3:"R"}
y={4:"S",5:"T"}
x.update(y)
print(x)
```

{1: 'P', 2: 'Q', 3: 'R', 4: 'S', 5: 'T'}

Method update() doesn't exist for dictionaries

{1: 'P', 2: 'Q', 3: 'R'}

{4: 'S', 5: 'T'}

146. What will be the output of the following Python code snippet?

```
numbers = {}
letters = {}
comb = {}
numbers[2] = 90
numbers[3] = 9
letters[5] = 'A'
comb['Numbers'] = numbers
comb['Letters'] = letters
print(comb)
```

Error, dictionary in a dictionary can't exist

'Numbers': {2: 90, 3: 9}

{'Numbers': {2: 90, 3: 9}, 'Letters': {5: 'A'}}

{'Numbers': {2: 90}, 'Letters': {5: 'A'}}

147. What will be the output of the following Python code?

```
x={}
x[3]=2
x[2]=[3,4,5]
print(x[2][2])
```

[3,4,5]

5

3

An exception is thrown

148. What will be the output of the following Python code snippet?

```
import collections
x=collections.Counter([2,2,3,4,4,5,5,5])
print(x)
```

{2,3,4,5}

Counter({5: 4, 3: 2})


```
Counter({5: 3, 2: 2, 4: 2, 3: 1})  
{5: 3, 2: 3, 3: 4, 3: 2}
```

Correct answer

Counter({5: 3, 2: 2, 4: 2, 3: 1})

149. What will be the output of the following Python code?

```
f=dict()  
f[1]
```

An exception is thrown since the dictionary is empty
, ,

1

Error

Correct answer

Error

150. What will be the output of the following Python code snippet?

```
f={1:"X",2:"Y",3:"Z"}  
print(f.setdefault(3))
```

```
{1: 'X', 2: 'Y', 3: 'Z'}
```

Z

```
{1: 3, 2: 3, 3: 3}
```

No method called setdefault() exists for dictionary

Correct answer

Z

151. Which of the following is not a declaration of the dictionary?

```
{1: 'A', 2: 'B'}
```

```
dict([[1,"A"],[2,"B"]])
```

```
{1,"A",2"B"}
```

```
{ }
```

Correct answer

{1,"A",2"B"}

1. Suppose x = {"jack":30, "henry":35}. To obtain the number of entries in dictionary which command do we use?

```
x.size()
```

```
len(x)
```

```
size(x)
```


x.len()

Correct answer

len(x)

152. What will be the output of the following Python code?

```
x={2:6,3:4,4:5}
x.pop(3)
print(x)
```

{2: 6}

{2: 6, 4: 5}

Error, syntax error for pop() method

{2: 6, 3: 4}

Correct answer

{2: 6, 4: 5}

153. What will be the output of the following Python code snippet?

```
x1 = {"jack":30, "john":35}
x2 = {"jack":355, "john":35}
print(x1 == x2)
```

True

False

None

Error

154. Suppose x = {"jack":30, "henry":35}, to delete the entry for "jack" what command do we use?

x.delete("jack":30)

x.delete("jack")

del x["jack"]

del x("jack":30)

Correct answer

del x["jack"]

155. Which of the statements about dictionary values is false?

More than one key can have the same value

The values of the dictionary can be accessed as dict[key]

Values of a dictionary must be unique

Values of a dictionary can be a mixture of letters and numbers

Correct answer

Values of a dictionary must be unique

156. What will be the output of the following Python code?

```
x={'Y':3,'X':5,'Z':7}
print(sorted(x))
```

['X', 'Y', 'Z']
['Y', 'Z', 'X']
[3,5,7]
[7,5,3]

Correct answer

['X', 'Y', 'Z']

157. What will be the output of the following Python code snippet?

```
f={1:"P",2:"Q",3:"R"}
f.setdefault(4,"S")
print(f)
```

{1: 'P', 2: 'Q', 3: 'R', 4: 'S'}
Error
None

[1,2,3,4]

Correct answer

{1: 'P', 2: 'Q', 3: 'R', 4: 'S'}

158. What will be the output of the following Python code?

```
x={1:"P",2:"Q",3:"R"}
y=x.copy()
y[2]="S"
print(x)
```

{1: 'P', 2: 'Q', 3: 'R'}

{1: 'P', 2: 'S', 3: 'R'}

Error, copy() method doesn't exist for dictionaries
"None" is printed

159. What will be the output of the following Python code snippet?

```
x1 = {"jack":30, "john":35}
x2 = {"jack":355, "john":35}
print(x1 > x2)
```

True

False

Error

None

Correct answer

Error

160. What will be the output of the following Python code?

```
f={}
print(all(f))
```

{ }

False

True

An exception is thrown

Correct answer

True

161. What will be the output of the following Python code?

```
import collections
f=dict()
f=collections.defaultdict(lambda: 7)
print(f[4])
```

4

0

7

An exception is thrown

Correct answer

7

162. What will be the output of the following Python code?

```
x={f: f*f for f in range(5)}
print(x)
```

{0: 0, 1: 1, 2: 4, 3: 9, 4: 16}

{0: 0, 1: 1, 4: 4, 9: 9, 4: 16}

{0: 0, 1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

Dictionary comprehension doesn't exist

163. What will be the output of the following Python code?

```
x={1:"P",2:"Q",3:"R"}  
print(x.get(7,6))
```

Error, invalid syntax

P

7

6

Correct answer

6

164. Which of the following statements create a dictionary?

d = { }

d = { "jack":30, "peter":35 }

d = { 30:"jack", 35:"peter" }

All of the mentioned

Correct answer

All of the mentioned

165. What will be the output of the following Python code?

```
import collections  
f=collections.OrderedDict((str(p),p) for p in range(3))  
print(f)
```

{'2':2, '0':0, '1':1}

OrderedDict([('0', 0), ('1', 1), ('2', 2)])

An exception is thrown

..

Correct answer

OrderedDict([('0', 0), ('1', 1), ('2', 2)])

166. Which of these about a dictionary is false?

The values of a dictionary can be accessed using keys

The keys of a dictionary can be accessed using values

Dictionaries aren't ordered

Dictionaries are mutable

Correct answer

The keys of a dictionary can be accessed using values

167. What will be the output of the following Python code snippet?

```
total={}
def insert(items):
    if items in total:
        total[items] += 1
    else:
        total[items] = 1
insert('Mango')
insert('Pen')
insert('Mango')
print (len(total))
```

3

2

1

0

Correct answer

2

168. What will be the output of the following Python code snippet?

```
f = {"peter":50, "henry":55}
print(f["peter"])
```

55

50

peter

henry

Correct answer

50

169. What will be the output of the following Python code?

```
x={2:6,3:4,4:5}
print(x.pop(4,9))
```

3

5

4

Too many arguments for pop() method

Correct answer

5

170. What will be the output of the following Python code?

```
import collections
x=dict()
x=collections.defaultdict(int)
print(x[1])
```

1

0

An exception is thrown

‘ ‘

If a is a dictionary with some key-value pairs, what does a.popitem() do?

Removes an arbitrary element

Removes all the key-value pairs

Removes the key-value pair for the key given as an argument

Invalid method for dictionary

Correct answer

Removes an arbitrary element

171. What will be the output of the following Python code snippet?

```
t = {1:'J', 2:'K', 3:'L'}
del t[2]
t[2] = 'M'
del t[3]
print(len(t))
```

Error as the key-value pair of 1:'A' is already deleted

0

2

1

172. What will be the output of the following Python code snippet?

```
f = {"jack":30, "john":35}
print(list(f.keys()))
```

```
[{"jack":30, "john":35}
['jack', 'john']
("jack", "john")
({"jack":30, "john":35})
```

Correct answer

['jack', 'john']

173. What will be the output of the following Python code snippet?

```
d = {"jack":30, "henry":35}
print(d)
```

"jack", 30, 35, and "henry"
{'jack': 30, 'henry': 35}
"jack" and "henry"
30 and 35

Correct answer

{'jack': 30, 'henry': 35}

174. What will be the output of the following Python code snippet?

```
d={1:"X",2:"Y",3:"Z"}
for a,b in d.items():
    print(a,b,end=" ")
```

1 X 2 Y 3 Z
1 2 3
X Y Z

1:"X" 2:"Y" 3:"Z"

Correct answer

1 X 2 Y 3 Z

175. Which of the following isn't true about dictionary keys?

More than one key isn't allowed

Keys must be immutable

Keys must be integers

When duplicate keys encountered, the last assignment wins

Correct answer

Keys must be integers

176. What will be the output of the following Python code snippet?


```
F={1:"X",2:"Y",3:"Z"}  
print(F.get(1,4))
```

1
4
X

Invalid syntax for get method

177. What will be the output of the following Python code?

```
f={1:"X",2:"Y",3:"Z"}  
for i in f:  
    print(i,end=" ")
```

1 2 3
'X' 'Y' 'Z'
1 'X' 2 'Y' 3 'Z'

Error, it should be: for i in a.items():

Correct answer

1 2 3

178. What will be the output of the following Python code?

```
x={1:"P",2:"Q",3:"R"}  
print(x.items())
```

dict_items([(1, 'P'), (2, 'Q'), (3, 'R')])
Syntax error

dict_items([(1,2,3)])
dict_items([('P'), ('Q'), ('R')])

Correct answer

dict_items([(1, 'P'), (2, 'Q'), (3, 'R')])

180. Let list1 = [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.extend([34, 5])?

[3, 4, 5, 20, 5, 25, 1, 3, 34, 5]

[1, 3, 3, 4, 5, 5, 20, 25, 34, 5]

[25, 20, 5, 5, 4, 3, 3, 1, 34, 5]

[1, 3, 4, 5, 20, 5, 25, 3, 34, 5]

[3, 1, 25, 5, 20, 5, 4, 3, 34, 5]

Correct answer

[3, 4, 5, 20, 5, 25, 1, 3, 34, 5]

181. Let list1 = [1, 3, 2, 4, 5, 2, 1, 0], What is list1[-1]?

3

5

1

0

Correct answer

0

182. Let list1 = [0.5 a for a in range(0, 4)], list1 is _____

[0, 1, 2, 3]

[0, 1, 2, 3, 4]

[0.0, 0.5, 1.0, 1.5]

[0.0, 0.5, 1.0, 1.5, 2.0]

Correct answer

[0.0, 0.5, 1.0, 1.5]

183. Let list1 = [1, 3, 2, 4, 5, 2, 1, 0], What is list1[:-1]?

0

[1, 3, 2, 4, 5, 2, 1]

[1, 3, 2, 4, 5, 2]

[1, 3, 2, 4, 5, 2, 1, 0]

Correct answer

[1, 3, 2, 4, 5, 2, 1]

184. What Will be The output Of the following code snippet?

```
def x(value, values):
```

```
    v = 1
```

```
    values[0] = 33
```

```
y = 3
```

```
v = [1, 2, 3]
```

```
x(y, v)
```

```
print(y, v[0])
```

1 1

1 33

3 1

3 33

Correct answer

3 33

185. Let list1 = [1, 3, 2, 4, 5, 2, 1, 0], Which of the following is correct?

```
print(list1[0])
```

```
print(list1[:2])
```

```
print(list1[:-2])
```

```
print(list1[4:6])
```

186. list1 = [11, 2, 23] and list2 = [2, 11, 23], list1 == list2 is _____

True

False

187. "Welcome to Python".split() is _____

["Welcome", "to", "Python"]

```
("Welcome", "to", "Python")
```

```
{"Welcome", "to", "Python"}
```

```
"Welcome", "to", "Python"
```

188. Let list1 = [2, 3, 4], What is list1 * 2?

[2, 6, 4]

[2, 4, 3, 2, 4]

[2, 3, 4, 2, 3, 4]

[2, 3, 4, 4, 3, 2]

189. Let list1 = [3, 4, 5, 18, 5, 22, 1, 2], what is len(list1)?

6
7
8
5

4

Correct answer

8

190. _____ creates a list.

list1 = list()
list1 = []
list1 = list([12, 4, 4])

list1 = [12, 4, 4]
list1 = [1, "3", "red"]

191. What is the output when we execute list("hello")?

['h', 'e', 'l', 'l', 'o']
['hello']
['llo']

['olleh']

Correct answer

['h', 'e', 'l', 'l', 'o']

192. Let list1 = [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.pop(1)?

[3, 4, 5, 20, 5, 25, 1, 3]
[1, 3, 3, 4, 5, 5, 20, 25]
[3, 5, 20, 5, 25, 1, 3]
[1, 3, 4, 5, 20, 5, 25]

[3, 1, 25, 5, 20, 5, 4]

Correct answer

[3, 5, 20, 5, 25, 1, 3]

193. To insert 5 to the third position in list1, use _____.

list1.insert(3, 5)
list1.insert(2, 5)
list1.add(3, 5)

`list1.append(3, 5)`

Correct answer

`list1.insert(3, 5)`

194. Let `list1 = [3, 4, 5, 20, 5, 25, 1, 3]`, what is `max(list1)`?

5

4

8

25

1

Correct answer

25

195. To shuffle `list1`, use _____.

`list1.shuffle()`

`shuffle(list1)`

`random.shuffle(list1)`

`random.shuffleList(list1)`

Correct answer

`random.shuffle(list1)`

196. Let `list1 = [3, 4, 5, 20, 5, 25, 1, 3]`, what is `list1.count(5)`?

0

4

1

2

Correct answer

2

197. Let `list1 = [3, 4, 5, 20, 5, 25, 1, 3]`, what is `list1` after `list1.reverse()`?

`[3, 4, 5, 20, 5, 25, 1, 3]`

`[1, 3, 3, 4, 5, 5, 20, 25]`

`[25, 20, 5, 5, 4, 3, 3, 1]`

`[1, 3, 4, 5, 20, 5, 25, 3]`

`[3, 1, 25, 5, 20, 5, 4, 3]`

Correct answer

`[3, 1, 25, 5, 20, 5, 4, 3]`

198. Let `list1 = [3, 4, 5, 20, 5, 25, 1, 3]`, what is `list1` after `list1.sort()`?

[3, 4, 5, 20, 5, 25, 1, 3]

[1, 3, 3, 4, 5, 5, 20, 25]

[25, 20, 5, 5, 4, 3, 3, 1]

[1, 3, 4, 5, 20, 5, 25, 3]

Correct answer

[1, 3, 3, 4, 5, 5, 20, 25]

199. What will be the output of the following code snippet?

```
def x(i, values = []):  
    values.append(i)  
    return values
```

x(2)

x(3)

y = x(4)

print(y)

[2] [3] [4]

1 2 3

[2, 3, 4]

[2] [2, 3] [2, 3, 4]

Correct answer

[2, 3, 4]

200. Let list1 = [3, 2, 5, 10, 5, 24, 1, 3], what is min(list1)?

5

4

8

25

1

Correct answer

1

201. What will be the output of the following code snippet?

```
list1 = [1, 2]
```

```
list2 = list1
```

```
list1[0] = 3
```

```
print(list2)
```

[2, 3]

[1, 3]

[3, 2]

[1, 2, 3]

Correct answer

[3, 2]

202. What Will be The output Of the following code snippet?

```
myList = [1, 3, 3, 3, 3, 1]
max = myList[0]
indexOfMax = 0
for x in range(1, len(myList)):
    if myList[x] > max:
        max = myList[x]
        indexOfMax = x

print(indexOfMax)
```

0

1

2

3

4

Correct answer

1

203. Let list1 = [3, 4, 5, 20, 5, 25, 1, 3], what is list1.index(5)?

0

4

1

2

Correct answer

2

204. What is list("pqrs")?

['p', 'q', 'r', 's']

['pq']

['rs']

['pqrs']

Correct answer

['p', 'q', 'r', 's']

205. What will be the output of the following code snippet?

```
myList = [0, 1, 2, 3, 4, 5]
for x in range(1, 5):
    myList[x - 1] = myList[x]

for x in range(0, 5):
    print(myList[x], end = " ")
```

2 3 4 5 6 1

1 1 2 3 4 5

6 1 2 3 4 5

1 2 3 4 4

Correct answer

1 2 3 4 4

206. What is `list("a#b#c#d".split('#'))`?

['a', 'b', 'c', 'd']

['a b c d']

['a#b#c#d']

['abcd']

Correct answer

['a', 'b', 'c', 'd']

207. To add 5 to the end of list1, use _____.

list1.add(5)

list1.append(5)

list1.addLast(5)

list1.addEnd(5)

Correct answer

list1.append(5)

208. list1 = [11, 2, 23] and list2 = [11, 2, 2], list1 < list2 is _____

True

False

209. What will be the output of the following code snippet?

```
def x(values):  
    values[0] = 33
```

```
v = [1, 2, 3]  
x(v)  
print(v)
```

[1, 2, 3, 33]

[1, 2, 3]

[1, 33]

[33, 2, 3]

Correct answer

[33, 2, 3]

210. Let list1 = [0, 3, 2], what is sum(list1)?

5

4

6

2

1

Correct answer

5

211. To remove string "red" from list1, use _____.

list1.remove("red")

list1.remove(red)

list1.removeAll("red")

list1.removeOne("red")

Correct answer

list1.remove("red")

212. What will be the output of the following code?

```
list1 = [12, 3, 25]
list2 = [12, 3, 2]
print(list1>list2)
```

False

True

Error

None

213. What will be the output of the following code?

```
numbers = [2, 4, 6]
numbers.append([1,2,3,4])
print(len(numbers))
```

6

7

4

22

Correct answer

4

214. What will be the output of the following code?

```
names1 = ['Bertha', 'Davida', 'Monika']
names2 = [name.lower() for name in
names1]
print(names2[2][0])
```

b

m

d

None

215. What will be the output of the following code?

```
p="python"
q=list((f.upper(),len(f)) for f in p)
print(q)
```

[('P', 1), ('Y', 1), ('T', 1), ('H', 1), ('O', 1), ('N', 1)]

[('PYTHON', 5)]

[('P', 1), ('Y', 1), ('T', 1), ('H', 1), ('O', 1), ('N', 1)]

Syntax error

216. To which of the following the “in” operator can be used to check if an item is in it?

Dictionary
Set

Lists

All of the above

Correct answer

All of the above

217. What will be the output of the following code?

```
def x(values):  
    values[0] = 45  
v = [2, 4, 6]  
x(v)  
  
print(v)
```

[45, 6, 4,]

[45, 4]

[4, 6, 45]

[45, 4, 6]

Correct answer

[45, 4, 6]

218. Suppose list1 is [3, 4, 15, 15, 25, 15], what is list1.index(15)?

0

5

2

3

219. What will be the output of the following code?

```
my_List = [1, 2, 3, 4, 5]  
for i in range(1, 5):  
    my_List[i - 1] = my_List[i]  
for i in range(0, 5):  
    print(my_List[i], end = " ")
```

2 2 3 4 3 3 6 3 3 4 5 2 3 4 4 5 4 5 5

2 2 3 4 3 3 4 5 4 4 5 2 3 4 2 3 3 4 5

2 2 3 4 5 2 3 3 4 5 2 3 4 4 5 2 3 4 5 5

2 2 2 3 4 5 2 2 2 2 3 4 5 3 4 5 2 3 4 5

Correct answer

2 2 3 4 5 2 3 3 4 5 2 3 4 4 5 2 3 4 5 5

220. What will be the output of the following code?

```
my_List = [2, 6, 6, 6, 6, 2]
max = my_List[0]
indexOfMax = 0
for i in range(2, len(my_List)):
    if my_List[i] > max:
        max = my_List[i]
        indexOfMax = i
print(indexOfMax)
```

1

2

3

4

Correct answer

2

221. What will be the output of the following code?

```
q=[5,6,7,8]
p=list(filter(lambda x:x%2,q))
print(p)
```

[5,8]

[]

[5, 7]

Invalid arguments for filter function

Correct answer

[5, 7]

222. What will be the output of the following code?

```
x=[12,48,15]
x.append([77])
x.extend([40,60])
print(x)
```

[12,48,15, [77]40,60]

[12, 48, 15, [77], 40, 60]

[12, 48, 15, 77,[40, 60]]

[12,48,15,77,[40, 60]]

223. What will be the output of the following code?

```
def addItem(list1):
    list1 += [1]
my_list = [2, 4, 6, 8]
addItem(my_list)
print(len(my_list))
```

5

1

4

8

Correct answer

5

224. What will be the output of the following code?

```
def increment_items(L, increment):
    i = 0
    while i < len(L):
        L[i] = L[i] + increment
        i = i + 1
values = [2, 4, 6]
print(increment_items(values, 2))
print(values)
```

None [4, 6, 8]

[4,6,8] None

[1, 2, 3] [4,5,6]

None [1, 2, 3]

225. What will be the output of the following code?

```
x=[2,3,4]
y=x.append(5)
print(x)
print(y)
```

[2,3,4,5]

[2,3,4,5]

Option 1

[2, 3, 4, 5]
None

Option 2

[2,3,4]
[2,3,4,5]

Option 3

Syntax error

Correct answer

Option 2

226. What will be the output of the following code?

```
list1 = [8, 7, 6, 5]
list2 = [1, 2, 3, 4]
print(len(list1 + list2))
```

2

8

4

6

Correct answer

8

227. What will be the output of the following code?

```
x="p@q@r@s"
p=list(x.partition("@"))
print(p)
q=list(x.split("@",3))
print(q)
```

['p','q','r','s']

['p','q','r','s']

Option 1

['p','@','q','@','r','@','s']
['p','q','r','s']

Option 2

['p','@','q@r@s']
['p','q','r','s']

Option 3

['p','@','q@r@s']
['p','@','q','@','r','@','s']

Option 4

Correct answer

Option 3

228. What will be the output of the following code?


```
values = [[4, 5, 6, 2], [44, 7, 2, 3]]
```

```
x = values[0][0]
for lst in values:
    for element in lst:
        if x > element:
            x = element
```

```
print(x)
```

2

3

6

7

229. What will be the output of the following code?

```
def f(i, values = []):
    values.append(i)
    return values
f(2)
f(4)
v = f(6)
print(v)
```

['2, 4, 6']

[2] [2, 4] [2, 4, 6]

[2, 4, 6]

[2] [4] [6]

Correct answer

[2, 4, 6]

230. What will be the output of the following code?

```
p=[2,3,4,5]
q=[sum(p[0:x+1]) for x in range(0,len(p))]
print(q)
```

14

[2,3,5,7]

5

[2, 5, 9, 14]

Correct answer

[2, 5, 9, 14]

231. How many elements are in a?

```
x = [[a, b] for a in range(0, 2) for b in range(0, 2)]
```

[[0, 1], [0, 2], [2, 0], [0, 1]]
[[0, 0], [0, 1], [1, 0], [1, 1]]
[[0, 10], [0, 2], [0, 3], [0, 4]]
None

Correct answer

[[0, 0], [0, 1], [1, 0], [1, 1]]

232. What will be the output of the following code?

```
v = [[4, 5, 6, 2 ], [44, 7, 2, 3]]  
  
for row in v:  
    row.sort()  
    for element in row:  
        print(element, end = " ")  
    print()
```

The program prints two rows 3 5 6 2 followed by 44 7 2 3

The program prints on row 3 6 5 2 44 7 3 2

The program prints two rows 2 4 5 6 followed by 2 3 7 44

The program prints two rows 3 6 5 2 followed by 44 6 2 3

233. What will be the output of the following Python code?

```
p = [1, 3, 5, 7, 7, 1]  
q=p[0]  
a= 0  
for a in range(1, len(p)):  
    if p[a] > q:  
        q = p[a]  
        q= a  
print(q)
```

5

3

4

0

Correct answer

4

234. What will be the output of the following code?

```
def example(L):
    ''' (list) -> list
    ...
    i = 0
    result = []
    while i < len(L):
        result.append(L[i])
        i = i + 3
    return result
```

Return a list containing every third item from L starting at index 0

Return an empty list

Return a list containing every third index from L starting at index 0

Return a list containing the items from L starting from index 0, omitting every third item

Correct answer

Return a list containing every third item from L starting at index 0

235. What will be the output of the following code?

```
animals = ['Monkey', 'Tiger', 'Lion']
animals1 = animals
animals2 = animals[:]
animals1[1]="Fox"
animals2[2]="Deer"
print(animals)
```

['Monkey', 'Fox', 'Deer']

['Monkey', 'Fox', 'Lion']

['Monkey', 'Fox', 'Tiger']

['Monkey', 'Tiger', 'Lion']

Correct answer

['Monkey', 'Fox', 'Lion']

236. What will be the output of the following code?

```
x=list((50,)*4)
print((50)*4)
print(x)

200
[(50),(50),(50),(50)]
```

Option 1

```
(50,50,50,50)
[50,50,50,50]
```

Option 2

```
200  
[50, 50, 50, 50]
```

Option 3

Syntax error

Correct answer

Option 3

237. What will be the output of the following code?

```
x=[12,50,5]  
y=x.copy()  
y is x
```

True

False

Correct answer

False

238. What will be the output of the following code?

```
x = y= [2, 4, 6]  
y [2] = 5  
print (x)
```

[1, 4, 3]

[2, 4, 6, 5]

[2, 4, 5]

[2, 4, 6]

Correct answer

[2, 4, 5]

239. What will be the output of the following code?

```
x = [[[2, 3], [4, 5]], [[6, 7], [8, 9]]]  
  
print(x[1][0][0])
```

2

5

4

6

Correct answer

6

240. What will be the output of the following code?

```
import copy
x=[20,33,60,[80]]
y=copy.deepcopy(x)
x[3][0]=90
x[1]=35
print(y)
```

[20,33,60,[90]]
[20,33,60,[80]]
[20, 33, 60, [80]]
[20, 33, 60, [90]]

Correct answer
[20, 33, 60, [80]]

241. What will be the output of the following code?

```
word1="Pen"
word2="Pen"
list1=[0,1,2]
list2=[0,1,2]
print(word1 is word2)
print(list1 is list2)
```

True
True

Option 1

False
True

Option 2

False
False

Option 3

True
False

Option 4

Correct answer
Option 4

242. What will be the output of the following code?

```
a=[[2],[3]]
print(" ".join(list(map(str,a))))
```

[2] [3]

[49] [50]
[[2]] [[3]]
Syntax error

243. What will be the output of the following code?

```
x=["Mango","Nail","Ox"]  
x.sort(key=len)  
print(x)
```

['Mango', 'Nail', 'Ox']
['Ox', 'Nail', 'Mango']
['Ox', 'Mango', 'Nail']

Invalid syntax for sort()

Correct answer

['Ox', 'Nail', 'Mango']

244. What will be the output of the following code?

```
fruits = ['mango', 'apple', 'banana', 'cherry']  
fruits.insert(fruits.index('apple'), 'berry')  
print(fruits)
```

['mango', 'berry', 'apple', 'banana', 'cherry']
['mango', 'berry', 'banana', 'cherry']
['mango', 'apple', 'berry', 'banana', 'cherry']

['mango', 'apple', 'berry', 'cherry', 'banana']

Correct answer

['mango', 'berry', 'apple', 'banana', 'cherry']

245. What will be the output of the following code?

```
m = [[2, 3, 4, 5],  
      [5, 6, 7, 8],  
      [9, 10, 11, 12],  
      [13, 14, 15, 16]]  
  
for i in range(0, 4):  
    print(m[i][1], end = " ")
```

2 3 4 5
5 6 7 8

2 3 9 15
3 6 10 14

Correct answer

3 6 10 14

246. What will be the output of the following code?

```
x=[20,33,60,[88]]
y=list(x)
x[3][0]=90
x[1]=35
print(y)
```

[20,33,60,[90]]
[20, 33, 60, [88]]
[20, 33, 60, [90]]

[20,33,60,[88]]

247. What will be the output of the following code?

```
>>>names = ['Ajoy', 'Jaya', 'Champion', 'Dhiman']
>>>print(names[-1][-1])
```

A
Dhiman
Error
n

248. What will be the output of the following code?

```
x=170
y=sum(list(map(int,str(x))))
print(y)
```

561
12
8
Syntax error

Correct answer

8

249. Which of the following commands will create a list?

list1 = []
list1 = list()
list1 = list([1, 2, 3])
all of the mentioned

250. What will be the output of the following code?

```
def change(var, lst):  
    var = 1  
    lst[0] = 55  
x = 4  
y = [2, 3, 4]  
change(x, y)  
print(x)  
print(y)
```

4
[55, 3, 4]

Option 1

4
[2,3,4]

Option 2

4
[2,3,55]

Option 3

2
[55,3,4]

Option 4

Correct answer

Option 1

251. What will be the output of the following code?

```
print(list(zip((2,3,4),('p'),('aaa','bbb'))))  
print(list(zip((3,5),('q','r'),('bb','aa'))))
```

[(2,3,4),('p'),('aaa','bbb')]
[(2,4),('q','r'),('bb','aa')]

Option 1

[(2, 'p', 'aaa'),(3, ' ', 'bbb'),(4, ' ', ' ')]
[(3, 'q', 'bb'), (5, 'r', 'aa')]

Option 2

[(2, 'p', 'aaa')]
[(3, 'q', 'bb'), (5, 'r', 'aa')]

Option 3

Syntax error

252. What will be the output of the following code?

```
n = ['One', 'Two', 'Three']
for a, x in enumerate(n):
    print('{}: {}'.format(a, x),end=" ")
```

1: 2: 3:

Exception is thrown

One Two Three

0: One 1: Two 2: Three

Correct answer

0: One 1: Two 2: Three

253. What will be the output of the following code?

```
list1 = [2, 5]
list2 = list1
list1[0] = 3
print(list2)
```

[2, 5]

[5, 2]

[3, 5]

[5, 3]

254. What will be the output of the following code?

```
x=[]*3
x[1].append(5)
print(x)
```

Syntax error

[[5], [], []]

[[5], [5], [5]]

[[],5, [], []]

Correct answer

[[5], [5], [5]]

255. What will be the output of the following code?

```
names1 = ['Bertha',
'Davida', 'Monika']
if 'bertha' in names1:
    print(1)
else:
    print(2)
```

1
3

2
None

Correct answer

1

256. What will be the output of the following code?

```
m=[4,5,7,2,3]
m[1:2]=[8,9]
print(m)
```

[4, 8, 9, 7, 2, 3]

Syntax error

[4,[8,9],5,2,3]

[4,5,6,7,8]

Correct answer

[4, 8, 9, 7, 2, 3]

257. What will be the output of the following code?

```
x= [2, 3, 4, 5, 6]
for y in range(1, 5):
    x[y-1] = x[y]
for y in range(0, 5):
    print(x[y],end = " ")
```

6 6 2 3 4

6 2 3 4 5

3 4 5 6 2

3 4 5 6 6

Correct answer

3 4 5 6 6

258. What will be the output of the following code?

```
x=[2,3,4,5]
y=[sum(x[0:a+1]) for a in range(0,len(x))]
print(y)
```

14

[2,5,7,9]

[2, 5, 9, 14]

[2,3,9,14]

Correct answer

[2, 5, 9, 14]

259. What is the maximum number of elements List can contain in Python?

10 million items

10 million on 32-bit system and 20 million on 64-bit system

There is no limit

20 million items

Another limit

Correct answer

There is no limit

260. What will be the output of the following code?

```
>>>"Welcome to Python".split()
```

("Welcome", "to", "Python")

{"Welcome", "to", "Python"}

['Welcome', 'to', 'Python']

"Welcome", "to", "Python"

Correct answer

['Welcome', 'to', 'Python']

261. What will be the output of the following code?

```
d = [[[2, 3], [4, 5]], [[6, 7], [8, 9]]]
```

```
def abc(y):
```

```
    x = y[0][0]
```

```
    for row in y:
```

```
        for element in row:
```

```
            if x < element: x = element
```

```
    return x
```

```
print(abc(d[0]))
```

2

4

5

6

Correct answer

5

262. What will be the output of the following code?

```
values = [[4, 5, 6, 2], [44, 7, 2, 3]]

x = values[0][0]
for row in range(0, len(values)):
    for column in range(0, len(values[row])):
        if x < values[row][column]:
            x = values[row][column]

print(x)
```

5

6

44

7

Correct answer

44

263. What will be the output of the following code?

```
p = [[2, 3], [4, 2.5], [0.7, 0.7]]
p.sort()
print(p)
```

[[4, 2.5], [2, 3], [0.7, 0.7]]

[[0.7, 0.7], [2, 3], [4, 2.5]]

[[0.7, 0.7], [4, 2.5], [2, 3]]

[[2, 3], [4, 2.5], [0.7, 0.7]]

Correct answer

[[0.7, 0.7], [2, 3], [4, 2.5]]

264. Suppose list1 is [4, 2, 2, 4, 5, 2, 1, 0], Which of the following is correct syntax for slicing operation?

print(list1[0])

print(list1[:2])

print(list1[:-2])

all of the mentioned

265. What will be the output of the following code?

```
def unpack(p,q,r,s):
    print(p+s)
a = [2,3,4,5]
unpack(*a)
```

Error

[2,5]

[7]

7

266. What will be the output of the following code?

```
names1 = ['Ajoy', 'Jaya', 'Champoin', 'Dhiman']
names2 = names1
names3 = names1[:]
names2[0] = 'Alicia'
names3[1] = 'Yen'
sum = 0
for ls in (names1, names2, names3):
    if ls[0] == 'Alicia':
        sum += 1
    if ls[1] == 'Yen':
        sum += 10
print(sum)
```

10

12

2

8

Correct answer

2

267. Suppose list1 = [0.5 x for x in range(0, 5)], list1 is:

[1.0, 0.5, 0.0, 1.5, 2.0]

[0.0, 0.5, 1.0, 1.5, 2.0]

[2.0, 1.5, 1.0, 0.5, 0.0]

[0.1, 0.2, 0.3, 0.4, 0.5]

Correct answer

[0.0, 0.5, 1.0, 1.5, 2.0]

268. What will be the output of the following code?

```
x=[[2,3],[4,5]]
print(sum(x,[]))
```

[[3],[8]]

[2, 3, 4, 5]

Error

[14]

Correct answer

[2, 3, 4, 5]

269. What will be the output of the following code?

```
def x(list):
    y = list[0]
    for e in list:
        if y < e: y = e
    return y

values = [[4, 5, 6, 2], [44, 7, 2, 3]]

for row in values:
    print(x(row), end = " ")
```

3 44

4 44

5 44

6 7

270. What will be the output of the following code?

```
f = [[a, a + 2, a + 3] for a in range(0, 3)]
```

[[1, 2, 3], [4, 5, 6], [7, 8, 9]]

[[0, 2, 3], [1, 3, 4], [2, 4, 5]]

[1, 2, 3, 4, 5, 6, 7, 8, 9]

[0, 1, 2, 1, 2, 3, 2, 3, 4]

Correct answer

[[0, 2, 3], [1, 3, 4], [2, 4, 5]]

272. Which of the following is a Python tuple?

[1, 2, 3]
(1, 2, 3)
{1, 2, 3}

{}

Correct answer

(1, 2, 3)

273. What is the data type of (1)?

Tuple
Integer
List
Both tuple and integer

Correct answer

Integer

274. If x=(1,2,3,4), x[1:-1] is _____

Error, tuple slicing doesn't exist

[2,3]
(2,3,4)
(2,3)

275. What will be the output of the following Python code?

```
x = ('check',)
n = 2
for i in range(int(n)):
    x = (x,)
    print(x)
```

Error, tuples are immutable

((('check',),),)
(((('check',),),),)

Option 2

((('check',),) 'check',)

```
('check',) 'check',)  
(((('check',) 'check',) 'check',)
```

Option 4

Correct answer

Option 2

276. What will be the output of the following Python code?

```
print(min((45, 5, 75)))
```

(min - 5)

5

Error

None of these above

Correct answer

5

277. What will be the output of the following Python code?

```
d = {"jimmy":45, "jack":40}  
d["jimmy"]
```

40

45

“jimmy”

“jack”

Correct answer

45

278. What will be the output of the following Python code?

```
x = (3,4,2,6)  
x.sort()  
x
```

(2,3,4,6)

(3,4,2,6)

None

Error, tuple has no attribute sort

Correct answer

Error, tuple has no attribute sort

279. What will be the output of the following Python code?

```
x = (2,3)
y = (4,5)
z = x+y
z
```

(4,5)

(2, 3, 4, 5)

Error as tuples are immutable

None

Correct answer

(2, 3, 4, 5)

280. What will be the output of the following Python code?

```
fruit = ("apple", "orange", "apple", "cherry", "apple")
print(fruit.count("apple"))
```

5

2

3

None

Correct answer

3

281. What will be the output of the following Python code?

```
p = (2, 3, 5, 4, 8, 9)
[p[y] for y in range(0, len(p), 2)]
```

[2, 3, 9]

[2, 3, 5, 4, 8, 9]

(2, 4, 8)

[2, 5, 8]

Correct answer

[2, 5, 8]

282. What will be the output of the following Python code?

```
print(any((False, False, False)))
```

(False, False, False)

False

True

None

Correct answer

False

283. Is the following Python code valid?

```
x=(1,2,3,4)
del x
```

No because tuple is immutable

Yes, first element in the tuple is deleted

Yes, the entire tuple is deleted

No, invalid syntax for del method

Correct answer

Yes, the entire tuple is deleted

284. What will be the output of the following Python code?

```
x=(5,6,7,8)
del(x[2])
```

Now, a=(1,2,4)

Now, a=(1,3,4)

Now a=(3,4)

Error as tuple is immutable

Correct answer

Error as tuple is immutable

285. Is the following Python code valid?

```
x = 1,2,3,4
x
```

Yes, 1 is printed

Yes, [1,2,3,4] is printed

No, too many values to unpack

Yes, (1,2,3,4) is printed

Correct answer

Yes, (1,2,3,4) is printed

286. What will be the output of the following Python code?

```
p=(2,3,5,4)
p[1:4]
```

(1, 2, 4)

(2, 4, 3)

(3, 5, 4)

(1, 2)

Correct answer

(3, 5, 4)

287. What will be the output of the following Python code?

```
print(any((False, True, False)))
```

True

(False, True, False)

False

None

288. What will be the output of the following Python code?

```
alpha = ("a", "g", "f")  
print(alpha[1])
```

f

g

a

None

Correct answer

g

289. What will be the output of the following Python code?

```
alpha = ("a", "g", "f")  
print(alpha[-1])
```

g

a

f

None

Correct answer

f

290. What will be the output of the following Python code?

```
x=(2,3,(5,6))  
y=(2,3,(4,5))  
(x<y)
```

False

True

Error, < operator is not valid for tuples

Error, < operator is valid for tuples but not if there are sub-tuples

291. What will be the output of the following Python code?

```
x=(1,2,3)  
sum(x,3)
```

Too many arguments for sum() method

The method sum() doesn't exist for tuples

12

9

Correct answer

9

292. Tuples can't be made keys of a dictionary.

True

False

Correct answer

False

293. What will be the output of the following Python code?

```
p1 = (2, 3, 5, 4)  
p2 = (2, 3, 4, 5)  
p1 < p2
```

True

False

Error

None

294. What will be the output of the following Python code?

```
x = [(3,4),(2,3),(4,9)]  
x.sort()  
x
```

[(2, 3), (3, 4), (4, 9)]

[(2,3),(3,2),(4,9)]

Error because tuples are immutable

Error, tuple has no sort attribute

Correct answer

[(2, 3), (3, 4), (4, 9)]

295. Suppose p = (1, 2, 4, 3), which of the following Python code is incorrect?

print(p[3])

p[3] = 45

print(max(p))

print(len(p))

Correct answer

p[3] = 45

296. What will be the output of the following Python code?

```
print(max((45, 5, 75)))
```

(max - 75)

75

Error

None of these above

Correct answer

75

297. What will be the output of the following Python code?

```
my_tuple = (2, 3, 4, 5)
my_tuple.append( (6, 7, 8) )
print len(my_tuple)
```

1

2

5

Error

Correct answer

Error

298. What will be the output of the following Python code?


```
subject = ("English", "Science", "Bengali", "History")
for word in subject:
    print(f"I like to read {word}")
```

```
I like to read English
I like to read Science
I like to read Bengali
I like to read History
```

Option 1

```
I like to read English
I like to read Bengali
I like to read History
I like to read Science
```

Option 2

```
I like to read All
```

Option 3

None of these above

299. What will be the output of the following Python code?

```
numberGames = {}
numberGames[(2,4,6)] = 14
numberGames[(6,4,2)] = 16
numberGames[(2,4)] = 18
sum = 0
for x in numberGames:
    sum += numberGames[x]
print (len(numberGames) + sum)
```

30

24

51

12

Correct answer

51

300. What will be the output of the following Python code?

```
x1 = ("apple",)
x2 = ("mango",)
x3 = x1 + x2
print(x3)
```

(apple, mango)

('apple', 'mango')

('apple"mango')

None

Correct answer
('apple', 'mango')

301. What will be the output of the following Python code?

```
x=(0,2,3,4,5)
y=slice(0,2)
x[y]
```

Invalid syntax for slicing
[0,2]

(0, 1)

(0, 2)

Correct answer
(0, 2)

302. What will be the output of the following Python code?

```
color = ("Red", "Green", "Blue")
color[0] = "yellow"
print(color)
```

("Yellow", "Green", "Blue")

'tuple' object does not support item assignment

("Red", "Green", "Blue")

None

Correct answer
'tuple' object does not support item assignment

303. What will be the output of the following Python code?

```
x = ("Python", "Tutorial")
print("Web" in x)
```

True

False

Error

None

Correct answer
False

304. What will be the output of the following Python code?

```
import collections
x = collections.namedtuple('x',['i','j'])
obj = x(i = 2, j = 5)
obj
```

x(i=2, j=5)
obj(i=2, j=5)

(2,5)

An exception is thrown

Correct answer

x(i=2, j=5)

305. Is the following Python code valid?

```
x = (2,3,4)
y = x.update(4,)
```

Yes, x=(1,2,3,4) and y=(1,2,3,4)

Yes, a=(2,3,4) and b=(1,2,3,4)

No because tuples are immutable

No because wrong syntax for update() method

306. What type of data is: x=[(1,1),(2,4),(3,9)]?

Array of tuples

List of tuples

Tuples of lists

Invalid type

Correct answer

List of tuples

307. Is the following Python code valid?

```
x = (0, 1, 2)
y = ('X', 'Y', 'Z')
z = zip(x, y)
print(z)
```

Yes, z will be ((0, 1, 2),('X','Y','Z'))

Yes, z will be ((1,2,3),('X','Y','Z'))

No because tuples are immutable

No because the syntax for zip function isn't valid

Correct answer

Yes, z will be ((0, 1, 2),('X','Y','Z'))

308. What will be the output of the following Python code?

```
p = (2, 3)
2 * p
```

(2, 3, 2, 3)

[2, 3, 2, 3]

(2, 2, 3, 3)

[2, 2, 3, 3]

Correct answer

(2, 3, 2, 3)

309. What will be the output of the following Python code?

```
p=(2,3,4,5)
p[1:-1]
```

(1, 2)

(1, 2, 4)

(3, 4)

(2, 4, 3)

310. What will be the output of the following Python code?

```
x=("Check")*3
x
```

('Check','Check','Check')

Operator not valid for tuples

('CheckCheckCheck')

Syntax error

Correct answer

('CheckCheckCheck')

311. What will be the output of the following Python code?

```
x,y = 6,8
x,y = y,x
x,y
```

(6,8)

Invalid syntax

(8,6)

Nothing is printed

Correct answer

(8,6)

MCQ on List in Python

Q1. Which of the following statement will create list?

- a. L1=list()
- b. L1=[1,2,3,4]
- c. Both of the above
- d. None of the above

Ans. c. Both of the above

Q2. Write the output of the following code :

```
list("welcome")
```

- a. ['w', 'e', 'l', 'c', 'o', 'm', 'e']
- b. ('w', 'e', 'l', 'c', 'o', 'm', 'e')
- c. ['welcome']
- d. None of the above

Ans. a. ['w', 'e', 'l', 'c', 'o', 'm', 'e']

Q3. Write the output of the following code :

```
>>> L=['w','e','l','c','o','m','e']
```

```
>>> print(len(L))
```

- a. 7
- b. 8
- c. 9
- d. None

Ans. a. 7

Q4. Write the output of the following code :

```
>>> L=["Amit","Anita","Zee","Longest Word"]
```

```
>>> print(max(L))
```

- a. Zee
- b. Longest Word
- c. Error
- d. None of the above

Ans. a. Zee

Q5. Write the output of the following code :

```
>>> L=["Amit","Anita","Zee","Longest Word",123]
```

```
>>> print(max(L))
```

- a. Longest Word
- b. Zee
- c. Amit
- d. Error

Ans. d. Error

Q6. Write the output of the following code :

```
>>>L=[1,5,9]
```

```
>>>print(sum(L),max(L),min(L))
```

- a. 15 9 1
- b. Error
- c. Max and Min are only for String Value
- d. None of the above

Ans. a. 15 9 1

Q7. Do we have any inbuilt function for shuffling the values of List. :

- a. True
- b. False

Ans. a. True

Q8. Write the output of the following code :

```
>>>L=[1,2,3,4,5,[6,7,8]]
```

```
>>>print(L[5])
```

- a. [6, 7, 8]
- b. 6, 7, 8
- c. Error
- d. 6

Ans. a. [6, 7, 8]

Q9. Write the output of the following code :

```
L=list("www.csiplearninghub.com")
```

```
print(L[20 : -1])
```

- a. ['c' , 'o']
- b. ['c' , 'o' , 'm']
- c. (com)
- d. Error

Ans. a. ['c' , 'o']

Q10. Write the output of the following code :

```
>>>L=list("www.csiplearninghub.com")
```

```
>>>print(L[20 : 0])
```

- a. Error
- b. No Value
- c. None
- d. []

Ans. d. []

Q11. Write the output of the following code :

```
>>>L=["Amit","Sumit","Naina"]
```

```
>>>print(L[-1][-1])
```

- a. [Naina]
- b. [a]
- c. a
- d. None of the above

Ans. c. a

Q12. Write the output of the following code :

```
>>>L=["Amit","Sumit","Naina"]  
>>>print(L[1:-1])
```

- a. ['Sumit']
- b. [a]
- c. [Naina]
- d. None of the above

Ans. a. ['Sumit']

Q13. Write the output of the following code :

```
L=["Amit","Sumit","Naina"]  
print(L*2)
```

- a. ['Amit', 'Sumit', 'Naina', 'Amit', 'Sumit', 'Naina']
- b. ["Amit", "Sumit", "Naina"]
- c. Error
- d. None of the above

Ans. a. ['Amit', 'Sumit', 'Naina', 'Amit', 'Sumit', 'Naina']

Q14. Write the output of the following code :

```
L=["Amit","Sumit","Naina"]  
print(L**2)
```

- a. Error
- b. ["Amit","Sumit","Naina"]["Amit","Sumit","Naina"]
- c. ["Amit","Sumit","Naina"]
- d. ["Amit","Sumit","Naina","Amit","Sumit","Naina"]

Ans. a. Error

Q15. Write the output of the following code :

```
L=[0.5 * x for x in range(4)]  
print(L)
```

- a. [0.0, 0.5, 1.0, 1.5]
- b. (0,.5, 1, 1.5)
- c. [0.0, 0.5, 1.0, 1.5, 2.0]
- d. Error

Ans. a. [0.0, 0.5, 1.0, 1.5]

Q16. Write the output of the following code :

```
L=['a' * x for x in range(4)]  
print(L)
```

- a. [' ', 'a', 'aa', 'aaa']
- b. ['a', 'aa', 'aaa']
- c. Error
- d. None of the above

Ans. a. [' ', 'a', 'aa', 'aaa']

Q17. Write the output of the following code :

```
L= [1*x for x in range(10,1,-4)]
```

```
print(L)
```

- a. [10, 6, 2]
- b. [10, 7, 4]
- c. Error
- d. None of the above

Ans. a. [10, 6, 2]

Q18. Write the output of the following code :

```
L=[1,2,3,4,5]
```

```
for i in L:
```

```
    print(i,end=" ")
```

```
    i=i+1
```

- a. 1, 2, 3, 4, 5
- b. 1, 3, 5
- c. Error
- d. None of the above

Ans. a. 1, 2, 3, 4, 5

Q19. Write the output of the following code :

```
L=["Amit","Sumit","Naina"]
```

```
L1=["Sunil"]
```

```
print(L + L1)
```

- a. ['Amit', 'Sumit', 'Naina', ['Sunil']]
- b. ['Amit', 'Sumit', 'Naina', 'Sunil']
- c. List can not concatenate
- d. None of the above

Ans. b. ['Amit', 'Sumit', 'Naina', 'Sunil']

Q20. Which command is used to add an element in List named L1

- a. L1.add(4)
- b. L1.append(4)
- c. L1.new(4)
- d. None of the above

Ans. b. L1.append(4)

Q21. Write the output of the following :

```
L = "123456"
```

```
L = list(L)
```

```
print(type(L[0]))
```

- a. class 'str'
- b. class 'int'
- c. 1
- d. Error

Ans. a. class 'str'

Q22. Write the output of the following:

```
T=(1,2,3,4,5.5)
```

```
L = list(T)
```

```
print(L[3]*2.5)
```

- a. Error
- b. 10
- c. 10.0
- d. 4

Ans. c. 10.0

Q23. Index value in list and string start from 0(T/F)

- a. True
- b. False

Ans. a. True

Q24. Write the output of the following:

```
T=(1,2,3,4,5.5)
```

```
L = list(T)
```

```
print(L*2)
```

- a. [2, 4, 6, 8, 11]
- b. [1, 2, 3, 4, 5.5, 1, 2, 3, 4, 5.5]
- c. Error
- d. None of the above

Ans. b. [1, 2, 3, 4, 5.5, 1, 2, 3, 4, 5.5]

Q25. Write the output of the following:

```
T = [1,2,3,4]
```

```
T1 = [3,4,5,6]
```

```
T2 = T + T1
```

```
print(T2)
```

- a. [1, 2, 3, 4, 5, 6]
- b. [1, 2, 3, 4, 3, 4, 5, 6]
- c. [4, 6, 8, 10]
- d. Error

Ans. b. [1, 2, 3, 4, 3, 4, 5, 6]

Q26. Write the output of the following:

```
T = [1,2,3,4]
```

```
T1 = [3,4,5,6]
```

```
T2 = T.append(T1)
```

```
print(T2)
```

- a. [1, 2, 3, 4, [3, 4, 5, 6]]
- b. [1, 2, 3, 4, 3, 4, 5, 6]
- c. None

d. None of the above

Ans. c. None

Q27. del statement can delete the following from the List?

- a. Single Element
- b. Multiple Elements
- c. All elements along with List object
- d. All of the above

Ans. d. All of the above

Q28. Write the output of the following:

```
T = [1,2,3,4]
```

```
T1=T
```

```
T[0] = "A"
```

```
print(T)
```

```
print(T1)
```

- a.
['A', 2, 3, 4]
[1, 2, 3, 4]
- b.
['A', 2, 3, 4]
['A', 2, 3, 4]
- c.
[1, 2, 3, 4]
[1, 2, 3, 4]
- d. Error

Ans. b.

```
['A', 2, 3, 4]
```

```
['A', 2, 3, 4]
```

Q29. What type of error is returned by the following statement?

```
T = [1,2,3,4]
```

```
print(T.index(9))
```

- a. IndexError
- b. TypeError
- c. ValueError
- d. None of the above

Ans. c. ValueError

Q30. Write the output of the following.

```
T = [1,2,3,4]
```

```
T1=[5,6,7]
```

```
L=T.append(T1)
```

```
print(L)
```

- a. None
- b. [1, 2, 3, 4, [5, 6, 7]]
- c. []

d. Error

Ans. a. None

Q31. Write the output of the following:

```
L=["Amit","Sumit","Naina"]
```

```
L1=["Sunil"]
```

```
print(L + L1)
```

a. ["Amit", "Sumit", "Naina", ["Sunil"]]

b. ['Amit', 'Sumit', 'Naina', 'Sunil']

c. Error

d. ['Amit', 'Sumit', 'Naina', 'Sunil']['Amit', 'Sumit', 'Naina', 'Sunil']

Ans. b. ['Amit', 'Sumit', 'Naina', 'Sunil']

Q32. Result of list slice is also a list?(T/F)

a. True

b. False

Ans. a. True

Q33. What we call the operation which is used to extract particular range from a sequence.

a. Slicing

b. range

c. Indexing

d. Replication

Ans. a. Slicing

Q34. Index of last element in list is n-1, where n is total number of elements.(T/F)

a. True

b. False

Ans. a. True

Q35. Write the output of the following :

```
L=[2 * x for x in range(3,14,3)]
```

```
print(L)
```

a. [6, 12, 18, 24]

b. [6, 12, 18]

c. [6, 12, 18, 24, 30]

d. Error

Ans. a. [6, 12, 18, 24]

Q36. Write the output of the following :

```
L=["Amit","Sumit","Naina"]
```

```
L1=["Sumit"]
```

```
print(L - L1)
```

a. ["Amit", "Naina"]

b. ["Amit", "Naina", "Sumit"]

- c. Show Error
- d. None of the above

Ans. c. Show Error

Q37. Write the output of the following:

- a. Error
- b. $14 + 9 - 1$
- c. 23
- d. 24

Ans. c. 23

Q38. Which mathematical operator is used for repetition?

- a. *
- b. **
- c. +
- d. //

Ans. a. *

Q39. Following two print statement will return same result.(T/F)

```
L1 = [1, 5, 9]
L2 = [2, 3, 4]
print(L1 + L1)
print(L1 * 2)
```

- a. True
- b. False

Ans. a. True

Q40. Which of the following is not list operation?

- a. Indexing
- b. Slicing
- c. Dividing
- d. Concatenation

Ans. c. Dividing

Q41. Which of the following is true about List data type in Python?

- a. List is a Sequence data type
- b. List is mutable
- c. List can have elements of different data type
- d. All of the above

Ans. d. All of the above

Q42. Identify data type of 'T' in following line of Code:

```
T = list(tuple([1,2,3]))
print(type(T))
```

- a. Tuple
- b. List

- c. Nested List
- d. None of the above

Ans. b. List

Q43. List and String are different

- a. in reference to their indexing
- b. in reference to data type of elements they contain
- c. None of the above
- d. Both of the above

Ans. b. in reference to data type of elements they contain

Q44. List can have elements of _____ data types.

- a. Same
- b. Different
- c. Both of the above
- d. None of the above

Ans. b. Different

Q45. Write the output of the following:

```
L=[['Physics',101],['Chemistry',202], ['Maths',303],45, 6, 'j']  
print(len(L))
```

- a. 3
- b. 4
- c. 5
- d. 6

Ans. d. 6

Q46. Write the output of the following :

```
L = [1,2,3,4,5,6,7,8,9,10]  
print(L[L[3]])
```

- a. 3
- b. 4
- c. 5
- d. 6

Ans. c. 5

Q47. Which of the following statement will return first element from right of list 'L'?

- a. L[0]
- b. L[-1]
- c. L[1]
- d. None of the Above

Ans. b. L[-1]

Q48. Write the output of the following:

```
L = [1,2,3,4,5,6,7,8,9,10]  
print(L[len(L) - 1])
```


- a. 9
- b. 1
- c. Error
- d. None of the above

Ans. d. None of the above

Q49. We can concatenate only two list at one time.(T/F)

- a. True
- b. False

Ans. b. False

Q50. The following statements is showing _____ operation in List.

L1 = [1,2,3,4]

L2 = [1,2,3,4]

L = L1 + L2

- a. Replication of List
- b. Concatenation of String
- c. Indexing of String
- d. None of the above

Ans. b. Concatenation of String

Q51. Which mathematical operator is used to concatenate list?

- a. +
- b. //
- c. **
- d. None of the above

Ans. a. +

Q52. Write the output of the following :

L1 = [1,2,3]

L2=[5,6,7]

L1 + L2

print(L1)

- a. [1, 2, 3, 4, 5, 6, 7]
- b. [1, 2, 3, 5, 6, 7]
- c. [1, 2, 3]
- d. None of the above

Ans.c. [1, 2, 3]

Q53. If we try to concatenate a list with elements of some other data type, _____ occurs.

- a. SyntaxError
- b. SyntaxError
- c. TypeError
- d. None of the above

Ans. c. TypeError

Q54. Name the operator which is used in the following print statement.

- a. Concatenation
- b. Repetition
- c. Membership
- d. None of the above

Ans. b. Repetition

Q55. `print(L1 + L1)` and `print(L1 * 2)` will produce the same result.(L1 is a List)(T/F)

- a. True
- b. False

Ans. a. True

Q56. Which operator helps to check whether an element is present in list or not?

- a. +
- b. in
- c. **
- d. None of the above

Ans. b. in

Q57. Write the output of the following:

`print(1 in [[1],2,3])`

- a. True
- b. False
- c. Error
- d. None of the above

Ans. b. False

Q58. Which operation of List is shown in following lines?

`L1 = [1, 2, 3, 4, 5, 6, 7, 8]`

`print(L1[3 : 6])`

- a. Concatenation
- b. Repetition
- c. Slicing
- d. None of the above

Ans. c. Slicing

Q59. Which of the following statement will reverse the list L1?

- a. `L1[: : 1]`
- b. `L1[-1 : : -1]`
- c. `L1[: : -1]`
- d. None of the above

Ans. c. `L1[: : -1]`

Q60. Traversing a list can be done with the help of _____

- a. loop

- b. if
- c. if-elif
- d. None of the above

Ans. a. loop

Q61. Write the output of the following:

```
print(len(tuple[1]))
```

- a. 1
- b. 0
- c. Error
- d. None of the above

Ans. c. Error

Q62. Write the output of the following :

```
L = [[1,2,3,5,6,7,[1,[2,3]]]]
```

```
print(len(L))
```

- a. 4
- b. 3
- c. 2
- d. 1

Ans. d. 1

Q63. Which function returns the length of a list?

- a. Len()
- b. length()
- c. len()
- d. Length()

Ans. c. len()

Q64. Write the output of the following :

```
D = list[ ]
```

```
print(len(D))
```

- a. 0
- b. 1
- c. SyntaxError
- d. ValueError

Ans. c. SyntaxError

Q65. remove() function removes the _____ occurrences of an element from the list

- a. all
- b. first
- c. last
- d. None of the above

Ans. b. first

Q66. sort () function Sorts the elements of the given list in-place(T/F)

- a. True
- b. False

Ans. a. True

Q67. Which of the following function creates the new list?

- a. sort()
- b. sorted()
- c. reverse()
- d. All of the above

Ans. b. sorted()

Q68. Write the output of the following :

```
D = [1,2,3]
```

```
D1 = D
```

```
D.append(4)
```

```
print(D1)
```

- a. [1, 2, 3, 4]
- b. [1, 2, 3]
- c. Error
- d. None of the above

Ans. a. [1, 2, 3, 4]

Q69. Fill in the blanks with same word in both places

```
>>> import _____
```

```
>>> list1 = [1,2,3,4,5]
```

```
>>> list2 = _____copy(list1)
```

```
>>> list2
```

- a. copy
- b. math
- c. pickle
- d. None of the above

Ans. a. copy

Q70. Write the output of the following :

```
def listchange(L):
```

```
L.append(45)
```

```
return
```

```
L1 = [1, 2, 3, 4]
```

```
listchange(L1)
```

```
print(L1)
```

- a. [1, 2, 3, 4]
- b. [1, 2, 3, 45]
- c. [1, 2, 3, 4, 45]
- d. None of the above

Ans. c. [1, 2, 3, 4, 45]

Q71. Write the output of the following:

```
print([] * 2)
```

- a. []
- b. 0
- c. Error
- d. None of the above

Ans. a. []

Q72. Which of the following will give output as [21,2,9,7] ? if list L = [1,21,4,2,5,9,6,7]

- a. print(L[1 : 8 : 2])
- b. print(L[1 : : 2])
- c. Both of the above
- d. None of the above

Ans. print(L[1 : : 2])

Q73. Write the output of the following :

```
L = ['Amit', 'anita', 'Sumant', 'Zaid']
```

```
print(max(L))
```

- a. Zaid
- b. Sumant
- c. anita
- d. Amit

Ans. c. anita

Q74. Write the output of the following:

```
L=[13, 12, 15, 27, 3, 46]
```

```
list1.pop(3)
```

```
print(L)
```

- a. [13,12,15, 27, 46]
- b. [13, 12, 15, 3, 46]
- c. [13, 12, 15, 27, 3]
- d. None of the above

Ans. b. [13, 12, 15, 3, 46]

Q75. Write the output of the following:

```
list1=[3,2,5,7,3,6]
```

```
list1.remove(3)
```

```
print(sum(list1))
```

- a. 23
- b. 20
- c. 19
- d. None of the above

Ans. a. 23

Q76. Write the output of the following

```
list1=[3,2,5,7,3,6]
```

```
list1.insert(6,3)
```

```
print(list1)
```

- a. [3, 2, 5, 6, 7, 3, 6]
- b. [3, 2, 5, 6, 3, 6]
- c. [3, 2, 5, 7, 3, 6, 3]
- d. None of the above

Ans. c. [3, 2, 5, 7, 3, 6, 3]

Q77. Write the output of the following

```
L = [14, 2, 3, 16, 15]
```

```
L[1:4] = [5, 4, 8]
```

```
print(L)
```

- a. [14, 5, 4, 8, 15]
- b. [14, 5, 4, 8, 2, 3, 16, 15]
- c. Error
- d. None of the above

Ans. a. [14, 5, 4, 8, 15]

Q78. Write the output of the following

```
L = ["Amit", 'Sumit', 'Ravi']
```

```
print(L[0][1])
```

- a. A
- b. Amit
- c. S
- d. m

Ans.d. m

Q79. Write the output of the following

```
L = ["Amit", 'Sumit', 'Ravi']
```

```
print("@".join(L))
```

- a. @Amit
- b. Amit@Sumit@Ravi
- c. Amit@Sumit@Ravi@
- d. None of the above

Ans. b. Amit@Sumit@Ravi

Q80. Write the output of the following:

```
L = ['A', 'S', 'R']
```

```
L = L + L*2
```

```
print(L)
```

- a. ['A', 'S', 'R', '2A', '2S', '2R']
- b. ['A', 'S', 'R', 'A', 'S', 'R', 'A', 'S', 'R']
- c. ['A', 'S', 'R']
- d. Error

Ans. b. ['A', 'S', 'R', 'A', 'S', 'R', 'A', 'S', 'R']

Q81. Write the output of the following :

L = [[5, 7, 9, 1], [12, 23, 4, 9]]

for r in L:

 r.reverse()

 for e in r:

 print(e, end = " ")

a. 1 9 7 5 9 4 23 12

b.

1 9 7 5

9 4 23 12

c.

Error

d. None of the above

Ans. a. 1 9 7 5 9 4 23 12

Q82. Write the output of the following:

L = [[5, 7, 9, 1], [12, 23, 4, 9]]

for r in L:

 r.sort()

 for e in r:

 print(e, end = " ")

a. 1 5 7 9 4 9 12 23

b. 1 4 5 7 9 9 12 23

c. 9 7 5 1 23 12 9 4

d. None of the above

Ans. a. 1 5 7 9 4 9 12 23

Q83. How many elements will be there in list 'L'

L = [[p, q] for p in (0, 4) for q in (0, 4)]

a. 2

b. 4

c. 8

d. 16

Ans. b. 4

Q84. Write the output of the following:

L = [[p, q] for p in (0, 4) for q in (0, 4)]

print(L[0])

a. [0]

b. [0, 4]

c. [4, 4]

d. [0, 0]

Ans. d. [0, 0]

Q85. Write the output of the following:


```
L = [23, 45, 65, 32, 3]
L.insert(L[4], 'Monitor')
print(L)
a. [23, 45, 65, 'Monitor', 32, 3]
b. [23, 45, 65, 32, 'Monitor', 3]
c. [23, 45, 65, 32, 3, 'Monitor']
d. None of the above
```

Ans. a. [23, 45, 65, 'Monitor', 32, 3]

Q86. Which statement will give the same output?

```
list1 = [1, 2, 3, 4]
list2 = [5, 6, 7, 8]
a. print(len(list1 + list2))
b. print(len(list1) + len(list2))
c. print(list2[3])
d. All of the above
```

Ans. d. All of the above

Q87. Write the output of the following:

```
L = [11, 21, 31, 41]
L.append([51,62,73,84])
print(len(L))
a. 8
b. 5
c. 4
d. None of the above
```

Ans. b. 5

Q88. Write the output of the following :

```
L = [11, 21, 31, 41]
L.extend([51,62,73,84])
print(len(L))
a. 8
b. 4
c. 5
d. Error
```

Ans. a. 8

Q89. Write the output of the following

```
L1 = ['C++', 'C-Sharp', 'Visual Basic']
L2 = [name.upper() for name in L1]
L3 = [name for name in L1]
if(L2[2][0] == L3[2][0]):
    print("YES")
else:
    print("NO")
```

- a. No
- b. Yes
- c. Error
- d. None of the above

Ans. b. Yes

Q90. Write the output of the following :

```
L = [11, 22, 33, 44, 55, 66]
```

```
for i in range(1, 6):
```

```
    L[i - 1] = L[i]*2
```

```
for i in range(0, 4):
```

```
    print(L[i], end = " ")
```

- a. 44 66 88 110
- b. 22 33 44 55
- c. 11 22 33 44
- d. Error

Ans. a. 44 66 88 110

Q91. Write the output of the following :

```
L= [1,2,3,4,5]
```

```
m = [m and 1 for m in L]
```

```
print(m)
```

- a. [1, 2, 3, 4, 5]
- b. [1, 1, 1, 1, 1]
- c. [1, 0, 1, 0, 1]
- d. None of the above

Ans. b. [1, 1, 1, 1, 1]

Q92. Write the output of the following :

```
L= [1,2,3,4,5]
```

```
m = [m + 3 for m in L]
```

```
print(m)
```

- a. [4, 5, 6, 7, 8, 9]
- b. [4, 5, 6, 7, 8, 9, 10]
- c. [4, 5, 6, 7, 8]
- d. Error

Ans. c. [4, 5, 6, 7, 8]

Q93. Write the output of the following :

```
L1 = [1, 2, 3, 4, 5]
```

```
L2 = [9, 8, 7, 6, 5]
```

```
S= [L1 + 3 for L1 in L2]
```

```
print(S)
```

- a. [12, 11, 10, 9, 8]
- b. [1, 2, 3, 4, 5, 6, 7, 8, 9]
- c. [4, 5, 6, 7, 8]

d. Error

Ans. a. [12, 11, 10, 9, 8]

Q94. Write the output of the following :

L1 = [1, 2, 3]

L2 = [9, 8]

S = [m * n for m in L1 for n in L2]

print(S)

a. [9, 8, 18, 16, 27, 24]

b. [9, 18, 27, 8, 16, 24]

c. [8, 9, 16, 18, 24, 27]

d. Error

Ans. a. [9, 8, 18, 16, 27, 24]

Q95. Write the output of the following :

L1 = [1, 2, 3]

L2 = [9, 8]

S = [n + m for m in L1 for n in L2]

print(S)

a. [2, 3, 4, 3, 4, 5, 4, 5]

b. [1, 2, 3, 2, 3, 4, 3, 4, 5]

c. [2, 3, 4, 3, 4, 5, 4, 5, 6]

d. Error

Ans. c. [2, 3, 4, 3, 4, 5, 4, 5, 6]

Q96. Which of the following statement will generate the square of given list L ?

L = [1, 2, 3, 4, 5]

a. [x ** 2 for x in L]

b. [x * 2 for x in L]

c. [x ^ 3 for x in L]

d. None of the above

Ans. a. [x ** 2 for x in L]

Q97. Which of the following function is used to shuffle the list ?

a. random()

b. swap()

c. shuffle()

d. None of the above

Ans. a. random()

Q98. Both the print statement will produce the same result.(T/F)

L = ["Amit", "Ananya", "Parth"]

print(L[-1])

print(L[-1][-1])

a. True

b. False

Ans. b. False

Q99. Write the output of the following:

L1 = [1, 2, 3]

L2 = [1, 2, 3, 4, 5, 6]

print(L1 in L2)

a. True

b. False

Ans. b. False

Q100. Which of the following command will insert 7 in third position of List L.

a. L.insert(3, 7)

b. L.insert(2, 7)

c. L.add(3, 7)

d. L.append(3, 7)

Ans. b. L.insert(2, 7)

Questions and Answers –Strings – 1

1. What will be the output of the following Python statement?

1. `>>>"a"+"bc"`

- a) a
- b) bc
- c) bca
- d) abc

Answer: d

Explanation: + operator is concatenation operator.

2. What will be the output of the following Python statement?

1. `>>>"abcd"[2:]`

- a) a
- b) ab
- c) cd
- d) dc

Answer: c

Explanation: Slice operation is performed on string.

3. The output of executing `string.ascii_letters` can also be achieved by:

- a) `string.ascii_lowercase_string.digits`
- b) `string.ascii_lowercase+string.ascii_uppercase`
- c) `string.letters`
- d) `string.lowercase_string.uppercase`

Answer: b

Explanation: Execute in shell and check.

4. What will be the output of the following Python code?

1. `>>> str1 = 'hello'`
2. `>>> str2 = ','`
3. `>>> str3 = 'world'`
4. `>>> str1[-1:]`

- a) olleh
- b) hello
- c) h
- d) o

Answer: d

Explanation: -1 corresponds to the last index.

5. What arithmetic operators cannot be used with strings?

- a) +
- b) *

- c) –
- d) All of the mentioned

Answer: c

Explanation: + is used to concatenate and * is used to multiply strings.

6. What will be the output of the following Python code?

1. `>>>print (r"\nhello")`

- a) a new line and hello
- b) `\nhello`
- c) the letter r and then hello
- d) error

Answer: b

Explanation: When prefixed with the letter 'r' or 'R' a string literal becomes a raw string and the escape sequences such as `\n` are not converted.

7. What will be the output of the following Python statement?

1. `>>>print('new' 'line')`

- a) Error
- b) Output equivalent to print `'new\nline'`
- c) newline
- d) new line

Answer: c

Explanation: String literal separated by whitespace are allowed. They are concatenated.

8. What will be the output of the following Python statement?

1. `>>> print('x\97\x98')`

- a) Error
- b)
97
98
- c) `x\97`
- d) `\x97\x98`

Answer: c

Explanation: `\x` is an escape sequence that means the following 2 digits are a hexadecimal number encoding a character.

9. What will be the output of the following Python code?

1. `>>>str1="helloworld"`

2. `>>>str1[::-1]`

- a) dlrowolleh
- b) hello
- c) world

d) helloworld

Answer: a

Explanation: Execute in shell to verify.

10. `print(0xA + 0xB + 0xC):`

a) `0xA0xB0xC`

b) Error

c) `0x22`

d) 33

Answer: d

Explanation: 0xA and 0xB and 0xC are hexadecimal integer literals representing the decimal values 10, 11 and 12 respectively. Their sum is 33.

Python Questions and Answers – Strings – 2

1. What will be the output of the following Python code?

```
1. class father:
2.     def __init__(self, param):
3.         self.o1 = param
4.
5. class child(father):
6.     def __init__(self, param):
7.         self.o2 = param
8.
9. >>>obj = child(22)
10.>>>print "%d %d" % (obj.o1, obj.o2)
```

- a) None None
- b) None 22
- c) 22 None
- d) Error is generated

Answer: d

Explanation: self.o1 was never created.

2. What will be the output of the following Python code?

```
1. class tester:
2.     def __init__(self, id):
3.         self.id = str(id)
4.         id="224"
5.
6. >>>temp = tester(12)
7. >>>print(temp.id)
```

- a) 224
- b) Error
- c) 12
- d) None

Answer: c

Explanation: Id in this case will be the attribute of the class.

3. What will be the output of the following Python code?

```
1. >>>example = "snow world"
2. >>>print("%s" % example[4:7])
```

- a) wo
- b) world
- c) sn
- d) rl

Answer: a

Explanation: Execute in the shell and verify.

4. What will be the output of the following Python code?

1. >>>example = "snow world"
2. >>>example[3] = 's'
3. >>>print example

- a) snow
- b) snow world
- c) Error
- d) snos world

Answer: c

Explanation: Strings cannot be modified.

5. What will be the output of the following Python code?

1. >>>max("what are you")

- a) error
- b) u
- c) t
- d) y

Answer: d

Explanation: Max returns the character with the highest ascii value.

6. Given a string example="hello" what is the output of example.count('l')?

- a) 2
- b) 1
- c) None
- d) 0

Answer: a

Explanation: l occurs twice in hello.

7. What will be the output of the following Python code?

1. >>>example = "helle"
2. >>>example.find("e")

- a) Error
- b) -1
- c) 1
- d) 0

Answer: c

Explanation: Returns lowest index.

8. What will be the output of the following Python code?

1. >>>example = "helle"
2. >>>example.rfind("e")

- a) -1
- b) 4
- c) 3
- d) 1

Answer: b

Explanation: Returns highest index.

9. What will be the output of the following Python code?

1. >>>example="helloworld"
2. >>>example[::-1].startswith("d")

- a) dlrowolleh
- b) True
- c) -1
- d) None

Answer: b

Explanation: Starts with checks if the given string starts with the parameter that is passed.

10. To concatenate two strings to a third what statements are applicable?

- a) s3 = s1 . s2
- b) s3 = s1.add(s2)
- c) s3 = s1.__add__(s2)
- d) s3 = s1 * s2

Answer: c

Explanation: __add__ is another method that can be used for concatenation.

Python Questions and Answers – Strings – 3

1. What will be the output of the following Python statement?

1. `>>>chr(ord('A'))`

- a) A
- b) B
- c) a
- d) Error

Answer: a

Explanation: Execute in shell to verify.

2. What will be the output of the following Python statement?

1. `>>>print(chr(ord('b')+1))`

- a) a
- b) b
- c) c
- d) A

Answer: c

Explanation: Execute in the shell to verify.

3. Which of the following statement prints `hello\example\test.txt`?

- a) `print("hello\example\test.txt")`
- b) `print("hello\\example\\test.txt")`
- c) `print("hello\"example\"test.txt")`
- d) `print("hello\"example\"test.txt")`

Answer: b

Explanation: `\` is used to indicate that the next `\` is not an escape sequence.

4. Suppose `s` is `"\t\tWorld\n"`, what is `s.strip()`?

- a) `\t\tWorld\n`
- b) `\t\tWorld\n`
- c) `\t\tWORLD\n`
- d) `World`

Answer: d

Explanation: Execute `help(string.strip)` to find details.

5. The `format` function, when applied on a string returns _____

- a) Error
- b) `int`
- c) `bool`
- d) `str`

Answer: d

Explanation: Format function returns a string.

6. What will be the output of the "hello" + 1 + 2 + 3?

- a) hello123
- b) hello
- c) Error
- d) hello6

Answer: c

Explanation: Cannot concatenate str and int objects.

7. What will be the output of the following Python code?

- 1. >>>print("D", end = ' ')
- 2. >>>print("C", end = ' ')
- 3. >>>print("B", end = ' ')
- 4. >>>print("A", end = ' ')

- a) DCBA
- b) A, B, C, D
- c) D C B A
- d) D, C, B, A will be displayed on four lines

Answer: c

Explanation: Execute in the shell.

8. What will be the output of the following Python statement?(python 3.xx)

- 1. >>>print(format("Welcome", "10s"), end = '#')
- 2. >>>print(format(111, "4d"), end = '#')
- 3. >>>print(format(924.656, "3.2f"))

- a) Welcome# 111#924.66
- b) Welcome#111#924.66
- c) Welcome#111#.66
- d) Welcome # 111#924.66

Answer: d

Explanation: Execute in the shell to verify.

9. What will be displayed by print(ord('b') - ord('a'))?

- a) 0
- b) 1
- c) -1
- d) 2

Answer: b

Explanation: ASCII value of b is one more than a. Hence the output of this code is 98-97, which is equal to 1.

10. Say s="hello" what will be the return value of type(s)?

- a) int
- b) bool
- c) str
- d) String

Answer: c

Explanation: str is used to represent strings in python.

Python Questions and Answers – Strings – 4

1. What is "Hello".replace("l", "e")?
- a) Heeeo
 - b) Heelo
 - c) Heleo
 - d) None

Answer: a

Explanation: Execute in shell to verify.

2. To retrieve the character at index 3 from string s="Hello" what command do we execute (multiple answers allowed)?
- a) s[]
 - b) s.getitem(3)
 - c) s.__getitem__(3)
 - d) s.getItem(3)

Answer: c

Explanation: __getitem(..) can be used to get character at index specified as parameter.

3. To return the length of string s what command do we execute?
- a) s.__len__()
 - b) len(s)
 - c) size(s)
 - d) s.size()

Answer: a

Explanation: Execute in shell to verify.

4. If a class defines the __str__(self) method, for an object obj for the class, you can use which command to invoke the __str__ method.
- a) obj.__str__()
 - b) str(obj)
 - c) print obj
 - d) all of the mentioned

Answer: d

Explanation: Execute in shell to verify.

5. To check whether string s1 contains another string s2, use _____
- a) s1.__contains__(s2)
 - b) s2 in s1
 - c) s1.contains(s2)
 - d) si.in(s2)

Answer: a

Explanation: s2 in s1 works in the same way as calling the special function `__contains__`.

6. Suppose i is 5 and j is 4, i + j is same as _____

- a) `i.__add(j)`
- b) `i.__add__(j)`
- c) `i.__Add(j)`
- d) `i.__ADD(j)`

Answer: b

Explanation: Execute in shell to verify.

7. What will be the output of the following Python code?

```
1. class Count:
2.     def __init__(self, count = 0):
3.         self.__count = count
4.
5. c1 = Count(2)
6. c2 = Count(2)
7. print(id(c1) == id(c2), end = " ")
8.
9. s1 = "Good"
10.s2 = "Good"
11.print(id(s1) == id(s2))
```

- a) True False
- b) True True
- c) False True
- d) False False

Answer: c

Explanation: Execute in the shell objects cannot have same id, however in the case of strings its different.

8. What will be the output of the following Python code?

```
1. class Name:
2.     def __init__(self, firstName, mi, lastName):
3.         self.firstName = firstName
4.         self.mi = mi
5.         self.lastName = lastName
6.
7. firstName = "John"
8. name = Name(firstName, 'F', "Smith")
9. firstName = "Peter"
10.name.lastName = "Pan"
11.print(name.firstName, name.lastName)
```

- a) Peter Pan
- b) John Pan
- c) Peter Smith
- d) John Smith

Answer: b

Explanation: Execute in the shell to verify.

9. What function do you use to read a string?

- a) input("Enter a string")
- b) eval(input("Enter a string"))
- c) enter("Enter a string")
- d) eval(enter("Enter a string"))

Answer: a

Explanation: Execute in shell to verify.

10. Suppose x is 345.3546, what is format(x, "10.3f") (_ indicates space).

- a) __345.355
- b) ___345.355
- c) ____345.355
- d) _____345.354

Answer: b

Explanation: Execute in the shell to verify.

Python Questions and Answers – Strings – 5

1. What will be the output of the following Python code?

```
print("abc DEF".capitalize())
```

- a) abc def
- b) ABC DEF
- c) Abc def
- d) Abc Def

Answer: c

Explanation: The first letter of the string is converted to uppercase and the others are converted to lowercase.

2. What will be the output of the following Python code?

```
print("abc. DEF".capitalize())
```

- a) abc. def
- b) ABC. DEF
- c) Abc. def
- d) Abc. Def

Answer: c

Explanation: The first letter of the string is converted to uppercase and the others are converted to lowercase.

3. What will be the output of the following Python code?

```
print("abcdef".center())
```

- a) cd
- b) abcdef
- c) error
- d) none of the mentioned

Answer: c

Explanation: The function center() takes at least one parameter.

4. What will be the output of the following Python code?

```
print("abcdef".center(0))
```

- a) cd
- b) abcdef
- c) error
- d) none of the mentioned

Answer: b

Explanation: The entire string is printed when the argument passed to center() is less than the length of the string.

5. What will be the output of the following Python code?

```
print('*', "abcdef".center(7), '*')
```

- a) * abcdef *
- b) * abcdef *
- c) *abcdef *
- d) * abcdef*

Answer: b

Explanation: Padding is done towards the left-hand-side first when the final string is of odd length. Extra spaces are present since we haven't overridden the value of sep.

6. What will be the output of the following Python code?

```
print('*', "abcdef".center(7), '*', sep="")
```

- a) * abcdef *
- b) * abcdef *
- c) *abcdef *
- d) * abcdef*

Answer: d

Explanation: Padding is done towards the left-hand-side first when the final string is of odd length.

7. What will be the output of the following Python code?

```
print('*', "abcde".center(6), '*', sep="")
```

- a) * abcde *
- b) * abcde *
- c) *abcde *
- d) * abcde*

Answer: c

Explanation: Padding is done towards the right-hand-side first when the final string is of even length.

8. What will be the output of the following Python code?

```
print("abcdef".center(7, 1))
```

- a) 1abcdef
- b) abcdef1
- c) abcdef
- d) error

Answer: d

Explanation: TypeError, the fill character must be a character, not an int.

9. What will be the output of the following Python code?

```
print("abcdef".center(7, '1'))
```

- a) 1abcdef
- b) abcdef1
- c) abcdef

d) error

Answer: a

Explanation: The character '1' is used for padding instead of a space.

10. What will be the output of the following Python code?

```
print("abcdef".center(10, '12'))
```

a) 12abcdef12

b) abcdef1212

c) 1212abcdef

d) error

Answer: d

Explanation: The fill character must be exactly one character long.

Python Questions and Answers – Strings – 6

1. What will be the output of the following Python code?

```
print("xyyzxyzxyzxy".count('yy'))
```

- a) 2
- b) 0
- c) error
- d) none of the mentioned

Answer: a

Explanation: Counts the number of times the substring 'yy' is present in the given string.

2. What will be the output of the following Python code?

```
print("xyyzxyzxyzxy".count('yy', 1))
```

- a) 2
- b) 0
- c) 1
- d) none of the mentioned

Answer: a

Explanation: Counts the number of times the substring 'yy' is present in the given string, starting from position 1.

3. What will be the output of the following Python code?

```
print("xyyzxyzxyzxy".count('yy', 2))
```

- a) 2
- b) 0
- c) 1
- d) none of the mentioned

Answer: c

Explanation: Counts the number of times the substring 'yy' is present in the given string, starting from position 2.

4. What will be the output of the following Python code?

```
print("xyyzxyzxyzxy".count('xyy', 0, 100))
```

- a) 2
- b) 0
- c) 1
- d) error

Answer: a

Explanation: An error will not occur if the end value is greater than the length of the string itself.

5. What will be the output of the following Python code?

```
print("xyyzyxzyxzyy".count('xyy', 2, 11))
```

- a) 2
- b) 0
- c) 1
- d) error

Answer: b

Explanation: Counts the number of times the substring 'xyy' is present in the given string, starting from position 2 and ending at position 11.

6. What will be the output of the following Python code?

```
print("xyyzyxzyxzyy".count('xyy', -10, -1))
```

- a) 2
- b) 0
- c) 1
- d) error

Answer: b

Explanation: Counts the number of times the substring 'xyy' is present in the given string, starting from position 2 and ending at position 11.

7. What will be the output of the following Python code?

```
print('abc'.encode())
```

- a) abc
- b) 'abc'
- c) b'abc'
- d) h'abc'

Answer: c

Explanation: A bytes object is returned by encode.

8. What is the default value of encoding in encode()?

- a) ascii
- b) qwerty
- c) utf-8
- d) utf-16

Answer: c

Explanation: The default value of encoding is utf-8.

9. What will be the output of the following Python code?

```
print("xyyzyxzyxzyy".endswith("xyy"))
```

- a) 1
- b) True
- c) 3
- d) 2

Answer: b

Explanation: The function returns True if the given string ends with the specified substring.

10. What will be the output of the following Python code?

```
print("xyyzyzxxxyy".endswith("xyy", 0, 2))
```

- a) 0
- b) 1
- c) True
- d) False

Answer: d

Explanation: The function returns False if the given string does not end with the specified substring

Python Questions and Answers – Lists – 1

1. Which of the following commands will create a list?

- a) list1 = list()
- b) list1 = []
- c) list1 = list([1, 2, 3])
- d) all of the mentioned

Answer: d

Explanation: Execute in the shell to verify

2. What is the output when we execute list("hello")?

- a) ['h', 'e', 'l', 'l', 'o']
- b) ['hello']
- c) ['llo']
- d) ['olleh']

Answer: a

Explanation: Execute in the shell to verify.

3. Suppose listExample is ['h','e','l','l','o'], what is len(listExample)?

- a) 5
- b) 4
- c) None
- d) Error

Answer: a

Explanation: Execute in the shell and verify.

4. Suppose list1 is [2445,133,12454,123], what is max(list1)?

- a) 2445
- b) 133
- c) 12454
- d) 123

Answer: c

Explanation: Max returns the maximum element in the list.

5. Suppose list1 is [3, 5, 25, 1, 3], what is min(list1)?

- a) 3
- b) 5
- c) 25
- d) 1

Answer: d

Explanation: Min returns the minimum element in the list.

6. Suppose list1 is [1, 5, 9], what is sum(list1)?

- a) 1
- b) 9
- c) 15
- d) Error

Answer: c

Explanation: Sum returns the sum of all elements in the list.

7. To shuffle the list(say list1) what function do we use?

- a) list1.shuffle()
- b) shuffle(list1)
- c) random.shuffle(list1)
- d) random.shuffleList(list1)

Answer: c

Explanation: Execute in the shell to verify.

8. Suppose list1 is [4, 2, 2, 4, 5, 2, 1, 0], Which of the following is correct syntax for slicing operation?

- a) print(list1[0])
- b) print(list1[:2])
- c) print(list1[:-2])
- d) all of the mentioned

Answer: d

Explanation: Slicing is allowed in lists just as in the case of strings.

9. Suppose list1 is [2, 33, 222, 14, 25], What is list1[-1]?

- a) Error
- b) None
- c) 25
- d) 2

Answer: c

Explanation: -1 corresponds to the last index in the list.

10. Suppose list1 is [2, 33, 222, 14, 25], What is list1[:-1]?

- a) [2, 33, 222, 14]
- b) Error
- c) 25
- d) [25, 14, 222, 33, 2]

Answer: a

Explanation: Execute in the shell to verify.

Python Questions and Answers – Lists – 2

1. What will be the output of the following Python code?

1. >>>names = ['Amir', 'Bear', 'Charlton', 'Daman']
2. >>>print(names[-1][-1])

- a) A
- b) Daman
- c) Error
- d) n

Answer: d

Explanation: Execute in the shell to verify.

2. What will be the output of the following Python code?

1. names1 = ['Amir', 'Bear', 'Charlton', 'Daman']
2. names2 = names1
3. names3 = names1[:]
- 4.
5. names2[0] = 'Alice'
6. names3[1] = 'Bob'
- 7.
8. sum = 0
9. for ls in (names1, names2, names3):
10. if ls[0] == 'Alice':
11. sum += 1
12. if ls[1] == 'Bob':
13. sum += 10
- 14.
15. print sum

- a) 11
- b) 12
- c) 21
- d) 22

Answer: b

Explanation: When assigning names1 to names2, we create a second reference to the same list. Changes to names2 affect names1. When assigning the slice of all elements in names1 to names3, we are creating a full copy of names1 which can be modified independently.

3. Suppose list1 is [1, 3, 2], What is list1 * 2?

- a) [2, 6, 4]
- b) [1, 3, 2, 1, 3]
- c) [1, 3, 2, 1, 3, 2]
- d) [1, 3, 2, 3, 2, 1]

Answer: c

Explanation: Execute in the shell and verify.

4. Suppose `list1 = [0.5 * x for x in range(0, 4)]`, `list1` is:

- a) `[0, 1, 2, 3]`
- b) `[0, 1, 2, 3, 4]`
- c) `[0.0, 0.5, 1.0, 1.5]`
- d) `[0.0, 0.5, 1.0, 1.5, 2.0]`

Answer: c

Explanation: Execute in the shell to verify.

5. What will be the output of the following Python code?

- 1. `>>>list1 = [11, 2, 23]`
- 2. `>>>list2 = [11, 2, 2]`
- 3. `>>>list1 < list2` is

- a) `True`
- b) `False`
- c) `Error`
- d) `None`

Answer: b

Explanation: Elements are compared one by one.

6. To add a new element to a list we use which command?

- a) `list1.add(5)`
- b) `list1.append(5)`
- c) `list1.addLast(5)`
- d) `list1.addEnd(5)`

Answer: b

Explanation: We use the function `append` to add an element to the list.

7. To insert 5 to the third position in `list1`, we use which command?

- a) `list1.insert(3, 5)`
- b) `list1.insert(2, 5)`
- c) `list1.add(3, 5)`
- d) `list1.append(3, 5)`

Answer: b

Explanation: Execute in the shell to verify.

8. To remove string "hello" from `list1`, we use which command?

- a) `list1.remove("hello")`
- b) `list1.remove(hello)`
- c) `list1.removeAll("hello")`

d) list1.removeOne("hello")

Answer: a

Explanation: Execute in the shell to verify.

9. Suppose list1 is [3, 4, 5, 20, 5], what is list1.index(5)?

- a) 0
- b) 1
- c) 4
- d) 2

Answer: d

Explanation: Execute help(list.index) to get details.

10. Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1.count(5)?

- a) 0
- b) 4
- c) 1
- d) 2

Answer: d

Explanation: Execute in the shell to verify.

Python Questions and Answers – Lists – 3

1. Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.reverse()?
a) [3, 4, 5, 20, 5, 25, 1, 3]
b) [1, 3, 3, 4, 5, 5, 20, 25]
c) [25, 20, 5, 5, 4, 3, 3, 1]
d) [3, 1, 25, 5, 20, 5, 4, 3]

Answer: d

Explanation: Execute in the shell to verify.

2. Suppose listExample is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after listExample.extend([34, 5])?
a) [3, 4, 5, 20, 5, 25, 1, 3, 34, 5]
b) [1, 3, 3, 4, 5, 5, 20, 25, 34, 5]
c) [25, 20, 5, 5, 4, 3, 3, 1, 34, 5]
d) [1, 3, 4, 5, 20, 5, 25, 3, 34, 5]

Answer: a

Explanation: Execute in the shell to verify.

3. Suppose listExample is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after listExample.pop(1)?
a) [3, 4, 5, 20, 5, 25, 1, 3]
b) [1, 3, 3, 4, 5, 5, 20, 25]
c) [3, 5, 20, 5, 25, 1, 3]
d) [1, 3, 4, 5, 20, 5, 25]

Answer: c

Explanation: pop() removes the element at the position specified in the parameter.

4. Suppose listExample is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after listExample.pop()?
a) [3, 4, 5, 20, 5, 25, 1]
b) [1, 3, 3, 4, 5, 5, 20, 25]
c) [3, 5, 20, 5, 25, 1, 3]
d) [1, 3, 4, 5, 20, 5, 25]

Answer: a

Explanation: pop() by default will remove the last element.

5. What will be the output of the following Python code?

1. >>>"Welcome to Python".split()

- a) ["Welcome", "to", "Python"]
b) ("Welcome", "to", "Python")
c) {"Welcome", "to", "Python"}
d) "Welcome", "to", "Python"

Answer: a

Explanation: split() function returns the elements in a list.

6. What will be the output of the following Python code?

```
1. >>>list("a#b#c#d".split('#'))
```

- a) ['a', 'b', 'c', 'd']
- b) ['a b c d']
- c) ['a#b#c#d']
- d) ['abcd']

Answer: a

Explanation: Execute in the shell to verify.

7. What will be the output of the following Python code?

```
1. myList = [1, 5, 5, 5, 5, 1]
2. max = myList[0]
3. indexOfMax = 0
4. for i in range(1, len(myList)):
5.     if myList[i] > max:
6.         max = myList[i]
7.         indexOfMax = i
8.
9. >>>print(indexOfMax)
```

- a) 1
- b) 2
- c) 3
- d) 4

Answer: a

Explanation: First time the highest number is encountered is at index 1.

8. What will be the output of the following Python code?

```
1. myList = [1, 2, 3, 4, 5, 6]
2. for i in range(1, 6):
3.     myList[i - 1] = myList[i]
4.
5. for i in range(0, 6):
6.     print(myList[i], end = " ")
```

- a) 2 3 4 5 6 1
- b) 6 1 2 3 4 5
- c) 2 3 4 5 6 6
- d) 1 1 2 3 4 5

Answer: c

Explanation: Execute in the shell to verify.

9. What will be the output of the following Python code?

```
1. >>>list1 = [1, 3]
2. >>>list2 = list1
3. >>>list1[0] = 4
4. >>>print(list2)
```

- a) [1, 3]
- b) [4, 3]
- c) [1, 4]
- d) [1, 3, 4]

Answer: b

Explanation: Lists should be copied by executing [:] operation.

10. What will be the output of the following Python code?

```
1. def f(values):
2.     values[0] = 44
3.
4. v = [1, 2, 3]
5. f(v)
6. print(v)
```

- a) [1, 44]
- b) [1, 2, 3, 44]
- c) [44, 2, 3]
- d) [1, 2, 3]

Answer: c

Explanation: Execute in the shell to verify.

Python Questions and Answers – Lists – 4

1. What will be the output of the following Python code?

```
1. def f(i, values = []):
2.     values.append(i)
3.     return values
4.
5. f(1)
6. f(2)
7. v = f(3)
8. print(v)
```

- a) [1] [2] [3]
- b) [1] [1, 2] [1, 2, 3]
- c) [1, 2, 3]
- d) 1 2 3

Answer: c

Explanation: Execute in the shell to verify

2. What will be the output of the following Python code?

```
1. names1 = ['Amir', 'Bala', 'Chales']
2.
3. if 'amir' in names1:
4.     print(1)
5. else:
6.     print(2)
```

- a) None
- b) 1
- c) 2
- d) Error

Answer: c

Explanation: Execute in the shell to verify.

3. What will be the output of the following Python code?

```
1. names1 = ['Amir', 'Bala', 'Charlie']
2. names2 = [name.lower() for name in names1]
3.
4. print(names2[2][0])
```

- a) None
- b) a
- c) b
- d) c

Answer: d

Explanation: List Comprehension are a shorthand for creating new lists.

4. What will be the output of the following Python code?

1. numbers = [1, 2, 3, 4]
- 2.
3. numbers.append([5,6,7,8])
- 4.
5. print(len(numbers))

- a) 4
- b) 5
- c) 8
- d) 12

Answer: b

Explanation: A list is passed in append so the length is 5.

5. To which of the following the “in” operator can be used to check if an item is in it?

- a) Lists
- b) Dictionary
- c) Set
- d) All of the mentioned

Answer: d

Explanation: In can be used in all data structures.

6. What will be the output of the following Python code?

1. list1 = [1, 2, 3, 4]
2. list2 = [5, 6, 7, 8]
- 3.
4. print(len(list1 + list2))

- a) 2
- b) 4
- c) 5
- d) 8

Answer: d

Explanation: + appends all the elements individually into a new list.

7. What will be the output of the following Python code?

1. def addItem(listParam):
2. listParam += [1]
- 3.
4. mylist = [1, 2, 3, 4]
5. addItem(mylist)
6. print(len(mylist))

- a) 1
- b) 4
- c) 5

d) 8

Answer: c

Explanation: + will append the element to the list.

8. What will be the output of the following Python code?

```
1. def increment_items(L, increment):
2.     i = 0
3.     while i < len(L):
4.         L[i] = L[i] + increment
5.         i = i + 1
6.
7. values = [1, 2, 3]
8. print(increment_items(values, 2))
9. print(values)
```

- a)
None
[3, 4, 5]
- b)
None
[1, 2, 3]
- c)
[3, 4, 5]
[1, 2, 3]
- d)
[3, 4, 5]
None

Answer: a

Explanation: Execute in the shell to verify.

9. What will be the output of the following Python code?

```
1. def example(L):
2.     "" (list) -> list
3.     ""
4.     i = 0
5.     result = []
6.     while i < len(L):
7.         result.append(L[i])
8.         i = i + 3
9.     return result
```

- a) Return a list containing every third item from L starting at index 0
- b) Return an empty list
- c) Return a list containing every third index from L starting at index 0
- d) Return a list containing the items from L starting from index 0, omitting every third item

Answer: a

Explanation: Run the code to get a better understanding with many arguments.

10. What will be the output of the following Python code?

1. `veggies = ['carrot', 'broccoli', 'potato', 'asparagus']`
2. `veggies.insert(veggies.index('broccoli'), 'celery')`
3. `print(veggies)`

a) ['carrot', 'celery', 'broccoli', 'potato', 'asparagus'] Correct 1.00

b) ['carrot', 'celery', 'potato', 'asparagus']

c) ['carrot', 'broccoli', 'celery', 'potato', 'asparagus']

d) ['celery', 'carrot', 'broccoli', 'potato', 'asparagus']

Answer: a

Explanation: Execute in the shell to verify.

Python Questions and Answers – Lists – 5

1. What will be the output of the following Python code?

1. >>>m = [[x, x + 1, x + 2] for x in range(0, 3)]

- a) [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
- b) [[0, 1, 2], [1, 2, 3], [2, 3, 4]]
- c) [1, 2, 3, 4, 5, 6, 7, 8, 9]
- d) [0, 1, 2, 1, 2, 3, 2, 3, 4]

Answer: b

Explanation: Execute in the shell to verify.

2. How many elements are in m?

1. m = [[x, y] for x in range(0, 4) for y in range(0, 4)]

- a) 8
- b) 12
- c) 16
- d) 32

Answer: c

Explanation: Execute in the shell to verify.

3. What will be the output of the following Python code?

1. values = [[3, 4, 5, 1], [33, 6, 1, 2]]

2.

3. v = values[0][0]

4. for row in range(0, len(values)):

5. for column in range(0, len(values[row])):

6. if v < values[row][column]:

7. v = values[row][column]

8.

9. print(v)

- a) 3
- b) 5
- c) 6
- d) 33

Answer: d

Explanation: Execute in the shell to verify.

4. What will be the output of the following Python code?

1. values = [[3, 4, 5, 1], [33, 6, 1, 2]]

2.

3. v = values[0][0]

4. for lst in values:

5. for element in lst:

6. if v > element:

```
7.         v = element
8.
9. print(v)
```

- a) 1
- b) 3
- c) 5
- d) 6

Answer: a

Explanation: Execute in the shell to verify.

5. What will be the output of the following Python code?

```
1. values = [[3, 4, 5, 1 ], [33, 6, 1, 2]]
2.
3. for row in values:
4.     row.sort()
5.     for element in row:
6.         print(element, end = " ")
7.     print()
```

- a) The program prints two rows 3 4 5 1 followed by 33 6 1 2
- b) The program prints on row 3 4 5 1 33 6 1 2
- c) The program prints two rows 3 4 5 1 followed by 33 6 1 2
- d) The program prints two rows 1 3 4 5 followed by 1 2 6 33

Answer: d

Explanation: Execute in the shell to verify.

6. What will be the output of the following Python code?

```
1. matrix = [[1, 2, 3, 4],
2.           [4, 5, 6, 7],
3.           [8, 9, 10, 11],
4.           [12, 13, 14, 15]]
5.
6. for i in range(0, 4):
7.     print(matrix[i][1], end = " ")
```

- a) 1 2 3 4
- b) 4 5 6 7
- c) 1 3 8 12
- d) 2 5 9 13

Answer: d

Explanation: Execute in the shell to verify.

7. What will be the output of the following Python code?

```
1. def m(list):
2.     v = list[0]
3.     for e in list:
```

```

4.     if v < e: v = e
5.     return v
6.
7. values = [[3, 4, 5, 1], [33, 6, 1, 2]]
8.
9. for row in values:
10.    print(m(row), end = " ")

```

- a) 3 33
- b) 1 1
- c) 5 6
- d) 5 33

Answer: d

Explanation: Execute in the shell to verify.

8. What will be the output of the following Python code?

```

1. data = [[[1, 2], [3, 4]], [[5, 6], [7, 8]]]
2.
3. print(data[1][0][0])

```

- a) 1
- b) 2
- c) 4
- d) 5

Answer: d

Explanation: Execute in the shell to verify.

9. What will be the output of the following Python code?

```

1. data = [[[1, 2], [3, 4]], [[5, 6], [7, 8]]]
2.
3. def ttt(m):
4.     v = m[0][0]
5.
6.     for row in m:
7.         for element in row:
8.             if v < element: v = element
9.
10.    return v
11.
12.print(ttt(data[0]))

```

- a) 1
- b) 2
- c) 4
- d) 5

Answer: c

Explanation: Execute in the shell to verify.

10. What will be the output of the following Python code?

1. `points = [[1, 2], [3, 1.5], [0.5, 0.5]]`
2. `points.sort()`
3. `print(points)`

- a) `[[1, 2], [3, 1.5], [0.5, 0.5]]`
- b) `[[3, 1.5], [1, 2], [0.5, 0.5]]`
- c) `[[0.5, 0.5], [1, 2], [3, 1.5]]`
- d) `[[0.5, 0.5], [3, 1.5], [1, 2]]`

Answer: c

Explanation: Execute in the shell to verify.

Python Questions and Answers – Lists – 6

1. What will be the output of the following Python code?

```
a=[10,23,56,[78]]
b=list(a)
a[3][0]=95
a[1]=34
print(b)
a) [10,34,56,[95]]
b) [10,23,56,[78]]
c) [10,23,56,[95]]
d) [10,34,56,[78]]
```

Answer: c

Explanation: The above copy is a type of shallow copy and only changes made in sublist is reflected in the copied list.

2. What will be the output of the following Python code?

```
print(list(zip((1,2,3),('a'),('xxx','yyy'))))
print(list(zip((2,4),('b','c'),('yy','xx'))))
a)
[(1,2,3),('a'),('xxx','yyy')]
[(2,4),('b','c'),('yy','xx')]
b)
[(1, 'a', 'xxx'),(2, ' ', 'yyy'),(3, ' ', ' ')]
[(2, 'b', 'yy'), (4, 'c', 'xx')]
c) Syntax error
d)
[(1, 'a', 'xxx')]
[(2, 'b', 'yy'), (4, 'c', 'xx')]
```

Answer: d

Explanation: The zip function combines the individual attributes of the lists into a list of tuples.

3. What will be the output of the following Python code?

```
import copy
a=[10,23,56,[78]]
b=copy.deepcopy(a)
a[3][0]=95
a[1]=34
print(b)
a) [10,34,56,[95]]
b) [10,23,56,[78]]
c) [10,23,56,[95]]
d) [10,34,56,[78]]
```

Answer: b

Explanation: The above copy is deepcopy. Any change made in the original list isn't reflected.

4. What will be the output of the following Python code?

```
s="a@b@c@d"
a=list(s.partition("@"))
print(a)
b=list(s.split("@",3))
print(b)
```

a)
['a','b','c','d']
['a','b','c','d']

b)
['a','@','b','@','c','@','d']
['a','b','c','d']

c)
['a','@','b@c@d']
['a','b','c','d']

d)
['a','@','b@c@d']
['a','@','b','@','c','@','d']

Answer: c

Explanation: The partition function only splits for the first parameter along with the separator while split function splits for the number of times given in the second argument but without the separator.

5. What will be the output of the following Python code?

```
a=[1,2,3,4]
b=[sum(a[0:x+1]) for x in range(0,len(a))]
print(b)
```

a) 10
b) [1,3,5,7]
c) 4
d) [1,3,6,10]

Answer: d

Explanation: The above code returns the cumulative sum of elements in a list.

6. What will be the output of the following Python code?

```
a="hello"
b=list((x.upper(),len(x)) for x in a)
print(b)
```

a) [('H', 1), ('E', 1), ('L', 1), ('L', 1), ('O', 1)]
b) [('HELLO', 5)]
c) [('H', 5), ('E', 5), ('L', 5), ('L', 5), ('O', 5)]

d) Syntax error

Answer: a

Explanation: Variable x iterates over each letter in string a hence the length of each letter is 1.

7. What will be the output of the following Python code?

```
a=[1,2,3,4]
b=[sum(a[0:x+1]) for x in range(0,len(a))]
print(b)
a) 10
b) [1,3,5,7]
c) 4
d) [1,3,6,10]
```

Answer: d

Explanation: The above code returns the cumulative sum of elements in a list.

8. What will be the output of the following Python code?

```
a=[]]*3
a[1].append(7)
print(a)
a) Syntax error
b) [[7], [7], [7]]
c) [[7], [], []]
d) [], 7, [], []]
```

Answer: b

Explanation: The first line of the code creates multiple reference copies of sublist. Hence when 7 is appended, it gets appended to all the sublists.

9. What will be the output of the following Python code?

```
b=[2,3,4,5]
a=list(filter(lambda x:x%2,b))
print(a)
a) [2,4]
b) [ ]
c) [3,5]
d) Invalid arguments for filter function
```

Answer: c

Explanation: The filter function gives value from the list b for which the condition is true, that is, $x \% 2 == 1$.

10. What will be the output of the following Python code?

```
lst=[3,4,6,1,2]
lst[1:2]=[7,8]
```



```
print(lst)
```

a) [3, 7, 8, 6, 1, 2]

b) Syntax error

c) [3,[7,8],6,1,2]

d) [3,4,6,7,8]

Answer: a

Explanation: In the piece of code, slice assignment has been implemented. The sliced list is replaced by the assigned elements in the list. Type in python shell to verify.

Python Questions and Answers – Lists – 7

1. What will be the output of the following Python code?

```
a=[1,2,3]
b=a.append(4)
print(a)
print(b)
a)
[1,2,3,4]
[1,2,3,4]
b)
[1, 2, 3, 4]
None
c) Syntax error
d)
[1,2,3]
[1,2,3,4]
```

Answer: b

Explanation: Append function on lists doesn't return anything. Thus the value of b is None.

2. What will be the output of the following Python code?

```
>>> a=[14,52,7]
>>>> b=a.copy()
>>> b is a
a) True
b) False
```

Answer: b

Explanation: List b is just a copy of the original list. Any copy made in list b will not be reflected in list a.

3. What will be the output of the following Python code?

```
a=[13,56,17]
a.append([87])
a.extend([45,67])
print(a)
a) [13, 56, 17, [87], 45, 67]
b) [13, 56, 17, 87, 45, 67]
c) [13, 56, 17, 87,[ 45, 67]]
d) [13, 56, 17, [87], [45, 67]]
```

Answer: a

Explanation: The append function simply adds its arguments to the list as it is while extend function extends its arguments and later appends it.

4. What is the output of the following piece of code?

```
a=list((45,)*4)
print((45)*4)
print(a)
a)
180
[(45),(45),(45),(45)]
b)
(45,45,45,45)
[45,45,45,45]
c)
180
[45,45,45,45]
d) Syntax error
```

Answer: c

Explanation: (45) is an int while (45,) is a tuple of one element. Thus when a tuple is multiplied, it created references of itself which is later converted to a list.

5. What will be the output of the following Python code?

```
lst=[[1,2],[3,4]]
print(sum(lst,[]))
a) [[3],[7]]
b) [1,2,3,4]
c) Error
d) [10]
```

Answer: b

Explanation: The above piece of code is used for flattening lists.

6. What will be the output of the following Python code?

```
word1="Apple"
word2="Apple"
list1=[1,2,3]
list2=[1,2,3]
print(word1 is word2)
print(list1 is list2)
a)
True
True
b)
False
True
c)
False
False
d)
```

True
False

Answer: d

Explanation: In the above case, both the lists are equivalent but not identical as they have different objects.

7. What will be the output of the following Python code?

```
def unpack(a,b,c,d):
```

```
    print(a+d)
```

```
x = [1,2,3,4]
```

```
unpack(*x)
```

a) Error

b) [1,4]

c) [5]

d) 5

Answer: d

Explanation: `unpack(*x)` unpacks the list into the separate variables. Now, `a=1` and `d=4`. Thus 5 gets printed.

8. What will be the output of the following Python code?

```
places = ['Bangalore', 'Mumbai', 'Delhi']
```

```
<br class="blank" />places1 = places
```

```
places2 = places[:]
```

```
<br class="blank" />places1[1]="Pune"
```

```
places2[2]="Hyderabad"
```

```
print(places)
```

a) ['Bangalore', 'Pune', 'Hyderabad']

b) ['Bangalore', 'Pune', 'Delhi']

c) ['Bangalore', 'Mumbai', 'Delhi']

d) ['Bangalore', 'Mumbai', 'Hyderabad']

Answer: b

Explanation: `places1` is an alias of the list `places`. Hence, any change made to `places1` is reflected in `places`. `places2` is a copy of the list `places`. Thus, any change made to `places2` isn't reflected in `places`.

9. What will be the output of the following Python code?

```
x=[[1],[2]]
```

```
print(" ".join(list(map(str,x))))
```

a) [1] [2]

b) [49] [50]

c) Syntax error

d) [[1]] [[2]]

Answer: a

Explanation: The elements 1 and 2 are first put into separate lists and then combined with a space in between using the join attribute.

10. What will be the output of the following Python code?

```
a=165
b=sum(list(map(int,str(a))))
print(b)
a) 561
b) 5
c) 12
d) Syntax error
```

Answer: c

Explanation: First, map converts the number to string and then places the individual digits in a list. Then, sum finds the sum of the digits in the list. The code basically finds the sum of digits in the number.

11. What will be the output of the following Python code?

```
a= [1, 2, 3, 4, 5]
for i in range(1, 5):
    a[i-1] = a[i]
for i in range(0, 5):
    print(a[i],end = " ")
a) 5 5 1 2 3
b) 5 1 2 3 4
c) 2 3 4 5 1
d) 2 3 4 5 5
```

Answer: d

Explanation: The items having indexes from 1 to 4 are shifted forward by one index due to the first for-loop and the item of index four is printed again because of the second for-loop.

12. What will be the output of the following Python code?

```
def change(var, lst):
    var = 1
    lst[0] = 44
k = 3
a = [1, 2, 3]
change(k, a)
print(k)
print(a)
a)
3
[44, 2, 3]
b)
```

1
[1,2,3]
c)
3
[1,2,3]
d)
1
[44,2,3]

Answer: a

Explanation: A list is mutable, hence it's value changes after function call. However, integer isn't mutable. Thus its value doesn't change.

13. What will be the output of the following Python code?

```
a = [1, 5, 7, 9, 9, 1]
<br class="blank" />b=a[0]
<br class="blank" />x= 0
for x in range(1, len(a)):
    if a[x] > b:
        b = a[x]
        b= x
print(b)
```

a) 5
b) 3
c) 4
d) 0

Answer: c

Explanation: The above piece of code basically prints the index of the largest element in the list.

14. What will be the output of the following Python code?

```
a=["Apple","Ball","Cobra"]
<br class="blank" />a.sort(key=len)
print(a)
```

a) ['Apple', 'Ball', 'Cobra']
b) ['Ball', 'Apple', 'Cobra']
c) ['Cobra', 'Apple', 'Ball']
d) Invalid syntax for sort()

Answer: b

Explanation: The syntax isn't invalid and the list is sorted according to the length of the strings in the list since key is given as len.

15. What will be the output of the following Python code?

```
num = ['One', 'Two', 'Three']
for i, x in enumerate(num):
```

```
print('{ }: {}'.format(i, x),end=" ")
```

- a) 1: 2: 3:
- b) Exception is thrown
- c) One Two Three
- d) 0: One 1: Two 2: Three

Answer: d

Explanation: `enumerate(iterator,start=0)` is a built-in function which returns `(0,lst[0]),(1,lst[1])` and so on where `lst` is a list(iterator).

Python Questions and Answers – Tuples – 1

1. Which of the following is a Python tuple?

- a) [1, 2, 3]
- b) (1, 2, 3)
- c) {1, 2, 3}
- d) {}

Answer: b

Explanation: Tuples are represented with round brackets.

2. Suppose t = (1, 2, 4, 3), which of the following is incorrect?

- a) print(t[3])
- b) t[3] = 45
- c) print(max(t))
- d) print(len(t))

Answer: b

Explanation: Values cannot be modified in the case of tuple, that is, tuple is immutable.

3. What will be the output of the following Python code?

- 1. >>>t=(1,2,4,3)
- 2. >>>t[1:3]

- a) (1, 2)
- b) (1, 2, 4)
- c) (2, 4)
- d) (2, 4, 3)

Answer: c

Explanation: Slicing in tuples takes place just as it does in strings.

4. What will be the output of the following Python code?

- 1. >>>t=(1,2,4,3)
- 2. >>>t[1:-1]

- a) (1, 2)
- b) (1, 2, 4)
- c) (2, 4)
- d) (2, 4, 3)

Answer: c

Explanation: Slicing in tuples takes place just as it does in strings.

5. What will be the output of the following Python code?

- 1. >>>t = (1, 2, 4, 3, 8, 9)
- 2. >>>[t[i] for i in range(0, len(t), 2)]

- a) [2, 3, 9]
- b) [1, 2, 4, 3, 8, 9]

- c) [1, 4, 8]
- d) (1, 4, 8)

Answer: c

Explanation: Execute in the shell to verify.

6. What will be the output of the following Python code?

- 1. d = {"john":40, "peter":45}
- 2. d["john"]

- a) 40
- b) 45
- c) "john"
- d) "peter"

Answer: a

Explanation: Execute in the shell to verify.

7. What will be the output of the following Python code?

- 1. >>>t = (1, 2)
- 2. >>>2 * t

- a) (1, 2, 1, 2)
- b) [1, 2, 1, 2]
- c) (1, 1, 2, 2)
- d) [1, 1, 2, 2]

Answer: a

Explanation: * operator concatenates tuple.

8. What will be the output of the following Python code?

- 1. >>>t1 = (1, 2, 4, 3)
- 2. >>>t2 = (1, 2, 3, 4)
- 3. >>>t1 < t2

- a) True
- b) False
- c) Error
- d) None

Answer: b

Explanation: Elements are compared one by one in this case.

9. What will be the output of the following Python code?

- 1. >>>my_tuple = (1, 2, 3, 4)
- 2. >>>my_tuple.append((5, 6, 7))
- 3. >>>print len(my_tuple)

- a) 1
- b) 2
- c) 5

d) Error

Answer: d

Explanation: Tuples are immutable and don't have an append method. An exception is thrown in this case.

10. What will be the output of the following Python code?

```
2. numberGames = { }
3. numberGames[(1,2,4)] = 8
4. numberGames[(4,2,1)] = 10
5. numberGames[(1,2)] = 12
6. sum = 0
7. for k in numberGames:
8.     sum += numberGames[k]
9. print len(numberGames) + sum
```

- a) 30
- b) 24
- c) 33
- d) 12

Answer: c

Explanation: Tuples can be used for keys into dictionary. The tuples can have mixed length and the order of the items in the tuple is considered when comparing the equality of the keys.

Python Questions and Answers – Tuples – 2

1. What is the data type of (1)?

- a) Tuple
- b) Integer
- c) List
- d) Both tuple and integer

Answer: b

Explanation: A tuple of one element must be created as (1,).

2. If a=(1,2,3,4), a[1:-1] is _____

- a) Error, tuple slicing doesn't exist
- b) [2,3]
- c) (2,3,4)
- d) (2,3)

Answer: d

Explanation: Tuple slicing exists and a[1:-1] returns (2,3).

3. What will be the output of the following Python code?

```
>>> a=(1,2,(4,5))
>>> b=(1,2,(3,4))
>>> a<b
```

- a) False
- b) True
- c) Error, < operator is not valid for tuples
- d) Error, < operator is valid for tuples but not if there are sub-tuples

Answer: a

Explanation: Since the first element in the sub-tuple of a is larger than the first element in the subtuple of b, False is printed.

4. What will be the output of the following Python code?

```
>>> a=("Check")*3
>>> a
```

- a) ('Check','Check','Check')
- b) * Operator not valid for tuples
- c) ('CheckCheckCheck')
- d) Syntax error

Answer: c

Explanation: Here ("Check") is a string not a tuple because there is no comma after the element.

5. What will be the output of the following Python code?

```
>>> a=(1,2,3,4)
```

```
>>> del(a[2])
```

a) Now, a=(1,2,4)
b) Now, a=(1,3,4)
c) Now a=(3,4)
d) Error as tuple is immutable

Answer: d

Explanation: 'tuple' object doesn't support item deletion.

6. What will be the output of the following Python code?

```
>>> a=(2,3,4)
>>> sum(a,3)
```

a) Too many arguments for sum() method
b) The method sum() doesn't exist for tuples
c) 12
d) 9

Answer: c

Explanation: In the above case, 3 is the starting value to which the sum of the tuple is added to.

7. Is the following Python code valid?

```
>>> a=(1,2,3,4)
>>> del a
```

a) No because tuple is immutable
b) Yes, first element in the tuple is deleted
c) Yes, the entire tuple is deleted
d) No, invalid syntax for del method

Answer: c

Explanation: The command del a deletes the entire tuple.

8. What type of data is: a=[(1,1),(2,4),(3,9)]?

a) Array of tuples
b) List of tuples
c) Tuples of lists
d) Invalid type

Answer: b

Explanation: The variable a has tuples enclosed in a list making it a list of tuples.

9. What will be the output of the following Python code?

```
>>> a=(0,1,2,3,4)
>>> b=slice(0,2)
>>> a[b]
```

a) Invalid syntax for slicing
b) [0,2]

- c) (0,1)
- d) (0,2)

Answer: c

Explanation: The method illustrated in the above piece of code is that of naming of slices.

10. Is the following Python code valid?

- ```
>>> a=(1,2,3)
>>> b=('A','B','C')
>>> c=tuple(zip(a,b))
```
- a) Yes, c will be ((1, 'A'), (2, 'B'), (3, 'C'))
  - b) Yes, c will be ((1,2,3),('A','B','C'))
  - c) No because tuples are immutable
  - d) No because the syntax for zip function isn't valid

**Answer: a**

**Explanation:** Zip function combines individual elements of two iterables into tuples. Execute in Python shell to verify.

## Python Questions and Answers – Tuples-3

1. Is the following Python code valid?

```
>>> a,b,c=1,2,3
>>> a,b,c
a) Yes, [1,2,3] is printed
b) No, invalid syntax
c) Yes, (1,2,3) is printed
d) 1 is printed
```

**Answer: c**

**Explanation: A tuple needn't be enclosed in parenthesis.**

2. What will be the output of the following Python code?

```
a = ('check',)
n = 2
for i in range(int(n)):
 a = (a,)
 print(a)
a) Error, tuples are immutable
b)
(('check',),)
(((('check',),),),)
c) (('check',)'check',)
d)
(('check',)'check',)
(((('check',)'check',)'check',),)
```

**Answer: b**

**Explanation: The loop runs two times and each time the loop runs an extra parenthesis along with a comma is added to the tuple (as a=(a')).**

3. Is the following Python code valid?

```
>>> a,b=1,2,3
a) Yes, this is an example of tuple unpacking. a=1 and b=2
b) Yes, this is an example of tuple unpacking. a=(1,2) and b=3
c) No, too many values to unpack
d) Yes, this is an example of tuple unpacking. a=1 and b=(2,3)
```

**Answer: c**

**Explanation: For unpacking to happen, the number of values of the right hand side must be equal to the number of variables on the left hand side.**

4. What will be the output of the following Python code?

```
>>> a=(1,2)
>>> b=(3,4)
>>> c=a+b
```



```
>>> c
a) (4,6)
b) (1,2,3,4)
c) Error as tuples are immutable
d) None
```

**Answer: b**

**Explanation:** In the above piece of code, the values of the tuples aren't being changed. Both the tuples are simply concatenated.

5. What will be the output of the following Python code?

```
>>> a,b=6,7
>>> a,b=b,a
>>> a,b
a) (6,7)
b) Invalid syntax
c) (7,6)
d) Nothing is printed
```

**Answer: c**

**Explanation:** The above piece of code illustrates the unpacking of variables.

6. What will be the output of the following Python code?

```
>>> import collections
>>> a=collections.namedtuple('a',['i','j'])
>>> obj=a(i=4,j=7)
>>> obj
a) a(i=4, j=7)
b) obj(i=4, j=7)
c) (4,7)
d) An exception is thrown
```

**Answer: a**

**Explanation:** The above piece of code illustrates the concept of named tuples.

7. Tuples can't be made keys of a dictionary.

a) True  
b) False

**Answer: b**

**Explanation:** Tuples can be made keys of a dictionary because they are hashable.

8. Is the following Python code valid?

```
>>> a=2,3,4,5
>>> a
a) Yes, 2 is printed
b) Yes, [2,3,4,5] is printed
```

- c) No, too many values to unpack
- d) Yes, (2,3,4,5) is printed

**Answer: d**

**Explanation: A tuple needn't be enclosed in parenthesis.**

9. What will be the output of the following Python code?

```
>>> a=(2,3,1,5)
>>> a.sort()
>>> a
```

- a) (1,2,3,5)
- b) (2,3,1,5)
- c) None
- d) Error, tuple has no attribute sort

**Answer: d**

**Explanation: A tuple is immutable thus it doesn't have a sort attribute.**

10. Is the following Python code valid?

```
>>> a=(1,2,3)
>>> b=a.update(4,)
```

- a) Yes, a=(1,2,3,4) and b=(1,2,3,4)
- b) Yes, a=(1,2,3) and b=(1,2,3,4)
- c) No because tuples are immutable
- d) No because wrong syntax for update() method

**Answer: c**

**Explanation: Tuple doesn't have any update() attribute because it is immutable.**

11. What will be the output of the following Python code?

```
>>> a=[(2,4),(1,2),(3,9)]
>>> a.sort()
>>> a
```

- a) [(1, 2), (2, 4), (3, 9)]
- b) [(2,4),(1,2),(3,9)]
- c) Error because tuples are immutable
- d) Error, tuple has no sort attribute

**Answer: a**

**Explanation: A list of tuples is a list itself. Hence items of a list can be sorted.**

## Python Questions and Answers – Dictionary – 1

1. Which of the following statements create a dictionary?

- a) `d = { }`
- b) `d = {"john":40, "peter":45}`
- c) `d = {40:"john", 45:"peter"}`
- d) All of the mentioned

**Answer: d**

**Explanation: Dictionaries are created by specifying keys and values.**

2. What will be the output of the following Python code snippet?

1. `d = {"john":40, "peter":45}`

- a) "john", 40, 45, and "peter"
- b) "john" and "peter"
- c) 40 and 45
- d) `d = (40:"john", 45:"peter")`

**Answer: b**

**Explanation: Dictionaries appear in the form of keys and values.**

3. What will be the output of the following Python code snippet?

1. `d = {"john":40, "peter":45}`

2. `"john" in d`

- a) True
- b) False
- c) None
- d) Error

**Answer: a**

**Explanation: In can be used to check if the key is in dictionary.**

4. What will be the output of the following Python code snippet?

1. `d1 = {"john":40, "peter":45}`

2. `d2 = {"john":466, "peter":45}`

3. `d1 == d2`

- a) True
- b) False
- c) None
- d) Error

**Answer: b**

**Explanation: If d2 was initialized as `d2 = d1` the answer would be true.**

5. What will be the output of the following Python code snippet?

1. `d1 = {"john":40, "peter":45}`

2. `d2 = {"john":466, "peter":45}`

3. `d1 > d2`

- a) True
- b) False
- c) Error
- d) None

**Answer: c**

**Explanation: Arithmetic > operator cannot be used with dictionaries.**

6. What will be the output of the following Python code snippet?

1. `d = {"john":40, "peter":45}`
2. `d["john"]`

- a) 40
- b) 45
- c) "john"
- d) "peter"

**Answer: a**

**Explanation: Execute in the shell to verify.**

7. Suppose `d = {"john":40, "peter":45}`, to delete the entry for "john" what command do we use?

- a) `d.delete("john":40)`
- b) `d.delete("john")`
- c) `del d["john"]`
- d) `del d("john":40)`

**Answer: c**

**Explanation: Execute in the shell to verify.**

8. Suppose `d = {"john":40, "peter":45}`. To obtain the number of entries in dictionary which command do we use?

- a) `d.size()`
- b) `len(d)`
- c) `size(d)`
- d) `d.len()`

**Answer: b**

**Explanation: Execute in the shell to verify.**

9. What will be the output of the following Python code snippet?

1. `d = {"john":40, "peter":45}`
2. `print(list(d.keys()))`

- a) `["john", "peter"]`
- b) `["john":40, "peter":45]`
- c) `("john", "peter")`

d) ("john":40, "peter":45)

**Answer: a**

**Explanation:** The output of the code shown above is a list containing only keys of the dictionary d, in the form of a list.

10. Suppose d = {"john":40, "peter":45}, what happens when we try to retrieve a value using the expression d["susan"]?

- a) Since "susan" is not a value in the set, Python raises a KeyError exception
- b) It is executed fine and no exception is raised, and it returns None
- c) Since "susan" is not a key in the set, Python raises a KeyError exception
- d) Since "susan" is not a key in the set, Python raises a syntax error

**Answer: c**

**Explanation:** Execute in the shell to verify.

## Python Questions and Answers – Dictionary – 2

1. Which of these about a dictionary is false?
- a) The values of a dictionary can be accessed using keys
  - b) The keys of a dictionary can be accessed using values
  - c) Dictionaries aren't ordered
  - d) Dictionaries are mutable

**Answer: b**

**Explanation:** The values of a dictionary can be accessed using keys but the keys of a dictionary can't be accessed using values.

2. Which of the following is not a declaration of the dictionary?
- a) {1: 'A', 2: 'B'}
  - b) dict([[1,"A"],[2,"B"]])
  - c) {1,"A",2"B"}
  - d) { }

**Answer: c**

**Explanation:** Option c is a set, not a dictionary.

3. What will be the output of the following Python code snippet?
- ```
a={1:"A",2:"B",3:"C"}
for i,j in a.items():
    print(i,j,end=" ")
```
- a) 1 A 2 B 3 C
 - b) 1 2 3
 - c) A B C
 - d) 1:"A" 2:"B" 3:"C"

Answer: a

Explanation: In the above code, variables i and j iterate over the keys and values of the dictionary respectively.

4. What will be the output of the following Python code snippet?
- ```
a={1:"A",2:"B",3:"C"}
print(a.get(1,4))
```
- a) 1
  - b) A
  - c) 4
  - d) Invalid syntax for get method

**Answer: b**

**Explanation:** The get() method returns the value of the key if the key is present in the dictionary and the default value(second parameter) if the key isn't present in the dictionary.



5. What will be the output of the following Python code snippet?

```
a={1:"A",2:"B",3:"C"}
print(a.get(5,4))
a) Error, invalid syntax
b) A
c) 5
d) 4
```

**Answer: d**

**Explanation:** The `get()` method returns the default value(second parameter) if the key isn't present in the dictionary.

6. What will be the output of the following Python code snippet?

```
a={1:"A",2:"B",3:"C"}
print(a.setdefault(3))
a) {1: 'A', 2: 'B', 3: 'C'}
b) C
c) {1: 3, 2: 3, 3: 3}
d) No method called setdefault() exists for dictionary
```

**Answer: b**

**Explanation:** `setdefault()` is similar to `get()` but will set `dict[key]=default` if key is not already in the dictionary.

7. What will be the output of the following Python code snippet?

```
a={1:"A",2:"B",3:"C"}
a.setdefault(4,"D")
print(a)
a) {1: 'A', 2: 'B', 3: 'C', 4: 'D'}
b) None
c) Error
d) [1,3,6,10]
```

**Answer: a**

**Explanation:** `setdefault()` will set `dict[key]=default` if key is not already in the dictionary.

8. What will be the output of the following Python code?

```
a={1:"A",2:"B",3:"C"}
b={4:"D",5:"E"}
a.update(b)
print(a)
a) {1: 'A', 2: 'B', 3: 'C'}
b) Method update() doesn't exist for dictionaries
c) {1: 'A', 2: 'B', 3: 'C', 4: 'D', 5: 'E'}
d) {4: 'D', 5: 'E'}
```



**Answer: c**

**Explanation:** update() method adds dictionary b's key-value pairs to dictionary a.  
Execute in python shell to verify.

9. What will be the output of the following Python code?

```
a={1:"A",2:"B",3:"C"}
```

```
b=a.copy()
```

```
b[2]="D"
```

```
print(a)
```

a) Error, copy() method doesn't exist for dictionaries

b) {1: 'A', 2: 'B', 3: 'C'}

c) {1: 'A', 2: 'D', 3: 'C'}

d) "None" is printed

**Answer: b**

**Explanation:** Changes made in the copy of the dictionary isn't reflected in the original one.

10. What will be the output of the following Python code?

```
a={1:"A",2:"B",3:"C"}
```

```
a.clear()
```

```
print(a)
```

a) None

b) { None:None, None:None, None:None }

c) {1:None, 2:None, 3:None}

d) { }

**Answer: d**

**Explanation:** The clear() method clears all the key-value pairs in the dictionary.

11. Which of the following isn't true about dictionary keys?

a) More than one key isn't allowed

b) Keys must be immutable

c) Keys must be integers

d) When duplicate keys encountered, the last assignment wins

**Answer: c**

**Explanation:** Keys of a dictionary may be any data type that is immutable.

12. What will be the output of the following Python code?

```
a={1:5,2:3,3:4}
```

```
a.pop(3)
```

```
print(a)
```

a) {1: 5}

b) {1: 5, 2: 3}

c) Error, syntax error for pop() method

d) {1: 5, 3: 4}

**Answer: b**

**Explanation:** pop() method removes the key-value pair for the key mentioned in the pop() method.

13. What will be the output of the following Python code?

```
a={1:5,2:3,3:4}
print(a.pop(4,9))
a) 9
b) 3
c) Too many arguments for pop() method
d) 4
```

**Answer: a**

**Explanation:** pop() method returns the value when the key is passed as an argument and otherwise returns the default value(second argument) if the key isn't present in the dictionary.

14. What will be the output of the following Python code?

```
a={1:"A",2:"B",3:"C"}
for i in a:
 print(i,end=" ")
a) 1 2 3
b) 'A' 'B' 'C'
c) 1 'A' 2 'B' 3 'C'
d) Error, it should be: for i in a.items():
```

**Answer: a**

**Explanation:** The variable i iterates over the keys of the dictionary and hence the keys are printed.

15. What will be the output of the following Python code?

```
>>> a={1:"A",2:"B",3:"C"}
>>> a.items()
a) Syntax error
b) dict_items([('A'), ('B'), ('C')])
c) dict_items([(1,2,3)])
d) dict_items([(1, 'A'), (2, 'B'), (3, 'C')])
```

**Answer: d**

**Explanation:** The method items() returns list of tuples with each tuple having a key-value pair.

## Python Questions and Answers – Dictionary – 3

1. Which of the statements about dictionary values is false?
- a) More than one key can have the same value
  - b) The values of the dictionary can be accessed as dict[key]
  - c) Values of a dictionary must be unique
  - d) Values of a dictionary can be a mixture of letters and numbers

**Answer: c**

**Explanation: More than one key can have the same value.**

2. What will be the output of the following Python code snippet?

```
>>> a={1:"A",2:"B",3:"C"}
```

```
>>> del a
```

- a) method del doesn't exist for the dictionary
- b) del deletes the values in the dictionary
- c) del deletes the entire dictionary
- d) del deletes the keys in the dictionary

**Answer: c**

**Explanation: del deletes the entire dictionary and any further attempt to access it will throw an error.**

3. If a is a dictionary with some key-value pairs, what does a.popitem() do?

- a) Removes an arbitrary element
- b) Removes all the key-value pairs
- c) Removes the key-value pair for the key given as an argument
- d) Invalid method for dictionary

**Answer: a**

**Explanation: The method popitem() removes a random key-value pair.**

4. What will be the output of the following Python code snippet?

```
total={ }
```

```
def insert(items):
```

```
 if items in total:
```

```
 total[items] += 1
```

```
 else:
```

```
 total[items] = 1
```

```
insert('Apple')
```

```
insert('Ball')
```

```
insert('Apple')
```

```
print (len(total))
```

- a) 3
- b) 1
- c) 2

d) 0

**Answer: c**

**Explanation:** The insert() function counts the number of occurrences of the item being inserted into the dictionary. There are only 2 keys present since the key 'Apple' is repeated. Thus, the length of the dictionary is 2.

5. What will be the output of the following Python code snippet?

```
a = {}
a[1] = 1
a['1'] = 2
a[1]=a[1]+1
count = 0
for i in a:
 count += a[i]
print(count)
```

- a) 1
- b) 2
- c) 4
- d) Error, the keys can't be a mixture of letters and numbers

**Answer: c**

**Explanation:** The above piece of code basically finds the sum of the values of keys.

6. What will be the output of the following Python code snippet?

```
numbers = {}
letters = {}
comb = {}
numbers[1] = 56
numbers[3] = 7
letters[4] = 'B'
comb['Numbers'] = numbers
comb['Letters'] = letters
print(comb)
```

- a) Error, dictionary in a dictionary can't exist
- b) 'Numbers': {1: 56, 3: 7}
- c) {'Numbers': {1: 56}, 'Letters': {4: 'B'}}
- d) {'Numbers': {1: 56, 3: 7}, 'Letters': {4: 'B'}}

**Answer: d**

**Explanation:** Dictionary in a dictionary can exist.

7. What will be the output of the following Python code snippet?

```
test = {1:'A', 2:'B', 3:'C'}
test = {}
print(len(test))
```

- a) 0
- b) None
- c) 3
- d) An exception is thrown

**Answer: a**

**Explanation:** In the second line of code, the dictionary becomes an empty dictionary. Thus, length=0.

8. What will be the output of the following Python code snippet?

```
test = {1:'A', 2:'B', 3:'C'}
```

```
del test[1]
```

```
test[1] = 'D'
```

```
del test[2]
```

```
print(len(test))
```

- a) 0
- b) 2
- c) Error as the key-value pair of 1:'A' is already deleted
- d) 1

**Answer: b**

**Explanation:** After the key-value pair of 1:'A' is deleted, the key-value pair of 1:'D' is added.

9. What will be the output of the following Python code snippet?

```
a = { }
```

```
a[1] = 1
```

```
a['1'] = 2
```

```
a[1.0]=4
```

```
count = 0
```

```
for i in a:
```

```
 count += a[i]
```

```
print(count)
```

- a) An exception is thrown
- b) 3
- c) 6
- d) 2

**Answer: c**

**Explanation:** The value of key 1 is 4 since 1 and 1.0 are the same. Then, the function count() gives the sum of all the values of the keys (2+4).

10. What will be the output of the following Python code snippet?

```
a={ }
```

```
a['a']=1
```

```
a['b']=[2,3,4]
```

```
print(a)
```



- a) Exception is thrown
- b) {'b': [2], 'a': 1}
- c) {'b': [2], 'a': [3]}
- d) {'b': [2, 3, 4], 'a': 1}

**Answer: d**

**Explanation:** Mutable members can be used as the values of the dictionary but they cannot be used as the keys of the dictionary.

11. What will be the output of the following Python code snippet?

```
>>>import collections
>>> a=collections.Counter([1,1,2,3,3,4,4,4])
>>> a
```

- a) {1,2,3,4}
- b) Counter({4, 1, 3, 2})
- c) Counter({4: 3, 1: 2, 3: 2, 2: 1})
- d) {4: 3, 1: 2, 3: 2, 2: 1}

**Answer: c**

**Explanation:** The statement `a=collections.OrderedDict()` generates a dictionary with the number as the key and the count of times the number appears as the value.

12. What will be the output of the following Python code snippet?

```
>>>import collections
>>> b=collections.Counter([2,2,3,4,4,4])
>>> b.most_common(1)
```

- a) Counter({4: 3, 2: 2, 3: 1})
- b) {3:1}
- c) {4:3}
- d) [(4, 3)]

**Answer: d**

**Explanation:** The `most_common()` method returns the `n` number key-value pairs where the value is the most recurring.

13. What will be the output of the following Python code snippet?

```
>>>import collections
>>> b=collections.Counter([2,2,3,4,4,4])
>>> b.most_common(1)
```

- a) Counter({4: 3, 2: 2, 3: 1})
- b) {3:1}
- c) {4:3}
- d) [(4, 3)]

**Answer: d**

**Explanation:** The `most_common()` method returns the `n` number key-value pairs where the value is the most recurring.

14. What will be the output of the following Python code snippet?

```
>>> import collections
>>> a=collections.Counter([2,2,3,3,3,4])
>>> b=collections.Counter([2,2,3,4,4])
>>> a|b
a) Counter({3: 3, 2: 2, 4: 2})
b) Counter({2: 2, 3: 1, 4: 1})
c) Counter({3: 2})
d) Counter({4: 1})
```

**Answer: a**

**Explanation:** a|b returns the pair of keys and the highest recurring value.

15. What will be the output of the following Python code snippet?

```
>>> import collections
>>> a=collections.Counter([3,3,4,5])
>>> b=collections.Counter([3,4,4,5,5,5])
>>> a&b
a) Counter({3: 12, 4: 1, 5: 1})
b) Counter({3: 1, 4: 1, 5: 1})
c) Counter({4: 2})
d) Counter({5: 1})
```

**Answer: b**

**Explanation:** a&b returns the pair of keys and the lowest recurring value.



## Python Questions and Answers – Dictionary – 4

1. The following Python code is invalid.

```
class demo(dict):
 def __test__(self,key):
 return []
a = demo()
a['test'] = 7
print(a)
a) True
b) False
```

**Answer: b**

**Explanation: The output of the code is: {'test':7}.**

2. What will be the output of the following Python code?

```
count={ }
count[(1,2,4)] = 5
count[(4,2,1)] = 7
count[(1,2)] = 6
count[(4,2,1)] = 2
tot = 0
for i in count:
 tot=tot+count[i]
print(len(count)+tot)
a) 25
b) 17
c) 16
d) Tuples can't be made keys of a dictionary
```

**Answer: c**

**Explanation: Tuples can be made keys of a dictionary. Length of the dictionary is 3 as the value of the key (4,2,1) is modified to 2. The value of the variable tot is 5+6+2=13.**

3. What will be the output of the following Python code?

```
a={ }
a[2]=1
a[1]=[2,3,4]
print(a[1][1])
a) [2,3,4]
b) 3
c) 2
d) An exception is thrown
```

**Answer: b**

**Explanation: Now, a={1:[2,3,4],2:1} . a[1][1] refers to second element having key 1.**

4. What will be the output of the following Python code?

```
>>> a={'B':5,'A':9,'C':7}
```

```
>>> sorted(a)
```

- a) ['A','B','C']
- b) ['B','C','A']
- c) [5,7,9]
- d) [9,5,7]

**Answer: a**

**Explanation: Return a new sorted list of keys in the dictionary.**

5. What will be the output of the following Python code?

```
>>> a={i: i*i for i in range(6)}
```

```
>>> a
```

- a) Dictionary comprehension doesn't exist
- b) {0: 0, 1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6:36}
- c) {0: 0, 1: 1, 4: 4, 9: 9, 16: 16, 25: 25}
- d) {0: 0, 1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

**Answer: d**

**Explanation: Dictionary comprehension is implemented in the above piece of code.**

6. What will be the output of the following Python code?

```
>>> a={ }
```

```
>>> a.fromkeys([1,2,3],"check")
```

- a) Syntax error
- b) {1:"check",2:"check",3:"check"}
- c) "check"
- d) {1:None,2:None,3:None}

**Answer: b**

**Explanation: The dictionary takes values of keys from the list and initializes it to the default value (value given in the second parameter). Execute in Python shell to verify.**

7. What will be the output of the following Python code?

```
>>> b={ }
```

```
>>> all(b)
```

- a) { }
- b) False
- c) True
- d) An exception is thrown

**Answer: c**

**Explanation: Function all() returns True if all keys of the dictionary are true or if the dictionary is empty.**

8. If b is a dictionary, what does any(b) do?
- a) Returns True if any key of the dictionary is true
  - b) Returns False if dictionary is empty
  - c) Returns True if all keys of the dictionary are true
  - d) Method any() doesn't exist for dictionary

**Answer: a**

**Explanation: Method any() returns True if any key of the dictionary is true and False if the dictionary is empty.**

9. What will be the output of the following Python code?

```
>>> a={"a":1,"b":2,"c":3}
>>> b=dict(zip(a.values(),a.keys()))
>>> b
```

- a) {'a': 1, 'b': 2, 'c': 3}
- b) An exception is thrown
- c) {'a': 'b': 'c': }
- d) {1: 'a', 2: 'b', 3: 'c'}

**Answer: d**

**Explanation: The above piece of code inverts the key-value pairs in the dictionary.**

10. What will be the output of the following Python code?

```
>>> a={i: 'A' + str(i) for i in range(5)}
>>> a
```

- a) An exception is thrown
- b) {0: 'A0', 1: 'A1', 2: 'A2', 3: 'A3', 4: 'A4'}
- c) {0: 'A', 1: 'A', 2: 'A', 3: 'A', 4: 'A'}
- d) {0: '0', 1: '1', 2: '2', 3: '3', 4: '4'}

**Answer: b**

**Explanation: Dictionary comprehension and string concatenation is implemented in the above piece of code.**

11. What will be the output of the following Python code?

```
>>> a=dict()
>>> a[1]
```

- a) An exception is thrown since the dictionary is empty
- b) ''
- c) 1
- d) 0

**Answer: a**

**Explanation: The values of a dictionary can be accessed through the keys only if the keys exist in the dictionary.**

12. What will be the output of the following Python code?

```
>>> import collections
>>> a=dict()
>>> a=collections.defaultdict(int)
>>> a[1]
a) 1
b) 0
c) An exception is thrown
d) ‘ ‘
```

**Answer: b**

**Explanation:** The statement `a=collections.defaultdict(int)` gives the default value of 0 (since int data type is given within the parenthesis) even if the keys don't exist in the dictionary.

13. What will be the output of the following Python code?

```
>>> import collections
>>> a=dict()
>>> a=collections.defaultdict(str)
>>> a['A']
a) An exception is thrown since the dictionary is empty
b) ‘ ‘
c) ‘A’
d) 0
```

**Answer: b**

**Explanation:** The statement `a=collections.defaultdict(str)` gives the default value of ‘ ‘ even if the keys don't exist in the dictionary.

14. What will be the output of the following Python code?

```
>>> import collections
>>> b=dict()
>>> b=collections.defaultdict(lambda: 7)
>>> b[4]
a) 4
b) 0
c) An exception is thrown
d) 7
```

**Answer: d**

**Explanation:** The statement `a=collections.defaultdict(lambda: x)` gives the default value of x even if the keys don't exist in the dictionary.

15. What will be the output of the following Python code?

```
>>> import collections
>>> a=collections.OrderedDict((str(x),x) for x in range(3))
>>> a
```

- a) {'2':2, '0':0, '1':1}
- b) OrderedDict([('0', 0), ('1', 1), ('2', 2)])
- c) An exception is thrown
- d) ''

**Answer: b**

**Explanation:** The line of code `a=collections.OrderedDict()` generates a dictionary satisfying the conditions given within the parenthesis and in an ascending order of the keys.

## Python Questions and Answers – Python Modules

1. Which of these definitions correctly describes a module?
- a) Denoted by triple quotes for providing the specification of certain program elements
  - b) Design and implementation of specific functionality to be incorporated into a program
  - c) Defines the specification of how it is to be used
  - d) Any program that reuses code

**Answer: b**

**Explanation: The term “module” refers to the implementation of specific functionality to be incorporated into a program.**

2. Which of the following is not an advantage of using modules?
- a) Provides a means of reuse of program code
  - b) Provides a means of dividing up tasks
  - c) Provides a means of reducing the size of the program
  - d) Provides a means of testing individual parts of the program

**Answer: c**

**Explanation: The total size of the program remains the same regardless of whether modules are used or not. Modules simply divide the program.**

3. Program code making use of a given module is called a \_\_\_\_\_ of the module.
- a) Client
  - b) Docstring
  - c) Interface
  - d) Modularity

**Answer: a**

**Explanation: Program code making use of a given module is called the client of the module. There may be multiple clients for a module.**

4. \_\_\_\_\_ is a string literal denoted by triple quotes for providing the specifications of certain program elements.
- a) Interface
  - b) Modularity
  - c) Client
  - d) Docstring

**Answer: d**

**Explanation: Docstring used for providing the specifications of program elements.**

5. Which of the following is true about top-down design process?
- a) The details of a program design are addressed before the overall design
  - b) Only the details of the program are addressed
  - c) The overall design of the program is addressed before the details



d) Only the design of the program is addressed

**Answer: c**

**Explanation: Top-down design is an approach for deriving a modular design in which the overall design.**

6. In top-down design every module is broken into same number of submodules.

- a) True
- b) False

**Answer: b**

**Explanation: In top-down design every module can even be broken down into different number of submodules.**

7. All modular designs are because of a top-down design process.

- a) True
- b) False

**Answer: b**

**Explanation: The details of the program can be addressed before the overall design too. Hence, all modular designs are not because of a top-down design process.**

8. What will be the output of the following Python code?

*#mod1*

```
def change(a):
 b=[x*2 for x in a]
 print(b)
```

*#mod2*

```
def change(a):
 b=[x*x for x in a]
 print(b)
```

```
from mod1 import change
from mod2 import change
```

*#main*

```
s=[1,2,3]
change(s)
```

- a) [2,4,6]
- b) [1,4,9]

c)  
[2,4,6]

[1,4,9]

- d) There is a name clash

**Answer: d**

**Explanation: A name clash is when two different entities with the same identifier become part of the same scope. Since both the modules have the same function name, there is a name clash.**



9. Which of the following isn't true about main modules?

- a) When a python file is directly executed, it is considered main module of a program
- b) Main modules may import any number of modules
- c) Special name given to main modules is: `__main__`
- d) Other main modules can import main modules

**Answer: d**

**Explanation: Main modules are not meant to be imported into other modules.**

10. Which of the following is not a valid namespace?

- a) Global namespace
- b) Public namespace
- c) Built-in namespace
- d) Local namespace

**Answer: b**

**Explanation: During a Python program execution, there are as many as three namespaces – built-in namespace, global namespace and local namespace.**

11. Which of the following is false about “import modulename” form of import?

- a) The namespace of imported module becomes part of importing module
- b) This form of import prevents name clash
- c) The namespace of imported module becomes available to importing module
- d) The identifiers in module are accessed as: `modulename.identifier`

**Answer: a**

**Explanation: In the “import modulename” form of import, the namespace of imported module becomes available to, but not part of, the importing module.**

12. Which of the following is false about “from-import” form of import?

- a) The syntax is: `from modulename import identifier`
- b) This form of import prevents name clash
- c) The namespace of imported module becomes part of importing module
- d) The identifiers in module are accessed directly as: `identifier`

**Answer: b**

**Explanation: In the “from-import” form of import, there may be name clashes because names of the imported identifiers aren't specified along with the module name.**

13. Which of the statements about modules is false?

- a) In the “from-import” form of import, identifiers beginning with two underscores are private and aren't imported
- b) `dir()` built-in function monitors the items in the namespace of the main module
- c) In the “from-import” form of import, all identifiers regardless of whether they are private or public are imported
- d) When a module is loaded, a compiled version of the module with file extension `.pyc` is

automatically produced

**Answer: c**

**Explanation:** In the “from-import” form of import, identifiers beginning with two underscores are private and aren’t imported.

14. What will be the output of the following Python code?

```
from math import factorial
```

```
print(math.factorial(5))
```

- a) 120
- b) Nothing is printed
- c) Error, method factorial doesn’t exist in math module
- d) Error, the statement should be: print(factorial(5))

**Answer: d**

**Explanation:** In the “from-import” form of import, the imported identifiers (in this case factorial()) aren’t specified along with the module name.

15. What is the order of namespaces in which Python looks for an identifier?

- a) Python first searches the global namespace, then the local namespace and finally the built-in namespace
- b) Python first searches the local namespace, then the global namespace and finally the built-in namespace
- c) Python first searches the built-in namespace, then the global namespace and finally the local namespace
- d) Python first searches the built-in namespace, then the local namespace and finally the global namespace

**Answer: b**

**Explanation:** Python first searches for the local, then the global and finally the built-in namespace.

## Python Questions and Answers – Math module– 1

1. What is returned by `math.ceil(3.4)`?

- a) 3
- b) 4
- c) 4.0
- d) 3.0

**Answer: b**

**Explanation:** The `ceil` function returns the smallest integer that is bigger than or equal to the number itself.

2. What is the value returned by `math.floor(3.4)`?

- a) 3
- b) 4
- c) 4.0
- d) 3.0

**Answer: a**

**Explanation:** The `floor` function returns the biggest number that is smaller than or equal to the number itself.

3. What will be the output of `print(math.copysign(3, -1))`?

- a) 1
- b) 1.0
- c) -3
- d) -3.0

**Answer: d**

**Explanation:** The `copysign` function returns a float whose absolute value is that of the first argument and the sign is that of the second argument.

4. What is displayed on executing `print(math.fabs(-3.4))`?

- a) -3.4
- b) 3.4
- c) 3
- d) -3

**Answer: b**

**Explanation:** A negative floating point number is returned as a positive floating point number.

5. Is the output of the function `abs()` the same as that of the function `math.fabs()`?

- a) sometimes
- b) always
- c) never
- d) none of the mentioned

**Answer: a**

**Explanation:** `math.fabs()` always returns a float and does not work with complex numbers whereas the return type of `abs()` is determined by the type of value that is passed to it.

6. What is the value returned by `math.factorial(6)`?

- a) 720
- b) 6
- c) [1, 2, 3, 6]
- d) error

**Answer: d**

**Explanation:** `NameError, fact()` is not defined.

7. What is the value of x if `x = math.factorial(0)`?

- a) 0
- b) 1
- c) error
- d) none of the mentioned

**Answer: b**

**Explanation:** Factorial of 0 is 1.

8. What is `math.factorial(4.0)`?

- a) 24
- b) 1
- c) error
- d) none of the mentioned

**Answer: a**

**Explanation:** The factorial of 4 is returned.

9. What will be the output of `print(math.factorial(4.5))`?

- a) 24
- b) 120
- c) error
- d) 24.0

**Answer: c**

**Explanation:** Factorial is only defined for non-negative integers.

10. What is `math.floor(0o10)`?

- a) 8
- b) 10
- c) 0
- d) 9

**Answer: a**

**Explanation:  $0o10$  is 8 and  $\text{floor}(8)$  is 8.**

## Python Questions and Answers – Math module– 2

1. What does the function `math.frexp(x)` return?
- a) a tuple containing the mantissa and the exponent of x
  - b) a list containing the mantissa and the exponent of x
  - c) a tuple containing the mantissa of x
  - d) a list containing the exponent of x

**Answer: a**

**Explanation:** It returns a tuple with two elements. The first element is the mantissa and the second element is the exponent.

2. What is the result of `math.fsum([.1 for i in range(20)])`?
- a) 2.0
  - b) 20
  - c) 2
  - d) 2.0000000000000004

**Answer: a**

**Explanation:** The function `fsum` returns an accurate floating point sum of the elements of its argument.

3. What is the result of `sum([.1 for i in range(20)])`?
- a) 2.0
  - b) 20
  - c) 2
  - d) 2.0000000000000004

**Answer: d**

**Explanation:** There is some loss of accuracy when we use `sum` with floating point numbers. Hence the function `fsum` is preferable.

4. What is returned by `math.isfinite(float('inf'))`?
- a) True
  - b) False
  - c) None
  - d) error

**Answer: b**

**Explanation:** `float('inf')` is not a finite number.

5. What is returned by `math.isfinite(float('nan'))`?
- a) True
  - b) False
  - c) None
  - d) error



**Answer: b**

**Explanation: float('nan') is not a finite number.**

6. What is x if `x = math.isfinite(float('0.0'))`?

- a) True
- b) False
- c) None
- d) error

**Answer: a**

**Explanation: float('0.0') is a finite number.**

7. What will be the output of the following Python code?

```
>>> -float('inf') + float('inf')
```

- a) inf
- b) nan
- c) 0
- d) 0.0

**Answer: b**

**Explanation: The result of float('inf')-float('inf') is undefined.**

8. What will be the output of the following Python code?

```
print(math.isinf(float('-inf')))
```

- a) error, the minus sign shouldn't have been inside the brackets
- b) error, there is no function called isinf
- c) True
- d) False

**Answer: c**

**Explanation: -float('inf') is the same as float('-inf').**

9. What is the value of x if `x = math.ldexp(0.5, 1)`?

- a) 1
- b) 2.0
- c) 0.5
- d) none of the mentioned

**Answer: d**

**Explanation: The value returned by ldexp(x, y) is  $x * (2 ** y)$ . In the current case x is 1.0.**

10. What is returned by `math.modf(1.0)`?

- a) (0.0, 1.0)
- b) (1.0, 0.0)
- c) (0.5, 1)



d) (0.5, 1.0)

**Answer: a**

**Explanation:** The first element is the fractional part and the second element is the integral part of the argument.

## Python Questions and Answers – Math module– 3

1. What is the result of `math.trunc(3.1)`?
- a) 3.0
  - b) 3
  - c) 0.1
  - d) 1

**Answer: b**

**Explanation:** The integral part of the floating point number is returned.

2. What is the output of `print(math.trunc('3.1'))`?
- a) 3
  - b) 3.0
  - c) error
  - d) none of the mentioned

**Answer: c**

**Explanation:** `TypeError`, a string does not have `__trunc__` method.

3. Which of the following is the same as `math.exp(p)`?
- a) `e ** p`
  - b) `math.e ** p`
  - c) `p ** e`
  - d) `p ** math.e`

**Answer: b**

**Explanation:** `math.e` is the constant defined in the math module.

4. What is returned by `math.expml(p)`?
- a) `(math.e ** p) - 1`
  - b) `math.e ** (p - 1)`
  - c) error
  - d) none of the mentioned

**Answer: a**

**Explanation:** One is subtracted from the result of `math.exp(p)` and returned.

5. What is the default base used when `math.log(x)` is found?
- a) e
  - b) 10
  - c) 2
  - d) none of the mentioned

**Answer: a**

**Explanation:** The natural log of x is returned by default.

6. Which of the following aren't defined in the math module?

- a) `log2()`
- b) `log10()`
- c) `logx()`
- d) none of the mentioned

**Answer: c**

**Explanation:** `log2()` and `log10()` are defined in the math module.

7. What is returned by `int(math.pow(3, 2))`?

- a) 6
- b) 9
- c) error, third argument required
- d) error, too many arguments

**Answer: b**

**Explanation:** `math.pow(a, b)` returns `a ** b`.

8. What is output of `print(math.pow(3, 2))`?

- a) 9
- b) 9.0
- c) None
- d) None of the mentioned

**Answer: b**

**Explanation:** `math.pow()` returns a floating point number.

9. What is the value of x if `x = math.sqrt(4)`?

- a) 2
- b) 2.0
- c) (2, -2)
- d) (2.0, -2.0)

**Answer: b**

**Explanation:** The function returns one floating point number.

10. What does `math.sqrt(X, Y)` do?

- a) calculate the Xth root of Y
- b) calculate the Yth root of X
- c) error
- d) return a tuple with the square root of X and Y

**Answer: c**

**Explanation:** The function takes only one argument.

## Python Question and Answers – Random module – 1

1. To include the use of functions which are present in the random library, we must use the option:

- a) import random
- b) random.h
- c) import.random
- d) random.random

**Answer: a**

**Explanation:** The command `import random` is used to import the random module, which enables us to use the functions which are present in the random library.

2. The output of the following Python code is either 1 or 2.

```
import random
random.randint(1,2)
```

- a) True
- b) False

**Answer: a**

**Explanation:** The function `random.randint(a,b)` helps us to generate an integer between 'a' and 'b', including 'a' and 'b'. In this case, since there are no integers between 1 and 2, the output will necessarily be either 1 or 2'.

3. What will be the output of the following Python code?

```
import random
random.choice(2,3,4)
```

- a) An integer other than 2, 3 and 4
- b) Either 2, 3 or 4
- c) Error
- d) 3 only

**Answer: c**

**Explanation:** The code shown above displays the incorrect syntax of the function `random.choice()`. This function takes its numeric parameter in the form of a list. Hence the correct syntax would be: `random.choice([2,3,4])`.

4. What will be the output of the following Python code?

```
import random
random.choice([10.4, 56.99, 76])
```

- a) Error
- b) Either 10.4, 56.99 or 76
- c) Any number other than 10.4, 56.99 and 76
- d) 56.99 only

**Answer: b**

**Explanation:** The function `random.choice(a,b,c,d)` returns a random number which is

selected from a, b, c and d. The output can be either a, b, c or d. Hence the output of the snippet of code shown above can be either 10.4, 56.99 or 76.

5. What will be the output of the following Python function (random module has already been imported)?

```
random.choice('sun')
```

- a) sun
- b) u
- c) either s, u or n
- d) error

**Answer: c**

**Explanation:** The above function works with alphabets just as it does with numbers. The output of this expression will be either s, u or n.

6. What will be the output of the following Python function, assuming that the random module has already been imported?

```
random.uniform(3,4)
```

- a) Error
- b) Either 3 or 4
- c) Any integer other than 3 and 4
- d) Any decimal value between 3 and 4

**Answer: d**

**Explanation:** This question depicts the basic difference between the functions `random.randint(a, b)` and `random.uniform(a, b)`. While `random.randint(a,b)` generates an integer between 'a' and 'b', including 'a' and 'b', the function `random.uniform(a,b)` generates a decimal value between 'a' and 'b'.

7. What will be the output of the following Python function if the random module has already been imported?

```
random.randint(3.5,7)
```

- a) Error
- b) Any integer between 3.5 and 7, including 7
- c) Any integer between 3.5 and 7, excluding 7
- d) The integer closest to the mean of 3.5 and 7

**Answer: a**

**Explanation:** The function `random.randint()` does not accept a decimal value as a parameter. Hence the function shown above will throw an error.

8. Which of the following functions helps us to randomize the items of a list?

- a) seed
- b) randomise
- c) shuffle
- d) uniform

**Answer: c**

**Explanation:** The function `shuffle`, which is included in the `random` module, helps us to randomize the items of a list. This function takes the list as a parameter.

9. What will be the output of the following Python code?

```
random.seed(3)
random.randint(1,5)
2
random.seed(3)
random.randint(1,5)
```

- a) 3
- b) 2
- c) Any integer between 1 and 5, including 1 and 5
- d) Any integer between 1 and 5, excluding 1 and 5

**Answer: b**

**Explanation:** We use the `seed` function when we want to use the same random number once again in our program. Hence the output of the code shown above will be 2, since 2 was generated previously following which we used the `seed` function.

10. What is the interval of the value generated by the function `random.random()`, assuming that the `random` module has already been imported?

- a) (0,1)
- b) (0,1]
- c) [0,1]
- d) [0,1)

**Answer: d**

**Explanation:** The function `random.random()` generates a random value in the interval `[0,1)`, that is, including zero but excluding one.

11. What will be the output of the following Python code?

```
random.randrange(0,91,5)
```

- a) 10
- b) 18
- c) 79
- d) 95

**Answer: a**

**Explanation:** The function shown above will generate an output which is a multiple of 5 and is between 0 and 91. The only option which satisfies these criteria is 10. Hence the only possible output of this function is 10.

12. Both the functions `randint` and `uniform` accept \_\_\_\_\_ parameters.

- a) 0
- b) 1
- c) 3



d) 2

**Answer: d**

**Explanation:** Both of these functions, that is, `randint` and `uniform` are included in the `random` module and both of these functions accept 2 parameters. For example: `random.uniform(a,b)` where 'a' and 'b' specify the range.

13. The `randrange` function returns only an integer value.

- a) True
- b) False

**Answer: a**

**Explanation:** The function `randrange` returns only an integer value. Hence this statement is true.

14. What will be the output of the following Python code?

```
random.randrange(1,100,10)
```

- a) 32
- b) 67
- c) 91
- d) 80

**Answer: c**

**Explanation:** The output of this function can be any value which is a multiple of 10, plus 1. Hence a value like 11, 21, 31, 41...91 can be the output. Also, the value should necessarily be between 1 and 100. The only option which satisfies this criteria is 91.

15. What will be the output of the following Python function, assuming that the `random` library has already been included?

```
random.shuffle([1,2,24])
```

- a) Randomized list containing the same numbers in any order
- b) The same list, that is [1,2,24]
- c) A list containing any random numbers between 1 and 24
- d) Error

**Answer: d**

**Explanation:** The function shown above will result in an error because this is the incorrect syntax for the usage of the function `shuffle()`. The list should be previously declared and then passed to this function to get an output.

An example of the correct syntax:

```
>>> l=['a','b','c','d']
>>> random.shuffle(l)
>>> print(l)
```



## Python Questions and Answers – Random Module – 2

1. What the does random.seed(3) return?

- a) True
- b) None
- c) 3
- d) 1

**Answer: b**

**Explanation: The function random.seed() always returns a None.**

2. Which of the following cannot be returned by random.randrange(4)?

- a) 0
- b) 3
- c) 2.3
- d) none of the mentioned

**Answer: c**

**Explanation: Only integers can be returned.**

3. Which of the following is equivalent to random.randrange(3)?

- a) range(3)
- b) random.choice(range(0, 3))
- c) random.shuffle(range(3))
- d) random.select(range(3))

**Answer: b**

**Explanation: It returns one number from the given range.**

4. The function random.randint(4) can return only one of the following values. Which?

- a) 4
- b) 3.4
- c) error
- d) 5

**Answer: c**

**Explanation: Error, the function takes two arguments.**

5. Which of the following is equivalent to random.randint(3, 6)?

- a) random.choice([3, 6])
- b) random.randrange(3, 6)
- c) 3 + random.randrange(3)
- d) 3 + random.randrange(4)

**Answer: d**

**Explanation: random.randint(3, 6) can return any one of 3, 4, 5 and 6.**

6. Which of the following will not be returned by `random.choice("1 ,")`?

- a) 1
- b) (space)
- c) ,
- d) none of the mentioned

**Answer: d**

**Explanation:** Any of the characters present in the string may be returned.

7. Which of the following will never be displayed on executing `print(random.choice({0: 1, 2: 3}))`?

- a) 0
- b) 1
- c) `KeyError: 1`
- d) none of the mentioned

**Answer: a**

**Explanation:** It will not print 0 but `dict[0]` i.e. 1 may be printed.

8. What does `random.shuffle(x)` do when `x = [1, 2, 3]`?

- a) error
- b) do nothing, it is a placeholder for a function that is yet to be implemented
- c) shuffle the elements of the list in-place
- d) none of the mentioned

**Answer: c**

**Explanation:** The elements of the list passed to it are shuffled in-place.

9. Which type of elements are accepted by `random.shuffle()`?

- a) strings
- b) lists
- c) tuples
- d) integers

**Answer: b**

**Explanation:** Strings and tuples are immutable and an integer has no `len()`.

10. What is the range of values that `random.random()` can return?

- a) `[0.0, 1.0]`
- b) `(0.0, 1.0]`
- c) `(0.0, 1.0)`
- d) `[0.0, 1.0)`

**Answer: d**

**Explanation:** Any number that is greater than or equal to 0.0 and lesser than 1.0 can be returned.

## CHAPTER-3 WORKING WITH FUNCTIONS

1. Which of the following is the use of function in python?

- a) Functions are reusable pieces of programs
- b) Functions don't provide better modularity for your application
- c) you can't also create your own functions
- d) All of the mentioned

**Answer: a**

Explanation: Functions are reusable pieces of programs. They allow you to give a name to a block of statements, allowing you to run that block using the specified name anywhere in your program and any number of times.

2. Which keyword is used for function?

- a) Fun
- b) Define
- c) Def
- d) Function

**Answer: c**

Explanation: None.

3. What will be the output of the following Python code?

- 1. `def sayHello():`
- 2. `print('Hello World!')`
- 3. `sayHello()`
- 4. `sayHello()`
  - a)  
Hello World!  
Hello World!
  - b)  
'Hello World!'  
'Hello World!'
  - c)  
Hello  
Hello
  - d) None of the mentioned

**Answer: a**

Explanation: Functions are defined using the `def` keyword. After this keyword comes an identifier name for the function, followed by a pair of parentheses which may enclose some names of variables, and by the final colon that ends the line. Next follows the block of statements that are part of this function.

- 1. `def sayHello():`
- 2. `print('Hello World!')` # block belonging to the function
- 3. `# End of function #`

- 4.
5. sayHello() # call the function
6. sayHello() # call the function again

4. What will be the output of the following Python code?

1. def printMax(a, b):
  2. if a > b:
  3. print(a, 'is maximum')
  4. elif a == b:
  5. print(a, 'is equal to', b)
  6. else:
  7. print(b, 'is maximum')
  8. printMax(3, 4)
- a) 3
  - b) 4
  - c) 4 is maximum
  - d) None of the mentioned

**Answer: c**

Explanation: Here, we define a function called printMax that uses two parameters called a and b. We find out the greater number using a simple if..else statement and then print the bigger number.

5. What will be the output of the following Python code?

1. x = 50
  2. def func(x):
  3. print('x is', x)
  4. x = 2
  5. print('Changed local x to', x)
  6. func(x)
  7. print('x is now', x)
- a) x is now 50
  - b) x is now 2
  - c) x is now 100
  - d) None of the mentioned

**Answer: a**

Explanation: The first time that we print the value of the name x with the first line in the function's body, Python uses the value of the parameter declared in the main block, above the function definition.

Next, we assign the value 2 to x. The name x is local to our function. So, when we change the value of x in the function, the x defined in the main block remains unaffected.

With the last print function call, we display the value of x as defined in the main block, thereby confirming that it is actually unaffected by the local assignment within the previously called function.

6. What will be the output of the following Python code?

1. `x = 50`
  2. `def func():`
  3.     `global x`
  4.     `print('x is', x)`
  5.     `x = 2`
  6.     `print('Changed global x to', x)`
  7. `func()`
  8. `print('Value of x is', x)`
- a)  
x is 50  
Changed global x to 2  
Value of x is 50
- b)  
x is 50  
Changed global x to 2  
Value of x is 2
- c)  
x is 50  
Changed global x to 50  
Value of x is 50
- d) None of the mentioned

**Answer: b**

Explanation: The `global` statement is used to declare that `x` is a global variable – hence, when we assign a value to `x` inside the function, that change is reflected when we use the value of `x` in the main block.

7. What will be the output of the following Python code?

1. `def say(message, times = 1):`
  2.     `print(message * times)`
  3. `say('Hello')`
  4. `say('World', 5)`
- a)  
Hello  
WorldWorldWorldWorldWorld
- b)  
Hello  
World 5
- c)  
Hello  
World,World,World,World,World
- d)  
Hello  
HelloHelloHelloHelloHello

**Answer: a**

Explanation: For some functions, you may want to make some parameters optional and use



default values in case the user does not want to provide values for them. This is done with the help of default argument values. You can specify default argument values for parameters by appending to the parameter name in the function definition the assignment operator (=) followed by the default value.

The function named say is used to print a string as many times as specified. If we don't supply a value, then by default, the string is printed just once. We achieve this by specifying a default argument value of 1 to the parameter times.

In the first usage of say, we supply only the string and it prints the string once. In the second usage of say, we supply both the string and an argument 5 stating that we want to say the string message 5 times.

8. What will be the output of the following Python code?

1. `def func(a, b=5, c=10):`
2. `print('a is', a, 'and b is', b, 'and c is', c)`
- 3.
4. `func(3, 7)`
5. `func(25, c = 24)`
6. `func(c = 50, a = 100)`
  - a)  
a is 7 and b is 3 and c is 10  
a is 25 and b is 5 and c is 24  
a is 5 and b is 100 and c is 50
  - b)  
a is 3 and b is 7 and c is 10  
a is 5 and b is 25 and c is 24  
a is 50 and b is 100 and c is 5
  - c)  
a is 3 and b is 7 and c is 10  
a is 25 and b is 5 and c is 24  
a is 100 and b is 5 and c is 50
  - d) None of the mentioned

**Answer: c**

Explanation: If you have some functions with many parameters and you want to specify only some of them, then you can give values for such parameters by naming them – this is called keyword arguments – we use the name (keyword) instead of the position (which we have been using all along) to specify the arguments to the function.

The function named func has one parameter without a default argument value, followed by two parameters with default argument values.

In the first usage, `func(3, 7)`, the parameter a gets the value 3, the parameter b gets the value 7 and c gets the default value of 10.

In the second usage `func(25, c=24)`, the variable a gets the value of 25 due to the position of the argument. Then, the parameter c gets the value of 24 due to naming i.e. keyword arguments. The variable b gets the default value of 5.

In the third usage `func(c=50, a=100)`, we use keyword arguments for all specified values. Notice that we are specifying the value for parameter c before that for a even though a is defined before c in the function definition.

9. What will be the output of the following Python code?

- ```
1. def maximum(x, y):
2.     if x > y:
3.         return x
4.     elif x == y:
5.         return 'The numbers are equal'
6.     else:
7.         return y
8.
9. print(maximum(2, 3))
```
- a) 2
 - b) 3
 - c) The numbers are equal
 - d) None of the mentioned

Answer: b

Explanation: The maximum function returns the maximum of the parameters, in this case the numbers supplied to the function. It uses a simple if..else statement to find the greater value and then returns that value.

10. Which of the following is a feature of DocString?

- a) Provide a convenient way of associating documentation with Python modules, functions, classes, and methods
- b) All functions should have a docstring
- c) Docstrings can be accessed by the `__doc__` attribute on objects
- d) All of the mentioned

Answer: d

Explanation: Python has a nifty feature called documentation strings, usually referred to by its shorter name docstrings. DocStrings are an important tool that you should make use of since it helps to document the program better and makes it easier to understand.

11. Which are the advantages of functions in python?

- a) Reducing duplication of code
- b) Decomposing complex problems into simpler pieces
- c) Improving clarity of the code
- d) All of the mentioned

Answer: d

Explanation: None.

12. What are the two main types of functions?

- a) Custom function
- b) Built-in function & User defined function
- c) User function

d) System function

Answer: b

Explanation: Built-in functions and user defined ones. The built-in functions are part of the Python language. Examples are: dir(), len() or abs(). The user defined functions are functions created with the def keyword.

13. Where is function defined?

- a) Module
- b) Class
- c) Another function
- d) All of the mentioned

Answer: d

Explanation: Functions can be defined inside a module, a class or another function.

14. What is called when a function is defined inside a class?

- a) Module
- b) Class
- c) Another function
- d) Method

Answer: d

Explanation: None.

15. Which of the following is the use of id() function in python?

- a) Id returns the identity of the object
- b) Every object doesn't have a unique id
- c) All of the mentioned
- d) None of the mentioned

Answer: a

Explanation: Each object in Python has a unique id. The id() function returns the object's id.

16. Which of the following refers to mathematical function?

- a) sqrt
- b) rhombus
- c) add
- d) rhombus

Answer: a

Explanation: Functions that are always available for usage, functions that are contained within external modules, which must be imported and functions defined by a programmer with the def keyword.

Eg: math import sqrt

A sqrt() function is imported from the math module.

17. What will be the output of the following Python code?

1. `def cube(x):`
2. `return x * x * x`
3. `x = cube(3)`
4. `print x`
 - a) 9
 - b) 3
 - c) 27
 - d) 30

Answer: c

Explanation: A function is created to do a specific task. Often there is a result from such a task. The return keyword is used to return values from a function. A function may or may not return a value. If a function does not have a return keyword, it will send a none value.

18. What will be the output of the following Python code?

1. `def C2F(c):`
 2. `return c * 9/5 + 32`
 3. `print C2F(100)`
 4. `print C2F(0)`
 - a)
212
 - b)
32
 - c)
314
 - d)
24
- d) None of the mentioned

Answer: a

Explanation: The code shown above is used to convert a temperature in degree celsius to fahrenheit.

19. What will be the output of the following Python code?

1. `def power(x, y=2):`
2. `r = 1`
3. `for i in range(y):`
4. `r = r * x`
5. `return r`
6. `print power(3)`
7. `print power(3, 3)`
 - a)
212
 - b)
32

- 9
- 27
- c)
- 567
- 98
- d) None of the mentioned

Answer: b

Explanation: The arguments in Python functions may have implicit values. An implicit value is used, if no value is provided. Here we created a power function. The function has one argument with an implicit value. We can call the function with one or two arguments.

20. What will be the output of the following Python code?

1. `def sum(*args):`
 2. `"""Function returns the sum`
 3. `of all values"""`
 4. `r = 0`
 5. `for i in args:`
 6. `r += i`
 7. `return r`
 8. `print sum.__doc__`
 9. `print sum(1, 2, 3)`
 10. `print sum(1, 2, 3, 4, 5)`
- a)
 - 6
 - 15
 - b)
 - 6
 - 100
 - c)
 - 123
 - 12345
 - d) None of the mentioned

Answer: a

Explanation: We use the * operator to indicate, that the function will accept arbitrary number of arguments. The sum() function will return the sum of all arguments. The first string in the function body is called the function documentation string. It is used to document the function. The string must be in triple quotes.

21. Python supports the creation of anonymous functions at runtime, using a construct called

-
- a) lambda
 - b) pi
 - c) anonymous
 - d) none of the mentioned

Answer: a

Explanation: Python supports the creation of anonymous functions (i.e. functions that are not bound to a name) at runtime, using a construct called lambda. Lambda functions are restricted to a single expression. They can be used wherever normal functions can be used.

22. What will be the output of the following Python code?

1. `y = 6`
2. `z = lambda x: x * y`
3. `print z(8)`
 - a) 48
 - b) 14
 - c) 64
 - d) None of the mentioned

Answer: a

Explanation: The lambda keyword creates an anonymous function. The x is a parameter, that is passed to the lambda function. The parameter is followed by a colon character. The code next to the colon is the expression that is executed, when the lambda function is called. The lambda function is assigned to the z variable.

The lambda function is executed. The number 8 is passed to the anonymous function and it returns 48 as the result. Note that z is not a name for this function. It is only a variable to which the anonymous function was assigned.

23. What will be the output of the following Python code?

1. `lamb = lambda x: x ** 3`
2. `print(lamb(5))`
 - a) 15
 - b) 555
 - c) 125
 - d) None of the mentioned

Answer: c

Explanation: None.

24. Does Lambda contains return statements?

- a) True
- b) False

Answer: b

Explanation: lambda definition does not include a return statement. it always contains an expression which is returned. Also note that we can put a lambda definition anywhere a function is expected. We don't have to assign it to a variable at all.

25. Lambda is a statement.

- a) True
- b) False

Answer: b

Explanation: lambda is an anonymous function in Python. Hence this statement is false.

26. Lambda contains block of statements.

- a) True
- b) False

Answer: b

Explanation: None.

27. What will be the output of the following Python code?

- 1. `def f(x, y, z): return x + y + z`
- 2. `f(2, 30, 400)`
 - a) 432
 - b) 24000
 - c) 430
 - d) No output

Answer: a

Explanation: None.

28. What will be the output of the following Python code?

- 1. `def writer():`
- 2. `title = 'Sir'`
- 3. `name = (lambda x:title + ' ' + x)`
- 4. `return name`
- 5.
- 6. `who = writer()`
- 7. `who('Arthur')`
 - a) Arthur Sir
 - b) Sir Arthur
 - c) Arthur
 - d) None of the mentioned

Answer: b

Explanation: None.

29. What will be the output of the following Python code?

- 1. `L = [lambda x: x ** 2,`
- 2. `lambda x: x ** 3,`
- 3. `lambda x: x ** 4]`
- 4.
- 5. `for f in L:`
- 6. `print(f(3))`
 - a) 27
 - b) 81

343

b)

6

9

12

c)

9

27

81

d) None of the mentioned

Answer: c

Explanation: None.

30. What will be the output of the following Python code?

1. `min = (lambda x, y: x if x < y else y)`

2. `min(101*99, 102*98)`

a) 9997

b) 9999

c) 9996

d) None of the mentioned

Answer: c

Explanation: None.

31. What is a variable defined outside a function referred to as?

a) A static variable

b) A global variable

c) A local variable

d) An automatic variable

Answer: b

Explanation: The value of a variable defined outside all function definitions is referred to as a global variable and can be used by multiple functions of the program.

32. What is a variable defined inside a function referred to as?

a) A global variable

b) A volatile variable

c) A local variable

d) An automatic variable

Answer: c

Explanation: The variable inside a function is called as local variable and the variable definition is confined only to that function.

33. What will be the output of the following Python code?


```
i=0
def change(i):
    i=i+1
    return i
change(1)
print(i)
```

a) 1
b) Nothing is displayed
c) 0
d) An exception is thrown

Answer: c

Explanation: Any change made in to an immutable data type in a function isn't reflected outside the function.

34. What will be the output of the following Python code?

```
def a(b):
    b = b + [5]

c = [1, 2, 3, 4]
a(c)
print(len(c))
```

a) 4
b) 5
c) 1
d) An exception is thrown

Answer: b

Explanation: Since a list is mutable, any change made in the list in the function is reflected outside the function.

35. What will be the output of the following Python code?

```
a=10
b=20
def change():
    global b
    a=45
    b=56
change()
print(a)
print(b)
```

a)
10
56
b)
45
56

- c)
- 10
- 20
- d) Syntax Error

Answer: a

Explanation: The statement “global b” allows the global value of b to be accessed and changed. Whereas the variable a is local and hence the change isn’t reflected outside the function.

36. What will be the output of the following Python code?

```
def change(i = 1, j = 2):
```

```
    i = i + j
```

```
    j = j + 1
```

```
    print(i, j)
```

```
change(j = 1, i = 2)
```

- a) An exception is thrown because of conflicting values
- b) 1 2
- c) 3 3
- d) 3 2

Answer: d

Explanation: The values given during function call is taken into consideration, that is, i=2 and j=1.

37. What will be the output of the following Python code?

```
def change(one, *two):
```

```
    print(type(two))
```

```
change(1,2,3,4)
```

- a) Integer
- b) Tuple
- c) Dictionary
- d) An exception is thrown

Answer: b

Explanation: The parameter two is a variable parameter and consists of (2,3,4). Hence the data type is tuple.

38. If a function doesn’t have a return statement, which of the following does the function return?

- a) int
- b) null
- c) None
- d) An exception is thrown without the return statement

Answer: c

Explanation: A function can exist without a return statement and returns None if the function doesn't have a return statement.

39. What will be the output of the following Python code?

```
def display(b, n):  
    while n > 0:  
        print(b,end="")  
        n=n-1  
display('z',3)
```

- a) zzz
- b) zz
- c) An exception is executed
- d) Infinite loop

Answer: a

Explanation: The loop runs three times and 'z' is printed each time.

40. What will be the output of the following Python code?

```
def find(a, **b):  
    print(type(b))  
find('letters',A='1',B='2')
```

- a) String
- b) Tuple
- c) Dictionary
- d) An exception is thrown

Answer: c

Explanation: b combines the remaining parameters into a dictionary.

41. Which of the following functions is a built-in function in python?

- a) seed()
- b) sqrt()
- c) factorial()
- d) print()

Answer: d

Explanation: The function seed is a function which is present in the random module. The functions sqrt and factorial are a part of the math module. The print function is a built-in function which prints a value directly to the system output.

42. What will be the output of the following Python expression?

```
round(4.576)
```

- a) 4.5
- b) 5
- c) 4
- d) 4.6

Answer: b

Explanation: This is a built-in function which rounds a number to give precision in decimal digits. In the above case, since the number of decimal places has not been specified, the decimal number is rounded off to a whole number. Hence the output will be 5.

43. The function `pow(x,y,z)` is evaluated as:

- a) `(x**y)**z`
- b) `(x**y) / z`
- c) `(x**y) % z`
- d) `(x**y)*z`

Answer: c

Explanation: The built-in function `pow()` can accept two or three arguments. When it takes in two arguments, they are evaluated as `x**y`. When it takes in three arguments, they are evaluated as `(x**y)%z`.

44. What will be the output of the following Python function?

`all([2,4,0,6])`

- a) Error
- b) True
- c) False
- d) 0

Answer: c

Explanation: The function `all` returns false if any one of the elements of the iterable is zero and true if all the elements of the iterable are non zero. Hence the output of this function will be false.

45. What will be the output of the following Python expression?

`round(4.5676,2)?`

- a) 4.5
- b) 4.6
- c) 4.57
- d) 4.56

Answer: c

Explanation: The function `round` is used to round off the given decimal number to the specified decimal places. In this case, the number should be rounded off to two decimal places. Hence the output will be 4.57.

46. What will be the output of the following Python function?

`any([2>8, 4>2, 1>2])`

- a) Error
- b) True
- c) False
- d) `4>2`

Answer: b

Explanation: The built-in function `any()` returns true if any or more of the elements of the iterable is true (non zero), If all the elements are zero, it returns false.

47. What will be the output of the following Python function?

```
import math  
abs(math.sqrt(25))
```

- a) Error
- b) -5
- c) 5
- d) 5.0

Answer: d

Explanation: The `abs()` function prints the absolute value of the argument passed. For example: `abs(-5)=5`. Hence, in this case we get `abs(5.0)=5.0`.

48. What will be the output of the following Python function?

```
sum(2,4,6)  
sum([1,2,3])
```

- a) Error, 6
- b) 12, Error
- c) 12, 6
- d) Error, Error

Answer: a

Explanation: The first function will result in an error because the function `sum()` is used to find the sum of iterable numbers. Hence the outcomes will be Error and 6 respectively.

49. What will be the output of the following Python function?

```
all(3,0,4.2)
```

- a) True
- b) False
- c) Error
- d) 0

Answer: c

Explanation: The function `all()` returns 'True' if any one or more of the elements of the iterable are non zero. In the above case, the values are not iterable, hence an error is thrown.

50. What will be the output of the following Python function?

```
min(max(False,-3,-4), 2,7)
```

- a) 2
- b) False
- c) -3
- d) -4

Answer: b

Explanation: The function max() is being used to find the maximum value from among -3, -4 and false. Since false amounts to the value zero, hence we are left with min(0, 2, 7) Hence the output is 0 (false).

51. What will be the output of the following Python functions?

chr('97')

chr(97)

a)

a

Error

b)

'a'

a

c)

Error

a

d)

Error

Error

Answer: c

Explanation: The built-in function chr() returns the alphabet corresponding to the value given as an argument. This function accepts only integer type values. In the first function, we have passed a string. Hence the first function throws an error.

52. What will be the output of the following Python function?

complex(1+2j)

a) Error

b) 1

c) 2j

d) 1+2j

Answer: d

Explanation: The built-in function complex() returns the argument in a complex form. Hence the output of the function shown above will be 1+2j.

53. What is the output of the function complex()?

a) 0j

b) 0+0j

c) 0

d) Error

Answer: a

Explanation: The complex function returns 0j if both of the arguments are omitted, that is, if the function is in the form of complex() or complex(0), then the output will be 0j.

54. The function `divmod(a,b)`, where both 'a' and 'b' are integers is evaluated as:

- a) `(a%b, a//b)`
- b) `(a//b, a%b)`
- c) `(a//b, a*b)`
- d) `(a/b, a%b)`

Answer: b

Explanation: The function `divmod(a,b)` is evaluated as `a//b, a%b`, if both 'a' and 'b' are integers.

55. What will be the output of the following Python function?

```
divmod(10.5,5)
divmod(2.4,1.2)
```

- a)
`(2.00, 0.50)`
`(2.00, 0.00)`
- b)
`(2, 0.5)`
`(2, 0)`
- c)
`(2.0, 0.5)`
`(2.0, 0.0)`
- d)
`(2, 0.5)`
`(2)`

Answer: c

Explanation: See python documentation for the function `divmod`.

56. The function `complex('2-3j')` is valid but the function `complex('2 - 3j')` is invalid.

- a) True
- b) False

Answer: a

Explanation: When converting from a string, the string must not contain any blank spaces around the + or - operator. Hence the function `complex('2 - 3j')` will result in an error.

57. What will be the output of the following Python function?

```
list(enumerate([2, 3]))
```

- a) Error
- b) `[(1, 2), (2, 3)]`
- c) `[(0, 2), (1, 3)]`
- d) `[(2, 3)]`

Answer: c

Explanation: The built-in function `enumerate()` accepts an iterable as an argument. The

function shown in the above case returns containing pairs of the numbers given, starting from 0. Hence the output will be: [(0, 2), (1,3)].

58. What will be the output of the following Python functions?

```
x=3  
eval('x^2')
```

- a) Error
- b) 1
- c) 9
- d) 6

Answer: b

Explanation: The function eval is use to evaluate the expression that it takes as an argument. In the above case, the eval() function is used to perform XOR operation between 3 and 2. Hence the output is 1.

59. What will be the output of the following Python functions?

```
float('1e-003')  
float('2e+003')
```

- a)
3.00
300
- b)
0.001
2000.0
- c)
0.001
200
- d)
Error
2003

Answer: b

Explanation: The output of the first function will be 0.001 and that of the second function will be 2000.0. The first function created a floating point number up to 3 decimal places and the second function adds 3 zeros after the given number.

60. Which of the following functions does not necessarily accept only iterables as arguments?

- a) enumerate()
- b) all()
- c) chr()
- d) max()

Answer: c

Explanation: The functions enumerate(), all() and max() accept iterables as arguments

whereas the function `chr()` throws an error on receiving an iterable as an argument. Also note that the function `chr()` accepts only integer values.

61. Which of the following functions accepts only integers as arguments?

- a) `ord()`
- b) `min()`
- c) `chr()`
- d) `any()`

Answer: c

Explanation: The function `chr()` accepts only integers as arguments. The function `ord()` accepts only strings. The functions `min()` and `max()` can accept floating point as well as integer arguments.

62. Suppose there is a list such that: `l=[2,3,4]`. If we want to print this list in reverse order, which of the following methods should be used?

- a) `reverse(l)`
- b) `list(reverse(l))`
- c) `reversed(l)`
- d) `list(reversed(l))`

Answer: d

Explanation: The built-in function `reversed()` can be used to reverse the elements of a list. This function accepts only an iterable as an argument. To print the output in the form of a list, we use: `list(reversed(l))`. The output will be: `[4,3,2]`.

63. What will be the output of the following Python function?

`float(' -12345\n')`

(Note that the number of blank spaces before the number is 5)

- 12345.0 (5 blank spaces before the number) a)
- b) -12345.0
- c) Error
- d) -12345.000000000.... (infinite decimal places)

Answer: b

Explanation: The function `float()` will remove all the blank spaces and convert the integer to a floating point number. Hence the output will be: -12345.0.

64. What will be the output of the following Python function?

`ord(65)`

`ord('A')`

- a)
- A
- 65
- b)
- Error
- 65

- c)
A
Error
- d)
Error
Error

Answer: b

Explanation: The built-in function `ord()` is used to return the ASCII value of the alphabet passed to it as an argument. Hence the first function results in an error and the output of the second function is 65.

65. What will be the output of the following Python function?

```
float('-infinity')  
float('inf')
```

- a)
-inf
inf
- b)
-infinity
inf
- c)
Error
Error
- d)
Error
Junk value

Answer: a

Explanation: The output of the first function will be `-inf` and that of the second function will be `inf`.

66. Which of the following functions will not result in an error when no arguments are passed to it?

- a) `min()`
- b) `divmod()`
- c) `all()`
- d) `float()`

Answer: d

Explanation: The built-in functions `min()`, `max()`, `divmod()`, `ord()`, `any()`, `all()` etc throw an error when no arguments are passed to them. However there are some built-in functions like `float()`, `complex()` etc which do not throw an error when no arguments are passed to them. The output of `float()` is 0.0.

67. What will be the output of the following Python function?

```
hex(15)
```

- a) f
- b) 0xF
- c) 0Xf
- d) 0xf

Answer: d

Explanation: The function `hex()` is used to convert the given argument into its hexadecimal representation, in lower case. Hence the output of the function `hex(15)` is `0xf`.

68. Which of the following functions does not throw an error?

- a) `ord()`
- b) `ord(' ')`
- c) `ord('')`
- d) `ord('')`

Answer: b

Explanation: The function `ord()` accepts a character. Hence `ord()`, `ord('')` and `ord('')` throw errors. However the function `ord(' ')` does not throw an error because in this case, we are actually passing a blank space as an argument. The output of `ord(' ')` is 32 (ASCII value corresponding to blank space).

69. What will be the output of the following Python function?

```
len(["hello",2, 4, 6])
```

- a) 4
- b) 3
- c) Error
- d) 6

Answer: a

Explanation: The function `len()` returns the length of the number of elements in the iterable. Therefore the output of the function shown above is 4.

70. What will be the output of the following Python function?

```
oct(7)
```

```
oct('7')
```

- a)
Error
07
- b)
0o7
Error
- c)
0o7
Error
- d)
07
0o7

Answer: c

Explanation: The function oct() is used to convert its argument into octal form. This function does not accept strings. Hence the second function results in an error while the output of the first function is 0o7.

71. What is the type of each element in sys.argv?

- a) set
- b) list
- c) tuple
- d) string

Answer: d

Explanation: It is a list of strings.

72. What is the length of sys.argv?

- a) number of arguments
- b) number of arguments + 1
- c) number of arguments – 1
- d) none of the mentioned

Answer: b

Explanation: The first argument is the name of the program itself. Therefore the length of sys.argv is one more than the number arguments.

73. What will be the output of the following Python code?

```
def foo(k):
```

```
    k[0] = 1
```

```
q = [0]
```

```
foo(q)
```

```
print(q)
```

- a) [0]
- b) [1]
- c) [1, 0]
- d) [0, 1]

Answer: b

Explanation: Lists are passed by reference.

74. How are keyword arguments specified in the function heading?

- a) one-star followed by a valid identifier
- b) one underscore followed by a valid identifier
- c) two stars followed by a valid identifier
- d) two underscores followed by a valid identifier

Answer: c

Explanation: Refer documentation.

75. How many keyword arguments can be passed to a function in a single function call?

- a) zero
- b) one
- c) zero or more
- d) one or more

Answer: c

Explanation: Zero keyword arguments may be passed if all the arguments have default values.

76. What will be the output of the following Python code?

```
def foo(fname, val):  
    print(fname(val))  
foo(max, [1, 2, 3])  
foo(min, [1, 2, 3])
```

- a) 3 1
- b) 1 3
- c) error
- d) none of the mentioned

Answer: a

Explanation: It is possible to pass function names as arguments to other functions.

77. What will be the output of the following Python code?

```
def foo():  
    return total + 1  
total = 0  
print(foo())
```

- a) 0
- b) 1
- c) error
- d) none of the mentioned

Answer: b

Explanation: It is possible to read the value of a global variable directly.

78. What will be the output of the following Python code?

```
def foo():  
    total += 1  
    return total  
total = 0  
print(foo())
```

- a) 0
- b) 1
- c) error
- d) none of the mentioned

Answer: c

Explanation: It is not possible to change the value of a global variable without explicitly specifying it.

79. What will be the output of the following Python code?

```
def foo(x):  
    x = ['def', 'abc']  
    return id(x)  
q = ['abc', 'def']  
print(id(q) == foo(q))
```

- a) True
- b) False
- c) None
- d) Error

Answer: b

Explanation: A new object is created in the function.

80. What will be the output of the following Python code?

```
def foo(i, x=[]):  
    x.append(i)  
    return x  
for i in range(3):  
    print(foo(i))
```

- a) [0] [1] [2]
- b) [0] [0, 1] [0, 1, 2]
- c) [1] [2] [3]
- d) [1] [1, 2] [1, 2, 3]

Answer: b

Explanation: When a list is a default value, the same list will be reused.

81. What will be the output of the following Python code?

```
def foo(k):  
    k = [1]  
q = [0]  
foo(q)  
print(q)
```

- a) [0]
- b) [1]
- c) [1, 0]
- d) [0, 1]

Answer: a

Explanation: A new list object is created in the function and the reference is lost. This can be checked by comparing the id of k before and after k = [1].

82. How are variable length arguments specified in the function heading?

- a) one star followed by a valid identifier
- b) one underscore followed by a valid identifier
- c) two stars followed by a valid identifier
- d) two underscores followed by a valid identifier

Answer: a

Explanation: Refer documentation.

83. Which module in the python standard library parses options received from the command line?

- a) getopt
- b) os
- c) getarg
- d) main

Answer: a

Explanation: getopt parses options received from the command line.

84. What is the type of sys.argv?

- a) set
- b) list
- c) tuple
- d) string

Answer: b

Explanation: It is a list of elements.

85. What is the value stored in sys.argv[0]?

- a) null
- b) you cannot access it
- c) the program's name
- d) the first argument

Answer: c

Explanation: Refer documentation.

86. How are default arguments specified in the function heading?

- a) identifier followed by an equal to sign and the default value
- b) identifier followed by the default value within backticks ("")
- c) identifier followed by the default value within square brackets ([])
- d) identifier

Answer: a

Explanation: Refer documentation.

87. How are required arguments specified in the function heading?

- a) identifier followed by an equal to sign and the default value

- b) identifier followed by the default value within backticks (“)
- c) identifier followed by the default value within square brackets ([])
- d) identifier

Answer: d

Explanation: Refer documentation.

88. What will be the output of the following Python code?

```
def foo(x):  
    x[0] = ['def']  
    x[1] = ['abc']  
    return id(x)  
q = ['abc', 'def']  
print(id(q) == foo(q))
```

- a) True
- b) False
- c) None
- d) Error

Answer: a

Explanation: The same object is modified in the function.

89. Where are the arguments received from the command line stored?

- a) sys.argv
- b) os.argv
- c) argv
- d) none of the mentioned

Answer: a

Explanation: Refer documentation.

90. What will be the output of the following Python code?

```
def foo(i, x=[]):  
    x.append(x.append(i))  
    return x  
for i in range(3):  
    y = foo(i)  
print(y)
```

- a) [[[0]], [[0]], [1]], [[0]], [[0]], [1], [2]]
- b) [[0], [0], 1], [0], [0], 1], 2]
- c) [0, None, 1, None, 2, None]
- d) [[[0]], [[0]], [1]], [[0]], [[0]], [1], [2]]

Answer: c

Explanation: append() returns None.

91. What will be the output of the following Python code?

```
def f1():  
    x=15  
    print(x)  
x=12  
f1()  
a) Error  
b) 12  
c) 15  
d) 1512
```

Answer: c

Explanation: In the code shown above, x=15 is a local variable whereas x=12 is a global variable. Preference is given to local variable over global variable. Hence the output of the code shown above is 15.

92. What will be the output of the following Python code?

```
def f1():  
    x=100  
    print(x)  
x+=1  
f1()  
a) Error  
b) 100  
c) 101  
d) 99
```

Answer: b

Explanation: The variable x is a local variable. It is first printed and then modified. Hence the output of this code is 100.

93. What will be the output of the following Python code?

```
def san(x):  
    print(x+1)  
x=-2  
x=4  
san(12)  
a) 13  
b) 10  
c) 2  
d) 5
```

Answer: a

Explanation: The value passed to the function san() is 12. This value is incremented by one and printed. Hence the output of the code shown above is 13.

94. What will be the output of the following Python code?

```
def f1():  
    global x  
    x+=1  
    print(x)  
x=12  
print("x")  
a) Error  
b) 13  
c)  
13  
x  
d) x
```

Answer: d

Explanation: In the code shown above, the variable 'x' is declared as global within the function. Hence the output is 'x'. Had the variable 'x' been a local variable, the output would have been:

```
13  
x
```

95. What will be the output of the following Python code?

```
def f1(x):  
    global x  
    x+=1  
    print(x)  
f1(15)  
print("hello")  
a) error  
b) hello  
c) 16  
d)  
16  
hello
```

Answer: a

Explanation: The code shown above will result in an error because 'x' is a global variable. Had it been a local variable, the output would be: 16
hello

96. What will be the output of the following Python code?

```
x=12  
def f1(a,b=x):  
    print(a,b)  
x=15  
f1(4)
```

- a) Error
- b) 12 4
- c) 4 12
- d) 4 15

Answer: c

Explanation: At the time of leader processing, the value of 'x' is 12. It is not modified later. The value passed to the function f1 is 4. Hence the output of the code shown above is 4 12.

97. What will be the output of the following Python code?

```
def f():  
    global a  
    print(a)  
    a = "hello"  
    print(a)  
a = "world"  
f()  
print(a)  
a)  
    hello  
    hello  
    world  
b)  
    world  
    hello  
    hello  
c)  
    hello  
    world  
    world  
d)  
    world  
    hello  
    world
```

Answer: b

Explanation: Since the variable 'a' has been explicitly specified as a global variable, the value of a passed to the function is 'world'. Hence the output of this code is:

```
world  
hello  
hello
```

98. What will be the output of the following Python code?

```
def f1(a,b=[]):  
    b.append(a)  
    return b  
print(f1(2,[3,4]))
```

- a) [3,2,4]
- b) [2,3,4]
- c) Error
- d) [3,4,2]

Answer: d

Explanation: In the code shown above, the integer 2 is appended to the list [3,4]. Hence the output of the code is [3,4,2]. Both the variables a and b are local variables.

99. What will be the output of the following Python code?

```
def f(p, q, r):  
    global s  
    p = 10  
    q = 20  
    r = 30  
    s = 40  
    print(p,q,r,s)  
p,q,r,s = 1,2,3,4  
f(5,10,15)  
a) 1 2 3 4  
b) 5 10 15 4  
c) 10 20 30 40  
d) 5 10 15 40
```

Answer: c

Explanation: The above code shows a combination of local and global variables. The output of this code is: 10 20 30 40

100. What will be the output of the following Python code?

```
def f(x):  
    print("outer")  
    def f1(a):  
        print("inner")  
        print(a,x)  
f(3)  
f1(1)  
a)  
outer  
error  
b)  
inner  
error  
c)  
outer  
inner  
d) error
```

Answer: a

Explanation: The error will be caused due to the statement `f1(1)` because the function is nested. If `f1(1)` had been called inside the function, the output would have been different and there would be no error.

101. What will be the output of the following Python code?

```
x = 5
def f1():
    global x
    x = 4
def f2(a,b):
    global x
    return a+b+x
f1()
total = f2(1,2)
print(total)
a) Error
b) 7
c) 8
d) 15
```

Answer: b

Explanation: In the code shown above, the variable 'x' has been declared as a global variable under both the functions `f1` and `f2`. The value returned is $a+b+x = 1+2+4 = 7$.

102. What will be the output of the following Python code?

```
x=100
def f1():
    global x
    x=90
def f2():
    global x
    x=80
print(x)
a) 100
b) 90
c) 80
d) Error
```

Answer: a

Explanation: The output of the code shown above is 100. This is because the variable 'x' has been declared as global within the functions `f1` and `f2`.

103. Read the following Python code carefully and point out the global variables?

```
y, z = 1, 2
def f():
    global x
```

```
x = y+z
```

- a) x
- b) y and z
- c) x, y and z
- d) Neither x, nor y, nor z

Answer: c

Explanation: In the code shown above, x, y and z are global variables inside the function f. y and z are global because they are not assigned in the function. x is a global variable because it is explicitly specified so in the code. Hence, x, y and z are global variables.

104. Which of the following data structures is returned by the functions `globals()` and `locals()`?

- a) list
- b) set
- c) dictionary
- d) tuple

Answer: c

Explanation: Both the functions, that is, `globals()` and `locals()` return value of the data structure dictionary.

105. What will be the output of the following Python code?

```
x=1
def cg():
    global x
    x=x+1
```

```
cg()
```

```
x
```

- a) 2
- b) 1
- c) 0
- d) Error

Answer: a

Explanation: Since 'x' has been declared a global variable, it can be modified very easily within the function. Hence the output is 2.

106. On assigning a value to a variable inside a function, it automatically becomes a global variable.

- a) True
- b) False

Answer: b

Explanation: On assigning a value to a variable inside a function, it automatically becomes a local variable. Hence the above statement is false.

107. What will be the output of the following Python code?

```
e="butter"
def f(a): print(a)+e
f("bitter")
```

a) error
b)
 butter
 error
c)
 bitter
 error
d) bitterbutter

Answer: c

Explanation: The output of the code shown above will be 'bitter', followed by an error. The error is because the operand '+' is unsupported on the types used above.

108. What happens if a local variable exists with the same name as the global variable you want to access?

- a) Error
b) The local variable is shadowed
c) Undefined behavior
d) The global variable is shadowed

Answer: d

Explanation: If a local variable exists with the same name as the local variable that you want to access, then the global variable is shadowed. That is, preference is given to the local variable.

109. What will be the output of the following Python code?

```
a=10
globals()['a']=25
print(a)
```

a) 10
b) 25
c) Junk value
d) Error

Answer: b

Explanation: In the code shown above, the value of 'a' can be changed by using globals() function. The dictionary returned is accessed using key of the variable 'a' and modified to 25.

110. _____ returns a dictionary of the module namespace.
_____ returns a dictionary of the current namespace.

- a)
locals()

globals()
b)
locals()
locals()
c)
globals()
locals()
d)
globals()
globals()

Answer: c

Explanation: The function globals() returns a dictionary of the module namespace, whereas the function locals() returns a dictionary of the current namespace.

CHAPTER-4 – FILE HANDLING

1. To open a file c:\scores.txt for reading, we use _____

- a) infile = open("c:\scores.txt", "r")
- b) infile = open("c:\\scores.txt", "r")
- c) infile = open(file = "c:\scores.txt", "r")
- d) infile = open(file = "c:\\scores.txt", "r")

Answer: b

Explanation: Execute help(open) to get more details.

2. To open a file c:\scores.txt for writing, we use _____

- a) outfile = open("c:\scores.txt", "w")
- b) outfile = open("c:\\scores.txt", "w")
- c) outfile = open(file = "c:\scores.txt", "w")
- d) outfile = open(file = "c:\\scores.txt", "w")

Answer: b

Explanation: w is used to indicate that file is to be written to.

3. To open a file c:\scores.txt for appending data, we use _____

- a) outfile = open("c:\\scores.txt", "a")
- b) outfile = open("c:\\scores.txt", "rw")
- c) outfile = open(file = "c:\scores.txt", "w")
- d) outfile = open(file = "c:\\scores.txt", "w")

Answer: a

Explanation: a is used to indicate that data is to be appended.

4. Which of the following statements are true?

- a) When you open a file for reading, if the file does not exist, an error occurs
- b) When you open a file for writing, if the file does not exist, a new file is created
- c) When you open a file for writing, if the file exists, the existing file is overwritten with the new file
- d) All of the mentioned

Answer: d

Explanation: The program will throw an error.

5. To read two characters from a file object infile, we use _____

- a) infile.read(2)
- b) infile.read()
- c) infile.readline()
- d) infile.readlines()

Answer: a

Explanation: Execute in the shell to verify.

6. To read the entire remaining contents of the file as a string from a file object infile, we use _____

- a) infile.read(2)
- b) infile.read()
- c) infile.readline()
- d) infile.readlines()

Answer: b

Explanation: read function is used to read all the lines in a file.

7. What will be the output of the following Python code?

1. f = None
 2. for i in range (5):
 3. with open("data.txt", "w") as f:
 4. if i > 2:
 5. break
 6. print(f.closed)
- a) True
 - b) False
 - c) None
 - d) Error

Answer: a

Explanation: The WITH statement when used with open file guarantees that the file object is closed when the with block exits.

8. To read the next line of the file from a file object infile, we use _____

- a) infile.read(2)
- b) infile.read()
- c) infile.readline()
- d) infile.readlines()

Answer: c

Explanation: Execute in the shell to verify.

9. To read the remaining lines of the file from a file object infile, we use _____

- a) infile.read(2)
- b) infile.read()
- c) infile.readline()
- d) infile.readlines()

Answer: d

Explanation: Execute in the shell to verify.

10. The readlines() method returns _____

- a) str

- b) a list of lines
- c) a list of single characters
- d) a list of integers

Answer: b

Explanation: Every line is stored in a list and returned.

11. Which are the two built-in functions to read a line of text from standard input, which by default comes from the keyboard?

- a) Raw_input & Input
- b) Input & Scan
- c) Scan & Scanner
- d) Scanner

Answer: a

Explanation: Python provides two built-in functions to read a line of text from standard input, which by default comes from the keyboard. These functions are: raw_input and input

12. What will be the output of the following Python code?

- 1. str = raw_input("Enter your input: ");
 - 2. print "Received input is : ", str
- a)
Enter your input: Hello Python
Received input is : Hello Python
 - b)
Enter your input: Hello Python
Received input is : Hello
 - c)
Enter your input: Hello Python
Received input is : Python
 - d) None of the mentioned

Answer: a

Explanation: The raw_input([prompt]) function reads one line from standard input and returns it as a string. This would prompt you to enter any string and it would display same string on the screen. When I typed "Hello Python!"

13. What will be the output of the following Python code?

- 1. str = input("Enter your input: ");
 - 2. print "Received input is : ", str
- a)
Enter your input: [x*5 for x in range(2,10,2)]
Received input is : [x*5 for x in range(2,10,2)]
 - b)
Enter your input: [x*5 for x in range(2,10,2)]
Received input is : [10, 30, 20, 40]

- c)
Enter your input: [x*5 for x in range(2,10,2)]
Received input is : [10, 10, 30, 40]
d) None of the mentioned

Answer: a

Explanation: None.

14. Which one of the following is not attributes of file?

- a) closed
- b) softspace
- c) rename
- d) mode

Answer: c

Explanation: rename is not the attribute of file rest all are files attributes.

Attribute	Description
file.closed	Returns true if file is closed, false otherwise.
file.mode	Returns access mode with which file was opened.
file.name	Returns name of the file.
file.softspace	Returns false if space explicitly required with print, true otherwise.

15. What is the use of tell() method in python?

- a) tells you the current position within the file
- b) tells you the end position within the file
- c) tells you the file is opened or not
- d) none of the mentioned

Answer: a

Explanation: The tell() method tells you the current position within the file; in other words, the next read or write will occur at that many bytes from the beginning of the file.

16. What is the current syntax of rename() a file?

- a) rename(current_file_name, new_file_name)
- b) rename(new_file_name, current_file_name,)
- c) rename((current_file_name, new_file_name))
- d) none of the mentioned

Answer: a

Explanation: This is the correct syntax which has shown below.

rename(current_file_name, new_file_name)

17. What is the current syntax of remove() a file?

- a) remove(file_name)
- b) remove(new_file_name, current_file_name,)
- c) remove(, file_name))

d) none of the mentioned

Answer: a

Explanation: remove(file_name)

18. What will be the output of the following Python code?

```
1. fo = open("foo.txt", "rw+")
2. print "Name of the file: ", fo.name
3.
4. # Assuming file has following 5 lines
5. # This is 1st line
6. # This is 2nd line
7. # This is 3rd line
8. # This is 4th line
9. # This is 5th line
10.
11. for index in range(5):
12.     line = fo.next()
13.     print "Line No %d - %s" % (index, line)
14.
15. # Close opened file
16. fo.close()
```

- a) Compilation Error
- b) Syntax Error
- c) Displays Output
- d) None of the mentioned

Answer: c

Explanation: It displays the output as shown below. The method next() is used when a file is used as an iterator, typically in a loop, the next() method is called repeatedly. This method returns the next input line, or raises StopIteration when EOF is hit.

Output:

Name of the file: foo.txt

Line No 0 - This is 1st line

Line No 1 - This is 2nd line

Line No 2 - This is 3rd line

Line No 3 - This is 4th line

Line No 4 - This is 5th line

19. What is the use of seek() method in files?

- a) sets the file's current position at the offset
- b) sets the file's previous position at the offset
- c) sets the file's current position within the file

d) none of the mentioned

Answer: a

Explanation: Sets the file's current position at the offset. The method seek() sets the file's current position at the offset.

Following is the syntax for seek() method:

`fileObject.seek(offset[, whence])`

Parameters

offset — This is the position of the read/write pointer within the file.

whence — This is optional and defaults to 0 which means absolute file positioning, other values are 1 which means seek relative to the current position and 2 means seek relative to the file's end.

20. What is the use of truncate() method in file?

- a) truncates the file size
- b) deletes the content of the file
- c) deletes the file size
- d) none of the mentioned

Answer: a

Explanation: The method truncate() truncates the file size. Following is the syntax for truncate() method:

`fileObject.truncate([size])`

Parameters

size — If this optional argument is present, the file is truncated to (at most) that size.

21. Which is/are the basic I/O connections in file?

- a) Standard Input
- b) Standard Output
- c) Standard Errors
- d) All of the mentioned

Answer: d

Explanation: Standard input, standard output and standard error. Standard input is the data that goes to the program. The standard input comes from a keyboard. Standard output is where we print our data with the print keyword. Unless redirected, it is the terminal console. The standard error is a stream where programs write their error messages. It is usually the text terminal.

22. What will be the output of the following Python code? (If entered name is sanfoundry)

1. `import sys`
2. `print 'Enter your name: '`
3. `name = "`
4. `while True:`
5. `c = sys.stdin.read(1)`
6. `if c == '\n':`
7. `break`

8. `name = name + c`
9.
10. `print 'Your name is:', name`
a) sanfoundry
b) sanfoundry, sanfoundry
c) San
d) None of the mentioned

Answer: a

Explanation: In order to work with standard I/O streams, we must import the sys module. The read() method reads one character from the standard input. In our example we get a prompt saying "Enter your name". We enter our name and press enter. The enter key generates the new line character: \n.

Output:

Enter your name: sanfoundry
Your name is: sanfoundry

23. What will be the output of the following Python code?

1. `import sys`
2. `sys.stdout.write(' Hello\n')`
3. `sys.stdout.write('Python\n')`
a) Compilation Error
b) Runtime Error
c) Hello Python
d)
Hello
Python

Answer: d

Explanation: None

Output:

Hello
Python

24. Which of the following mode will refer to binary data?

- a) r
b) w
c) +
d) b

Answer:d

Explanation: Mode Meaning is as explained below:

r Reading
w Writing
a Appending
b Binary data
+ Updating.

25. What is the pickling?

- a) It is used for object serialization
- b) It is used for object deserialization
- c) None of the mentioned
- d) All of the mentioned

Answer: a

Explanation: Pickle is the standard mechanism for object serialization. Pickle uses a simple stack-based virtual machine that records the instructions used to reconstruct the object. This makes pickle vulnerable to security risks by malformed or maliciously constructed data, that may cause the deserializer to import arbitrary modules and instantiate any object.

26. What is unpickling?

- a) It is used for object serialization
- b) It is used for object deserialization
- c) None of the mentioned
- d) All of the mentioned

Answer: b

Explanation: We have been working with simple textual data. What if we are working with objects rather than simple text? For such situations, we can use the pickle module. This module serializes Python objects. The Python objects are converted into byte streams and written to text files. This process is called pickling. The inverse operation, reading from a file and reconstructing objects is called deserializing or unpickling.

27. What is the correct syntax of open() function?

- a) file = open(file_name [, access_mode][, buffering])
- b) file object = open(file_name [, access_mode][, buffering])
- c) file object = open(file_name)
- d) none of the mentioned

Answer: b

Explanation: Open() function correct syntax with the parameter details as shown below:

file object = open(file_name [, access_mode][, buffering])

Here is parameters' detail:

file_name: The file_name argument is a string value that contains the name of the file that you want to access.

access_mode: The access_mode determines the mode in which the file has to be opened, i.e., read, write, append, etc. A complete list of possible values is given below in the table. This is optional parameter and the default file access mode is read (r).

buffering: If the buffering value is set to 0, no buffering will take place. If the buffering value is 1, line buffering will be performed while accessing a file. If you specify the buffering value as an integer greater than 1, then buffering action will be performed with the indicated buffer size. If negative, the buffer size is the system default(default behavior).

28. What will be the output of the following Python code?

1. `fo = open("foo.txt", "wb")`
2. `print "Name of the file: ", fo.name`
3. `fo.flush()`
4. `fo.close()`
 - a) Compilation Error
 - b) Runtime Error
 - c) No Output
 - d) Flushes the file when closing them

Answer: d

Explanation: The method `flush()` flushes the internal buffer. Python automatically flushes the files when closing them. But you may want to flush the data before closing any file.

29. Correct syntax of `file.writelines()` is?
- a) `file.writelines(sequence)`
 - b) `fileObject.writelines()`
 - c) `fileObject.writelines(sequence)`
 - d) none of the mentioned

Answer: c

Explanation: The method `writelines()` writes a sequence of strings to the file. The sequence can be any iterable object producing strings, typically a list of strings. There is no return value.

Syntax

Following is the syntax for `writelines()` method:

`fileObject.writelines(sequence)`.

30. Correct syntax of `file.readlines()` is?
- a) `fileObject.readlines(sizehint)`;
 - b) `fileObject.readlines()`;
 - c) `fileObject.readlines(sequence)`
 - d) none of the mentioned

Answer: a

Explanation: The method `readlines()` reads until EOF using `readline()` and returns a list containing the lines. If the optional `sizehint` argument is present, instead of reading up to EOF, whole lines totalling approximately `sizehint` bytes (possibly after rounding up to an internal buffer size) are read.

Syntax

Following is the syntax for `readlines()` method:

`fileObject.readlines(sizehint)`;

Parameters

`sizehint` — This is the number of bytes to be read from the file.

31. In file handling, what does this terms means “r, a”?
- a) read, append
 - b) append, read

- c) write, append
- d) none of the mentioned

Answer: a

Explanation: r- reading, a-appending.

32. What is the use of “w” in file handling?

- a) Read
- b) Write
- c) Append
- d) None of the mentioned

Answer: b

Explanation: This opens the file for writing. It will create the file if it doesn't exist, and if it does, it will overwrite it.

fh = open("filename_here", "w").

33. What is the use of “a” in file handling?

- a) Read
- b) Write
- c) Append
- d) None of the mentioned

Answer: c

Explanation: This opens the file in appending mode. That means, it will be open for writing and everything will be written to the end of the file.

fh=open("filename_here", "a").

34. Which function is used to read all the characters?

- a) Read()
- b) Readcharacters()
- c) Readall()
- d) Readchar()

Answer: a

Explanation: The read function reads all characters fh = open("filename", "r")
content = fh.read().

35. Which function is used to read single line from file?

- a) Readline()
- b) Readlines()
- c) Readstatement()
- d) Readfullline()

Answer: b

Explanation: The readline function reads a single line from the file fh = open("filename",

```
"I")
```

```
content = fh.readline().
```

36. Which function is used to write all the characters?

- a) write()
- b) writecharacters()
- c) writeall()
- d) writechar()

Answer: a

Explanation: To write a fixed sequence of characters to a file

```
fh = open("hello.txt", "w")
```

```
write("Hello World").
```

37. Which function is used to write a list of string in a file?

- a) writeline()
- b) writelines()
- c) writestatement()
- d) writefullline()

Answer: a

Explanation: With the writeline function you can write a list of strings to a file

```
fh = open("hello.txt", "w")
```

```
lines_of_text = ["a line of text", "another line of text", "a third line"]
```

```
fh.writelines(lines_of_text).
```

38. Which function is used to close a file in python?

- a) Close()
- b) Stop()
- c) End()
- d) Closefile()

Answer: a

Explanation: f.close()to close it and free up any system resources taken up by the open file.

39. Is it possible to create a text file in python?

- a) Yes
- b) No
- c) Machine dependent
- d) All of the mentioned

Answer: a

Explanation: Yes we can create a file in python. Creation of file is as shown below.

```
file = open("newfile.txt", "w")
```

```
file.write("hello world in the new file\n")
```

```
file.write("and another line\n")
```

```
file.close().
```

40. Which of the following are the modes of both writing and reading in binary format in file?

- a) wb+
- b) w
- c) wb
- d) w+

Answer: a

Explanation: Here is the description below

“w” Opens a file for writing only. Overwrites the file if the file exists. If the file does not exist, creates a new file for writing.

“wb” Opens a file for writing only in binary format. Overwrites the file if the file exists. If the file does not exist, creates a new file for writing.

“w+” Opens a file for both writing and reading. Overwrites the existing file if the file exists. If the file does not exist, creates a new file for reading and writing.

“wb+” Opens a file for both writing and reading in binary format. Overwrites the existing file if the file exists. If the file does not exist, creates a new file for reading and writing

41. Which of the following is not a valid mode to open a file?

- a) ab
- b) rw
- c) r+
- d) w+

Answer: b

Explanation: Use r+, w+ or a+ to perform both read and write operations using a single file object.

42. What is the difference between r+ and w+ modes?

- a) no difference
- b) in r+ the pointer is initially placed at the beginning of the file and the pointer is at the end for w+
- c) in w+ the pointer is initially placed at the beginning of the file and the pointer is at the end for r+
- d) depends on the operating system

Answer: b

Explanation: none.

43. How do you get the name of a file from a file object (fp)?

- a) fp.name
- b) fp.file(name)
- c) self.__name__(fp)
- d) fp.__name__()

Answer: a

Explanation: name is an attribute of the file object.

44. Which of the following is not a valid attribute of a file object (fp)?

- a) fp.name
- b) fp.closed
- c) fp.mode
- d) fp.size

Answer: d

Explanation: fp.size has not been implemented.

45. How do you close a file object (fp)?

- a) close(fp)
- b) fclose(fp)
- c) fp.close()
- d) fp.__close__()

Answer: c

Explanation: close() is a method of the file object.

46. How do you get the current position within the file?

- a) fp.seek()
- b) fp.tell()
- c) fp.loc
- d) fp.pos

Answer: b

Explanation: It gives the current position as an offset from the start of file.

47. How do you rename a file?

- a) fp.name = 'new_name.txt'
- b) os.rename(existing_name, new_name)
- c) os.rename(fp, new_name)
- d) os.set_name(existing_name, new_name)

Answer: b

Explanation: os.rename() is used to rename files.

48. How do you delete a file?

- a) del(fp)
- b) fp.delete()
- c) os.remove('file')
- d) os.delete('file')

Answer: c

Explanation: os.remove() is used to delete files.

49. How do you change the file position to an offset value from the start?

- a) fp.seek(offset, 0)

- b) `fp.seek(offset, 1)`
- c) `fp.seek(offset, 2)`
- d) none of the mentioned

Answer: a

Explanation: 0 indicates that the offset is with respect to the start.

50. What happens if no arguments are passed to the seek function?

- a) file position is set to the start of file
- b) file position is set to the end of file
- c) file position remains unchanged
- d) error

Answer: d

Explanation: `seek()` takes at least one argument.

MULTIPLE CHOICE QUESTIONS:

1. What is the use of “a” in file handling?

- a) Read
- b) Write
- c) Append
- d) None of the mentioned

2. How do you rename a file?

- a) `f.name = 'new_name.txt'`
- b) `os.rename(old_file, new_name)`
- c) `os.set_name(old_file, new_name)`

3. What is the use of `seek()` method in files?

- a) sets the file's current position at the offset
- b) sets the file's previous position at the offset
- c) sets the file's current position within the file
- d) none of the mentioned

Correct answer

sets the file's current position at the offset

4. How do you get the name of a file from a file object (f)?

- a) `f.name`
- b) `f.file(name)`
- c) `self.__name__(f)`
- d) `f.__name__()`

Correct answer

f.name

5. What is the use of “w” in file handling?

- a) Read
- b) Write
- c) Append
- d) None of the mentioned

6. What is the correct syntax to remove() a file?

- a) remove(file_name)
- b) remove(new_file_name, current_file_name,)
- c) remove((), file_name))
- d) none of the mentioned

Correct answer

remove(file_name)

7. To read two characters from a file object f, we use _____

- a) f.read(2)
- b) f.read()
- c) f.readline()
- d) f.readlines()

Correct answer

f.read(2)

8. What is the correct syntax of rename() a file?

- a) rename(current_file_name, new_file_name)
- b) rename(new_file_name, current_file_name,)
- c) rename((),(current_file_name, new_file_name))
- d) none of the mentioned

9. Which of the following statements are true?

- a) When you open a file for reading an error occurs, if the file does not exist
- b) When you open a file for writing a new file is created, if the file does not exist
- c) When you open a file for writing, the existing file is overwritten with the new file, if the file exists,
- d) All of the mentioned

10. Which are the two built-in functions to read a line of text from standard input, which by default comes from the keyboard?

- a) raw_input & Input
- b) Input & Scan

- c) Scan & Scanner
- d) Scanner

Correct answer

raw_input & Input

11. What will be the output of the following Python code?

```
ab = open("abb.txt", "wb")
print("Name of the file: ", ab.name)
ab.flush()
ab.close()
```

- a) Compilation Error
- b) Runtime Error
- c) No Output
- d) Flushes the file when closing them

Correct answer

Flushes the file when closing them

12. What happens if no arguments are passed to the seek function?

- a) file position is set to the start of file
- b) file position is set to the end of file
- c) file position remains unchanged
- d) error

Correct answer

error

13. To read the next line of the file from a file object f, we use _____

- a) f.read(2)
- b) f.read()
- c) f.readline()
- d) f.readlines()

Correct answer

f.readline()

14. What is the use of truncate() method in file?

- a) truncates the file size
- b) deletes the content of the file
- c) deletes the file size
- d) none of the mentioned

Correct answer

truncates the file size

15. Is it possible to create a text file in Python?

- a) Yes
- b) No
- c) Machine dependent
- d) All of the mentioned

Correct answer

Yes

16. Which of the following are the modes of both writing and reading in binary format in file?

- a) wb+
- b) w
- c) wb
- d) w+

Correct answer

wb+

17. What is the difference between r+ and w+ modes?

- a) No difference
- b) In case of r+ the pointer is initially placed at the beginning of the file and the pointer is at the end for w+
- c) In case of w+ the pointer is initially placed at the beginning of the file and the pointer is at the end for r+
- d) Depends on the operating system

Correct answer

In case of r+ the pointer is initially placed at the beginning of the file and the pointer is at the end for w+

18. To open a file c:\test.txt for appending data, we use _____

- a) outfile = open("c:\\test.txt", "a")
- b) outfile = open("c:\\test.txt", "rw")
- c) outfile = open(file = "c:\\test.txt", "w")
- d) outfile = open(file = "c:\\test.txt", "w")



Correct answer

outfile = open("c:\\test.txt", "a")

19. What will be the output of the following Python code?

```
import sys
print(sys.stdout.write(' Hello\n'))
print(sys.stdout.write('World\n'))
```

- a) Compilation Error
- b) Runtime Error

- c) 
- output
- d) 
- Output

20. Correct syntax of `file.readlines()` is?

- a) `fileObject.readlines(sizehint);`
- b) `fileObject.readlines();`
- c) `fileObject.readlines(sequence)`
- d) none of the mentioned

21. Command to delete a file.

- a) `del(fp)`
- b) `fp.delete()`
- c) `os.remove('file')`
- d) `os.delete('file')`

22. Which function is used to write all the characters?

- a) `write()`
- b) `writecharacters()`
- c) `writeall()`
- d) `writechar()`

Correct answer

`write()`

23. What is the correct syntax of `open()` function?

- a) `file = open(file_name [, access_mode][, buffering])`
- b) `file object = open(file_name [, access_mode][, buffering])`
- c) `file object = open(file_name)`
- d) none of the mentioned

Correct answer

`file object = open(file_name [, access_mode][, buffering])`

24. Which of the following is not a valid attribute of a file object (f)?

- a) f.name
- b) f.closed
- c) f.mode
- d) f.size

Correct answer

f.size

25. Which one of the following is not attributes of file?

- a) closed
- b) softspace
- c) rename
- d) mode

26. Which function is used to read single line from file?

- a) readline()
- b) readlines()
- c) readstatement()
- d) readfullline()

27. Which of the following mode will refer to binary data?

- a) r
- b) w
- c) +
- d) b

28. To open a file c:\text.txt for reading, we use _____

- a) f = open("c:\test.txt", "r")
- b) f = open("c:\\test.txt", "r")
- c) f = open(file = "c:\test.txt", "r")
- d) f = open(file = "c:\\test.txt", "r")

Correct answer

f = open("c:\\test.txt", "r")

29. Change the file position to an offset value from the starting position.

- a) fp.seek(offset, 0)
- b) fp.seek(offset, 1)
- c) fp.seek(offset, 2)
- d) none of the mentioned

Correct answer

fp.seek(offset, 0)

30.What is the use of tell() method in python?

- a) Inform you the current position within the file
- b) Inform you the end position within the file
- c) Inform you the file is opened or not
- d) None of the mentioned

Correct answer

Inform you the current position within the file

31.How do you close a file object (fp)?

- a) close(fp)
- b) fclose(fp)
- c) fp.close()
- d) fp.__close__()

Correct answer

fp.close()

32.Correct syntax of file.writelines() is?

- a) file.writelines(sequence)
- b) fileObject.writelines()
- c) fileObject.writelines(sequence)
- d) none of the mentioned

33.What will be the output of the following Python code?

```
import sys
print('w3resource'),
name = 'w3resource'
while True:
    c = sys.stdin.read(1)
    if c == '\n':
        break
    name = name + c

print('w3resource', name)
```

- a) w3resource
- b) w3resource , w3resource
- c) w3r
- d) None of the mentioned

34.What will be the output of the following Python code?

```
x = None
for y in range (3):
    with open("data.txt", "w") as x:
        if y > 2:
            break
print(x.closed)
```

- a) True
- b) False
- c) None
- d) Error

Correct answer

True

35. In file handling, what does this term mean "r, a"?

- a) read, append
- b) append, read
- c) write, append
- d) none of the mentioned

Correct answer

read, append

36. To open a file c:\text.txt for writing, we use _____

- a) outfile = open("c:\test.txt", "w")
- b) outfile = open("c:\\test.txt", "w")
- c) outfile = open(file = "c:\test.txt", "w")
- d) outfile = open(file = "c:\\test.txt", "w")

Correct answer

outfile = open("c:\\test.txt", "w")

37. Which function is used to write a list of strings in a file?

- a) writeline()
- b) writelines()
- c) writestatement()
- d) writefullline()

Correct answer

writelines()

38. Which function is used to read all the characters?

- a) read()
- b) readcharacters()
- c) readall()
- d) readchar()

Correct answer

read()

39. Which of the following is not a valid mode to open a file?

- a) ab
- b) rw
- c) r+
- d) w+

Correct answer

rw

40. The readlines() method returns _____

- a) str
- b) a list of lines
- c) a list of single characters
- d) a list of integers

41. Which function is used to close a file in Python?

- a) close()
- b) stop()
- c) end()
- d) closefile()

Correct answer

close()

42. How do you get the current position within the file?

- a) f.seek()
- b) f.tell()
- c) f.loc
- d) f.pos

Correct answer

f.tell()

43. To read the remaining lines of the file from a file object f, we use _____

- a) f.read(2)
- b) f.read()
- c) f.readline()
- d) f.readlines()

Correct answer

f.readlines()

44. To read the entire remaining contents of the file as a string from a file object f, we

use _____

- a) f.read(2)
- b) f.read()
- c) f.readline()
- d) f.readlines()

Correct answer

f.read()

MCQs – FILE HANDLING:

[1] Which of the following is not a correct statement for binary files?

- a) Easy for carrying data into buffer
- b) Much faster than other file systems
- c) Characters translation is not required
- d) Every line ends with new line character '\n'**

[2] Which of the following file mode open a file for reading and writing both in the binary file?

- a) r
- b) rb
- c) rb+**
- d) rwb

[3] Which of the following file mode opens a file for reading and writing both as well as overwrite the existing file if the file exists otherwise creates a new file?

- a) w
- b) wb+**
- c) wb
- d) rwb

[4] Which of the following file mode opens a file for append or read a binary file and moves the files pointer at the end of the file if the file already exist otherwise create a new file?

- a) a
- b) ab
- c) ab+**
- d) a+

[5] Ms. Suman is working on a binary file and wants to write data from a list to a binary file. Consider list object as l1, binary file suman_list.dat, and file object as f. Which of the following can be the correct statement for her?

- a) f = open('sum_list','wb'); pickle.dump(l1,f)**
- b) f = open('sum_list','rb'); l1=pickle.dump(f)
- c) f = open('sum_list','wb'); pickle.load(l1,f)
- d) f = open('sum_list','rb'); l1=pickle.load(f)

[6] Which option will be correct for reading file for suman from q-5?

→ Option) f = open('sum_list','rb'); l1=pickle.load(f)

[7] In which of the file mode existing data will be intact in binary file?

- a) ab**
- b) a
- c) w
- d) wb

[8] Which one of the following is correct statement?

- a) import – pickle
- b) pickle import
- c) import pickle**
- d) All of the above

Data file handling in python – MCQs

1 Every file has its own identity associated with it. Which is known as –

- a. icon
- b. extension**
- c. format
- d. file type

2 Which of the following is not a known file type?

- a. .pdf
- b. jpg
- c. mp3
- d. txp**

3. In f=open(“data.txt”, “r”), r refers to _____.

- a. File handle
- b. File object
- c. File Mode**
- d Buffer

4. EOL stands for

- a. End Of Line**
- b. End Of List
- c. End of Lines
- d. End Of Location

5. Which of the following file types allows to store large data files in the computer memory?

- a. Text Files
- b. Binary Files**
- c. CSV Files
- d. None of these

6. Which of the following file types can be opened with notepad as well as ms excel?

- a. Text Files
- b. Binary Files
- c. CSV Files**
- d. None of these

7. Which of the following is nor a proper file access mode?

- a. close**
- b. read
- c. write

d. append

8. To read 4th line from text file, which of the following statement is true?

a. dt = f.readlines();print(dt[3])

b. dt=f.read(4) ;print(dt[3])

c. dt=f.readline(4);print(dt[3])

d. All of these

9 Which of the following function flushes the files implicitly?

a. flush()

b. close()

c. open()

d. fflush()

10. Which of the following functions flushes the data before closing the file?

a. flush()

b. close()

c. open()

d. fflush()