

Python Programming Question Bank

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|--------|---|----|---|---|----|
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| PYTHON | 1 |
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PYTHON

Q.1) What is the output of the following?

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

a) 123456

b) 1234567

c) error

d) none of the entioned

Q.2) What is the output of the following? 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

Q.3) What is the output of the following?

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

a) no output

b) i i i i i i ...

c) a a a a a a ...

d) a b c d e f

Q.4) What is the output of the following? 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 | | |
|--|---|--------------------------------|--|--|--|
| Q.5) What is the out | put of the following? | | | | |
| x = 'abcd' for i in x: | · | | | | |
| a) a b c d | b) A B C D | c) a B C D | d) error | | |
| Q.6) What is the out if None: | put of the following co | ode? | | | |
| print("Hello") | | | | | |
| a) False | b) Hello | c) Nothing will be printed | d) Syntax error | | |
| Q.7) The ifelifels a) True b) False | • | ock of code among several b | locks. s no elif statement in Python. | | |
| | | 227 22 | A | | |
| Q.8) What is the out for i in [1, 0]: print(a) 2 | put of the following co i+1) | de? Manti | riA | | |
| 1 | | | | | |
| b) [2, 1] | | | | | |
| c) 2 0 | | | | | |
| d) [2, 0] | | | | | |
| Q.9)In Python, for a | nd while loop can <mark>have</mark> | optional else statement? | | | |
| a) Only for loop can | have optional else stat | tement | | | |
| b) Only while loop c | an have option <mark>al else s</mark> | tatement | | | |
| c) Both loops can ha | ave optional e <mark>lse state</mark> r | ment | | | |
| d) Loops cannot have else statement in Python | | | | | |
| Q.10) What is the o print(sum) | utput of the following | code? i = sum = 0 while i <= 4 | 4: sum += i i = i+1 | | |
| a) 0 | b) 10 | c) 4 d) N | one of the above | | |
| <i>a</i> , 0 | b) 10 | c, 4 u, N | one of the above | | |
| Q.11) What is the out | utput of the following (| code? | | | |
| a) 4 is printed once | -(' / | b) 4 is print | ed four times | | |
| · · | tely until program clos | | | | |
| • | · | while if you are iterating thr | ough a sequence (like: list)? a) | | |
| No, it's better to use | · | | | | |
| b) Yes, for loop is m | • • | | | | |
| • • | erate through a seque | • , | | | |
| d) No you cannot it | arata through a saguai | nce using loons | | | |



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| Q.13) Which of the fo | _ | | | | | | |
|-------------------------------|-----------------------------------|------------------------------|--------------------------|-----------------------------|-------------------|----------------------|--------|
| a) The break stateme | | • | _ | | | | |
| b) The continue state | | • | | | - | | |
| c) The break and con | | are almost al | lways use | d with if, if | else and i | felifelse state | ments. |
| d) All of the above | | | | | | | |
| | | | | | | | |
| Q.14) What is the out | tput of the followi | ng code? | | | | | |
| for char in 'PYTHON S | STRING': | | | | | | |
| if char == ' ': | | | | | | | |
| break print(char, | | | | | | | |
| end=") if char == | | | | | | | |
| 'O': continue | | | | | | | |
| a) PYTHON | b) PYTHONSTRIN | IG | c) PYTHN | I | d) STRIN | G | |
| | | | | | | | |
| Q.15) Which of the f | ollowing statemer | nt is true abo | ut the pa | ss statement | :? | | |
| a) The Python interpo | reter ignores the p | ass stateme | nt like cor | mments. | - 1 | | |
| b) The pass statemen | nt terminates the l | oop containi | ng it. | INTE | 7 | | |
| c) It is used as a place | eholder for future | implementat | tion of fu | nctions, loop | s etc d) A | II of the above. | |
| | | | | | | | |
| Q.16) What is the ou | tput of the code s | hown below | ? import | | | | |
| math | | | | | | | |
| [str(round(math.pi)) | for i in range (1, 6) | | | | | | |
| a) ['3', '3', '3', '3', '3', | '3'] b) ['3.1', ' | '3.14', '3.142 | ', '3.14 <mark>16</mark> | <mark>', '3.14</mark> 159', | ' 3.141582 | '] | |
| c) ['3', '3', '3', '3', '3'] | d) ['3.1', ' | <mark>'3.14', '3.</mark> 142 | ', '3.1 <mark>416</mark> | <mark>', '3.1</mark> 4159'] | | | |
| | | | | | | | |
| Q.17) What is the ou | itput of the cod <mark>e s</mark> | hown below | ? t=32.00 | | | | |
| [round((x-32)*5/9) fc | or x in t] | | | | | | |
| a) [0] | b) 0 | c) [0.0 | 0] | | d) Error | | |
| | V | | | | | \ \ | |
| Q.18) What is the out | tput of the followi | ng? | | | | | |
| print([i.lower() for i in | n "HELLO"]) | | | | | | |
| a) ['h', 'e', 'l', 'l', 'o']. | • | b) 'hello' | | c) ['hello']. | D) | hello | |
| , - , , , , - | | , | | , | • | | |
| Q.19) Suppose list1 i | s [3, 5, 25, 1, 3], w | hat is min(lis | t1) ? | | | | |
| a) 3 | b) 5 | c) 25 | , | | d) 1 | | |
| • | , | , | | | • | | |
| Q.20) Suppose list1 is | [1, 3, 2], What is | list1 * 2 ? | | | | | |
| a) [2, 6, 4]. | = ' | | c) [1, 3, 2 | 2, 1, 3, 2] . | d |) [1, 3, 2, 3, 2, 1] | |

Q.21) What is the output when the following code is executed? "Welcome to Python".split()

a) ["Welcome", "to", "Python"].

b) ("Welcome", "to", "Python")

c) {"Welcome", "to", "Python"}

d) "Welcome", "to", "Python"

Q.22) What will be the output? names1 =



| ['Amir', 'Bala', 'Charlie [name.lower() for nam print(names2[2][0]) | = | | | |
|--|--|---|---|-------------------------------------|
| a) None | b) a | c) b | d) c | |
| Q.23) What will be the = [[3, 4, 5, 1], [33, 6, 1, v = values[0][0] for lst i values: for element lst: if v > element: v = element print(v) | 2]] n | | | |
| a) 1 | b) 3 | c) 5 | d) 6 | |
| Q.24) What is the outprode? import copy a=[ib=copy.deepcopy(a) a a) [10,34,56,[95]]. Q.25) What is the outproduction a=list((45,)*4) print((45)*4) print(a) a) 180[(45),(45),(45),(45),(45),(45),(45),(45), | 10,23,56,[78]] [3][0]=95 a[1]=34 p b) [10,23,5 out of the following | orint(b) 66,[78]]. c) [1 g piece of code? b) | 0,23,56,[95]]. d) [10,34, (45,45,45,45).[45,45,45,45]. | |
| c) 180[45,45,45,45]. | | a). | Syntax error | |
| Q.26) What is the outp A = [[1, 2, 3], [4, 5, 6], [7, 8, 9]] [A[i][len(A)-1-i] for i in | | wn below? | | |
| a) [1, 5, 9] | o) [4, 5, 6] | c) [3, 5, 7] | d) [2, 5, 8] | |
| | | BASIC OPERATO | R | |
| 1. Which is the correct a) X^y Explanation: In pythor | o) X**y | c) X^^y | d) None of the mentione | d |
| 2. Which one of these | is floor division? | | | |
| Explanation: When bo the round off value, t | o get the accurate | are integer then pytho answer use floor divisi | he mentioned View Answer n chops out the fraction par ion. This is floor division. Fo on in python is 2.To get the 2 | t and gives you or ex, 5/2 = 2.5 |
| 3. What is the order o | f precedence in py | thon? | | |

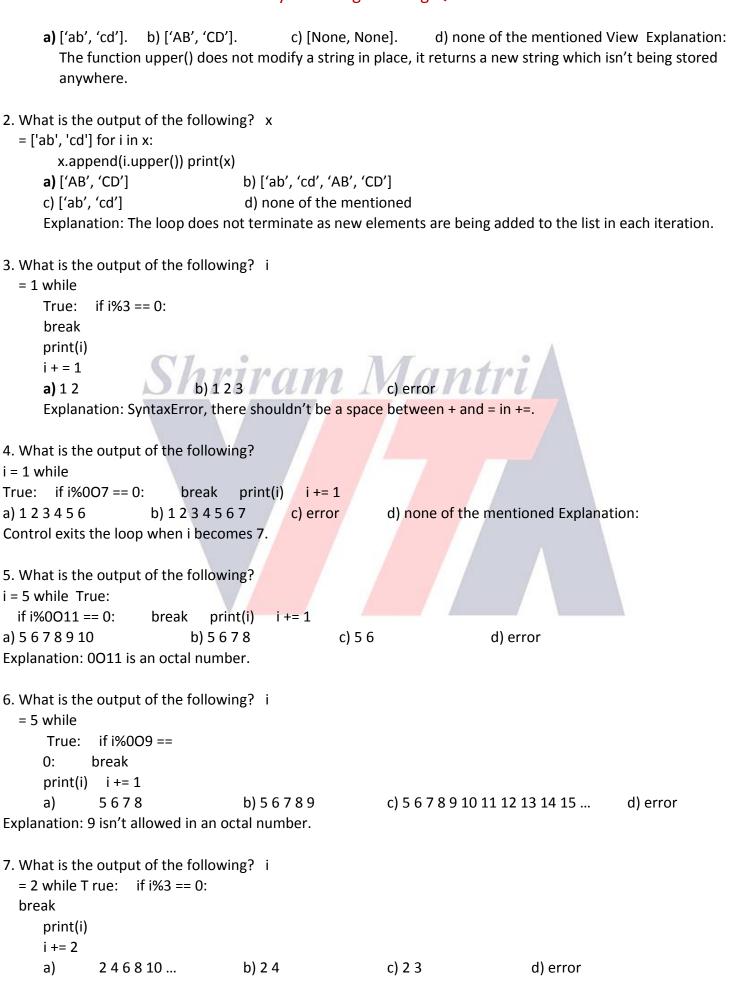
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| i) arentheses ii) xponential iii) Multiplication iv) Division v) Addition vi) Subtraction a) i,ii,iii,iv,v,vi b) ii,i,iii,iv,v,vi c) ii,i,iv,iii,v,vi d) i,ii,iii,iv,vi,v Explanation: For order of precedence, just remember this PEMDAS (similar to BODMAS) | | | |
|--|--|--|--|
| 4. What is answer of this expression, 22 % 3 is? | | | |
| a) 7 b) 1 c) 0 d) 5 | | | |
| Explanation: Modulus operator gives remainder. So, 22%3 gives the remainder, that is, 1. | | | |
| 5. Mathematical operations can be performed on a string. State whether true or false. a) True b) False 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) Cant say d) None of the mentioned | | | |
| 7. What is the output of this expression, 3*1**3? a) 27 b) 9 c) 3 d) 1 Explanation: First this expression will solve 1**3 because exponential have higher precedence than multiplication, so 1**3 = 1 and 3*1 = 3. Final answer is 3. 8. Which one of the following have the same precedence? a) Addition and Subtraction b) Multiplication and Division c) Both a and b d) None of the mentioned | | | |
| 9. The expression Int(x) implies that the variable x is converted to integer. State whether true or false.a) Trueb) False | | | |
| 10. Which one of the following have the highest precedence in the expression? a) Exponential b) Addition c) Multiplication d) Parentheses Explanation: Just remember: PEDMAS, 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. | | | |
| WHILE AND FOR LOOP | | | |

| 1. | What is the output of | the following? | Χ |
|----|----------------------------|----------------|---|
| | = ['ab', 'cd'] for i in x: | i.upper() | |
| | print(x) | | |
| | | | |







a)

8. What is the output of the following?

True

True = False while True: print(True) break

b) False

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d) none of the mentioned

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.

c) None

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

| | | DICTIONA | .RY | |
|---|--|-----------------|-------------------------------|-------------------------------------|
| 1. Which of these ab | out a dictionary is false | e? | | |
| | ctionary can be accesse | | | |
| b) The keys of a diction | onary can be accessed | using values | | |
| c) Dictionaries aren't | r ordered | | | |
| d) Dictionaries are m | utable View Answer | | | |
| Explanation: The value | ues of a dictionary can | be accessed us | sing keys but the keys | of a dictionary can't be |
| accessed using value | hriran | n M | antri | |
| | wing is not a declaration | | · | |
| a) {1: 'A', 2: 'B'} | b) dict([[1,"A"],[2,"B"] | | c) {1,"A",2"B"} | d) { } |
| Explanation: Option | c is a set, not a diction | ary. | | |
| 3. What is the output code? a={1:"A",2:"B | 3",3:"C"} for i,j in | | | |
| a.items(): print(i,j a) 1 A 2 B 3 C | b) 1 2 3 | c) A B C | d)1:"A" 2:"B" 3:"C" | |
| • | bove code, va <mark>riables i a</mark> | 0 // | | os of the dictionary |
| respectively. | bove code, variables i | and jiterate ov | er the keys and value | is of the dictionary |
| = | t of the following piece ",3:"C"} print(a.get(1,4 | | | |
| a) 1 Answer: b | b) A | c) 4 | d) Invalid syntax for | get method |
| | () method returns the solution () arameter) if the key | | | in the dictionary and the |
| a={1:"A",2:"B",3:"C"} a) Error, invalid synta | ax b) A | | c) 5 econd parameter) if t | d) 4 he key isn't present in the |
| dictionary. | | | , | · |
| • | t of the following code } print(a.setdefault(3)) '} b) C | ? | | |



| | No method called setdefault() exists for dictionary () but will set dict[key]=default if key is not already in the |
|---|---|
| 7. What is the output of the following co | de? |
| 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]. |
| Explanation: setdefault() will set dict[key |]=default if key is not already in the dictionary. |
| 8. What is the output of the following co | de? |
| 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'} |
| | onary b's key-value pairs to dictionary a. Execute in python shell |
| to verify. | m Mantri A |
| 9. What is the output of the following | |
| 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 | f the ediction and in the ediction of the |
| Explanation: Changes made in the copy of | of the dictionary isn't reflected in the original one. |
| 10. What is the output of the following c | ode? |
| a={1:"A",2:"B",3:"C" | |
| } a.clear() print(a) | h) (Nana)Nana Nana)Nana Nana)Nana) |
| a) None | b) { None:None, None:None, None:None} |
| c) {1:None, 2:None, 3:None} | d) { } |
| Explanation: The clear() method clears al | i the key-value pairs in the dictionary. |
| 11. Which of the following isn't true about | ut 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 | _ |
| Explanation: Keys of a dictionary may be | any data type that is immutable. |
| 12. What is the output of the following | |
| code? a={1:5,2:3,3:4} a.pop(3) print(a) | |
| | Error, syntax error for pop() method d) {1: 5, 3: 4} |
| Explanation: pop() method removes the | key-value pair for the key mentioned in the pop() method. |



| 13. What is the output of the following 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 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 is the output of the following 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(): Explanation: The variable i iterates over the keys of the dictionary and hence the keys are printed. |
| 15. Execute the following in Python shell? >>> 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')]) Explanation: The method items() returns list of tuples with each tuple having a key-value pair. |
| FILES |
| 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") 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") 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") is used to indicate that data is to be apended. |

- 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
- 5. To read two characters from a file object infile, we use

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| a) infile.read(2) | b) infile.read() | c) infile.readline() | d) infile.readlines() |
|--|--|--|---|
| 6. To read the entire real infile.read(2) Explanation: read funct | b) infile.read() | ne file as a string from a file c) infile.readline() the lines in a file. | object infile, we use d) infile.readlines() View |
| 7. What is the output? 1. f = None 2. for i in range (5): 3. with open("data. 4. if i > 2: 5. break 6. print(f.closed) a) True Explanation: The WITH | txt", "w") as f: b) False | c) None with open file guarantees t | d) Error Answer: a hat the file object is closed when |
| the with block exits. 8. To read the next line a) infile.read(2) Explanation: Execute in | b) infile.read(<mark>)</mark> | object infile, we use c) infile.readline() | d) infile.readlines() |
| a) infile.read(2)View AnswerExplanation: Execute in10. The readlines() met | b) infile.read() the shell to verify. hod returns of lines c) a list | a file object infile, we use C) infile.readline() of single characters eturned. | d) infile.readlines()d) a list of integers |
| | | TUPLES | |
| Q.1) Which of the follow a) [1, 2, 3]. | b) (1, 2, 3) | c) {1, 2, 3} | d) {} |
| Q.2) Suppose t = (1, 2, 4, a) print(t[3]) b) | | ving is incorrect? print(max(t)) | d) print(len(t)) |
| Q.3) What will be the ou >>>t=(1,2,4,3) >>>t[1:3] a) (1, 2) | tput? b) (1, 2, 4) | c) (2, 4) | d) (2, 4, 3) |
| Q.4) What will be the ou >>>t=(1,2,4,3) | tput? | | |



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>>>t[1:-1]

a) (1, 2) b) (1, 2, 4) c) (2, 4) d) (2, 4, 3) Q.5) What will be the output? >>>t =(1, 2, 4, 3, 8, 9)>>>[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) Q.6) What will be the output? d = {"john":40, "peter":45} d["john"] b) 45 d) "peter" a) 40 c) "john" am Mantri Q.7) What will be the output? >>>t1 = (1, 2, 4, 3) >>>t2 = (1, 2, 3, 4) >>>t1 < t2 a) True b) False c) Error d) None Q.8) What will be the output? >>>my_tuple = (1, 2, 3, 4) >>>my_tuple.append((5, 6, 7)) >>>print len(my_tuple) d) Error c) 5 a) 1 b) 2

Q.9) What will be the output?

numberGames = $\{\}$ numberGames[(1,2,4)] = 8 numberGames[(4,2,1)] = 10 numberGames[(1,2)] = 12 sum = 0 for k in numberGames:

sum += numberGames[k] print len(numberGames) + sum a)

30

b) 24

c) 33

d) 12

Q. 10) What is the data type of (1)?

a)Tuple b)Integer c)List d)Both tuple and integer

Q.11) 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)

Q.12)What is the output of the following piece of code when executed in Python shell? >>> a=("Check")*3

>>> a

a) ('Check','Check','Check')

b) * Operator not valid for tuples



| c) ('CheckCheckCheck') | d) Syntax error |
|--|--|
| Q.13)What is the output of the following 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 |
| Q.14)What is the output of the following 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 | |
| | s, first element in the tuple is deleted , invalid syntax for del method |
| Q.16)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 |
| Q.17)What is the output of the following piece of open as 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) |
| Q.18)Is the following piece of code valid? >>> a=(1,2,3) >>> b=('A','B','C') >>> c=zip(a,b) a)Yes, c will be ((1,2,3),('A','B','C')) c)No because tuples are immutable | b)Yes, c will be ((1,2,3),('A','B','C')) d)No because the syntax for zip function isn't valid |
| Q.19)Is the following piece of 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 |
| Q.20)What is the output of the following piece of a = ('check',) n = 2 for i in range(int(n)): a = | code? |



| (a,) print(a)a) Error, tuples are inc) (('check',)'check',) | | b) (('check',),) ((('ch d) (('check',)'check' | | eck',)'check',) |
|---|---|--|-------------------|-------------------------|
| b)Yes, this is an exar c)No, too many valu | nple of tuple unpacking | g. a=(1,2) and b=3 | | |
| >>> a=(1,2) >>> b=(1,2) >>> c=a+b | itput of the following p 3,4) | iece of code when ex | ecuted in Pytho | n shell? |
| >>> c a) (4,6) | b) (1,2,3,4) | c) Error as tuples a | re immutable | d) None |
| Q.23)What is the our code? >>> a,b=6,7 > >>> a,b a) (6,7) | tput of the following >>> a,b=b,a b) Invalid syntax | n Mai c) (7) | ntri ,6) | d) Nothing is printed |
| Q.24)What is the our >>> import collection >>> a=collections.na >>> obj=a(i=4,j=7) >>> obj a) a(i=4, j=7) | V | | d) An excepti | on is thrown |
| Q.25)Tuples can't be a) True | e made keys of a diction b) False | nary. True or False? | | |
| >>> a=2,3,4,5 >>> a a) Yes, 2 is printed | g piece of code valid? | · · | 4,5] is printed | |
| c) No, too many valu | es to unpack | d) Yes, (2, | 3,4,5) is printed | |
| Q.27)What is the ou >>> a=(2,3,1,5) >>> a.sort() >>> a | tput of the following p | iece of code? | | |
| a) (1,2,3,5) | b) (2,3,1,5) | c) None | d) Error, tuple | e has no attribute sort |

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Q.28)Is the following piece of 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

Q.29) What is the output of the following piece of 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

FUNCTION

- 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 View Answer

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 use for function?
- a) Fun
- b) Define
- c) Def
- d) Function
- 3. What is the output of the below program?
- def sayHello():
- print('Hello World!')
- sayHello() 4. sayHello()
- a) Hello World!

Hello World!

b)'Hello

World!' 'Hello

World!' c)

Hello

Hello

d) None of the mentioned

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():
- print('Hello World!') # block belonging to the function
- # End of function #



| 4.5. sayHello() # call the function6. sayHello() # call the function again |
|---|
| 4. What is the output of the below program? 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 |
| 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 ifelse statement and then print the bigger number. |
| 5. What is the output of the below program ? 1. |
| 6. What is the output of the below program? |
| 1. $x = 50$ |
| 2. def func(): |
| 3. global x |
| 4. print('x is', x) |
| $5. \qquad x=2$ |
| 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 |



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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

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 is the output of below program?
- 1. def say(message, times = 1):
- 2.print(message * times)
- 3. say('Hello') 4. say('World', 5)
- a) Hello WorldWorldWorldWorld
- **b)** Hello World 5
- c) Hello

World, World, World, World

d) Hello HelloHelloHelloHello

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 is the output of the below program?
- 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

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.

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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 is the output of below program? |
|---|
| 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, (2, (3))) |
| a) 2 b) 3 c) The numbers are equal d) None of the mentioned |
| Explanation: The maximum function returns the maximum of the parameters, in this case the numbers |
| supplied to the function. It uses a simple ifelse statement to find the greater value and then returns that |
| value. |
| |
| 10. Which of the following is a features 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 thedoc 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. |
| |
| ARGUMENT |
| 1. What is the output of the following code? def |
| foo(k): $k = [1] q = [0] foo(q) print(q)$ |
| a) [0]. b) [1] c) [1, 0]. d) [0, 1]. |
| 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 $k = [1]$. |
| |
| 2. 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 View Answer Explanation: Refer documentation. |
|---|
| 3. Which module in the python standard library parses options received from the command line? a) getopt b) os c) getarg d) main Explanation: getopt parses options received from the command line. |
| 4. What is the type of sys.argv? a) set b) list c) tuple d) string View Answer Explanation: It is a list of elements. |
| 5. 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 Explanation: Refer documentation. |
| 6. 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 back-ticks (") c) identifier followed by the default value within square brackets ([]) d) identifier Explanation: Refer documentation. 7. 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 back-ticks (") c) identifier followed by the default value within square brackets ([]) d) identifier 8. What is the output of the following 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 Explanation: The same object is modified in the function. |
| 9. Where are the arguments received from the command line stored?a) sys.argv b) os.argv c) argv d) none of the mentioned Explanation: Refer documentation. |
| 10. What is the output of the following? def foo(i, x=[]): x.append(x.append(i)) return x for i in range(3): y = foo(i) print(y) a) [[[0]], [[[0]], [[[0]], [[[0]], [2]]]. b) [[0], [[0], 1], [[0], 1], 2]]. c) [0, None, 1, None, 2, None]. d) [[[0]], [[[0]], [[1]], [[[0]], [[0]], [2]]]. |



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Explanation: append() returns None.

EXCEPTION HANDLING Q.1) How many except statements can a try-except block have? c) more than one a) zero b) one d) more than zero

- Q.2) When will the else part of try-except-else be executed? a) always
- b) when an exception occurs
- c) when no exception occurs
- d) when an exception occurs in to except block

Explanation: The else part is executed when no exception occurs.

Q.3) Is the following code valid? try:

Do something except:

Do something else:

Do something

- a) no, there is no such thing as else
- b) no, else cannot be used with except
- c) no, else must come before except Explanation: Refer documentation. d) yes
- Q.4) Can one block of except statements handle multiple exception?
- a) yes, like except TypeError, SyntaxError [,...].
- **b)** yes, like except [TypeError, SyntaxError].
- c) no
- d) none of the mentioned
- Q.5) When is the finally block executed?
- a) when there is no exception
- b) when there is an exception
- c) only if some condition that has been specified is satisfied d) always
- Q.6) What is the output of the code shown below?

#generator def f(x): yield x+1 g=f(8)print(next(g))

a) 8

b) 9

c) 7

d) Error

Q.7) What is the output of the code shown below? yield x+2

def f(x): yield x+1 print("test")

g=f(10) print(next(g)) print(next(g))

a) No output b)11 test 12 c) 11 test

d) 11

Q.8) What is the output of the following

code? def a(): try: f(x, 4) finally: print('after f') print('after f?') a()



| a) No output | b) after f? | c) error | d) after f | |
|--|--|--------------------------------|-----------------------------------|------------------------------|
| Q.9) The output of th int('65.43') | e code shown below is | s: | | |
| a)ImportError | b)ValueError | c)TypeError | d)Na | meError |
| Q.10) Syntax errors and a) True | re also known as parsii b) False | ng errors. Is this | statement true or f | alse? |
| Q.11) Which of the fo | ollowing blocks will be objected by blocks | executed whethor) c)finally | er an exception is th d)assert | nrown or not? |
| · | put of the code showr f m<1 or b)Invalid | | d) ValueErro | r("Invalid") |
| | (C | ORE DATA T | YPES | |
| What error occurs apple =mango a) SyntaxError | when you execute? b) Na <mark>meError</mark> | | c) ValueError | d) TypeError |
| 2. Which of these in ra) Lists | not a core da <mark>tatype?</mark> b) Dictionary | c) Tuples | d) Class | |
| a) int | nat does not return any b) bool shell throws a NoneTyp | c) void | lue is thrown by def d)None | ault when executed in shell. |
| 4. Following set of co>>str[:2]>>> | mmands are executed | in shell, what w | ill be the output? .? | >>>str="hello" |
| a) he | b) lo c) ollel | | d) hello View Answe | |
| Explanation: We are p | orinting only the 1st tw | vo bytes of string | g and hence the ans | wer is "he". |
| 5. Which of the follow a) round(45.8) b) round(6352.898,2, c) round() d) round(7463.123,2, | | rrors ? | | |



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

| 6. What is the return | n type of function id? | | |
|---|-------------------------------------|-----------------------|--|
| a) int | b) float | c) bool | d) dict |
| Explanation: Execute | help(id) to find out d | etails in python shel | l.id returns a integer value that is unique. |
| 7. In python we do i | | directly interpreted | by the compiler, so consider the following |
| · | ective is to make sure | x has a integer value | e, select all that |
| apply (python 3.xx) | | _ | |
| b) x = int(13 / 2) | | | |
| c) x = 13 % 2 | | | |
| d) All of the mention | ed | | |
| Explanation: // is inte | eger operation in pyth | non 3.0 and int() is | a type cast operator. |
| 8. Carefully observe t def example(a): | the code and give the | answer. | ntri |
| a = a + '2' a = | | | |
| a*2 | | | |
| return a | 11 115 | | |
| >>> example ("he | llo") | | |
| a) indentation Error | | 7. A | |
| hello2 | athematical oper <mark>ation</mark> | n on strings c) | |
| d) hello2hello2 View | | 1. / | |
| Explanation: Python | codes have to be inde | ented properly. | |
| Q.9 What dataype is = [1,23,'hello',1]. | the object below ? L | | |
| a) list | b) dictionary | c) array | d) tuple View Answer |
| Explanation: List data | atype can store any va | alues within it. | |
| Q.10 In order to store | e values in terms of ke | ey and value we use | what core datatype. |
| a) list | b) tuple | c) class | d) dictionary |
| Explanation: Dictiona | ary stores values in ter | rms of keys and valu | es. |
| 11. Which of the follo | owing results in a Synt | taxError ? | |
| a) "Once upon a tim | = - | b) "He said, 'Yes!" | n |
| c) '3\' | , | d) "'That's okay"' | |
| Explanation: Carefull | y look at the colons. | , | |
| 12. The following is d | displayed by a print fur | nction call: | |
| 1. tom | 1 - 1 1 - 1 - 1 - 1 - 1 | | |



| 3. harry Select all of the function calls that result in this output a) print("'tom \ndick \nharry"') b) print("'tomdickharry"') c) print('tom\ndick\nharry') d) print('tom dick harry') View Answer Explanation: The \n adds a new line. |
|---|
| 13. What is the average value of the code that is executed below? 1. >>>grade1 = 80 2. >>>grade2 = 90 3. >>>average = (grade1 + grade2) / 2 a) 85 b) 85.1 c) 95 d) 95.1 Explanation: Cause a decimal value 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') Explanation: Execute in the shell. |
| 15. What is the return value of trunc()? |
| a) int b) bool c) float d) None View Answer Explanation: Executle help(math.trunc) to get details. |
| CLASSES & OBJECT focuses on "Classes and Objects – 1". 1 represents an entity in the real world with its identity and behaviour. a) A method b) An object c) A class d) An operator View Answer Explanation: An object represents an entity in the real world that can be distinctly identified. A class may define an object. |
| 2 is used to create an object. a) class b) constructor c) User-defined functions d) In-built functions View Answer Explanation: The values assigned by the constructor to the class members is used to create the object. |
| 3. What is the output of the following code? class test: definit(self,a="Hello World"): self.a=a def display(self): print(self.a) obj=test() obj.display() a) The program has an error because constructor can't have default arguments b) Nothing is displayed |



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|--|
| c) "Hello World" is displayed d) The program has an error display function doesn't have parameters View Answer Explanation: The program has no error. "Hello World" is displayed. Execute in python shell to verify. |
| 4. What is setattr() used for? a) To access the attribute of the object b) To set an attribute c) To check if an attribute exists or not d) To delete an attribute View Answer Explanation: setattr(obj,name,value) is used to set an attribute. If attribute doesn't exist, then it would be created. |
| 5. What is getattr() used for? a) To access the attribute of the object b) To delete an attribute c) To check if an attribute exists or not getattr(obj,name) is used to get the attribute of an object. |
| 6. What is the output of the following code? class change: definit(self, x, y, z): self.a = x + y + z x = change(1,2,3) y = getattr(x, 'a') setattr(x, 'a', y+1) print(x.a) a) 6 |
| 7. What is the output of the following code? class test: definit(self,a): self.a=a def display(self): print(self.a) obj=test() obj.display() a) Runs normally, doesn't display anything b) Displays O, which is the automatic default value c) Error as one argument is required while creating the object d) Error as display function requires additional argument View Answer Explanation: Since, theinit special method has another argument a other than self, during object creation, one argument is required. For example: obj=test("Hello") |
| 8. Is the following piece of code correct? >>> class A: definit(self,b): self.b=b |
| Explanation: It is possible to delete an object of the class. On further typing obj in the python shell, it throws an error because the defined object has now been deleted. 9. What is the output of the following code? |

9. What is the output of the following code? class test: def __init__(self): self.variable = 'Old' self.Change(self.variable) def Change(self, var):



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| <pre>var = 'New' obj=test() print(obj.variable) a) Error because function change can't be called in theinit function b) 'New' is printed c) 'Old' is printed d) Nothing is printed Explanation: This is because strings are immutable. Hence any change made isn't reflected in the original string.</pre> |
|--|
| 10. What is Instantiation in terms of OOP terminology? a) Deleting an instance of class b) Modifying an instance of class c) Copying an instance of class d) Creating an instance of class Explanation: Instantiation refers to creating an object/instance for a class. |
| 11. What is the output of the following code? class fruits: definit(self, price): self.price = price obj=fruits(50) obj.quantity=10 obj.bags=2 print(obj.quantity+len(objdict)) a) 12 |
| 12. What is the output of the following code? class Demo: definit(self): pass def test(self): |
| print(name) obj = Demo() obj.test() a) Exception is thrown b)main c) Demo d) test Explanation: Since the above code is being run not as a result of an import from another module, the variable will have value "main". |
| INHERITANCE 1. What type of inheritance is illustrated in the following piece of code? class A(): pass class B(A): pass class C(B): pass a) Multi-level inheritance b) Multiple inheritance c) Hierarchical inheritance d) Single-level inheritance Explanation: In multi-level inheritance, a subclass derives from another class which itself is derived from another class. |

2. What does single-level inheritance mean?



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- a) A subclass derives from a class which in turn derives from another class
- b) A single superclass inherits from multiple subclasses
- c) A single subclass derives from a single superclass
- d) Multiple base classes inherit a single derived class View Answer

Explanation: In single-level inheritance, there is a single subclass which inherits from a single superclass. So the class definition of the subclass will be: class B(A): where A is the superclass.

3. What is the output of the following piece of code?

```
class A:
 init (self):
self.__i = 1
                   self.j
= 5
        def
display(self):
print(self.__i, self.j) class B(A):
def __init__(self):
super(). init ()
                         self. i
= 2
          self.j = 7 c = B()
c.display()
a) 2 7
                        b) 15
                                                c) 17
```

Explanation: Any change made in variable i isn't reflected as it is the private member of the superclass.

- 4. Which of the following statements isn't true?
- a) A non-private method in a superclass can be overridden
- b) A derived class is a subset of superclass
- c) The value of a private variable in the superclass can be changed in the subclass
- d) When invoking the constructor from a subclass, the constructor of superclass is automatically invoked Explanation: If the value of a private variable in a superclass is changed in the subclass, the change isn't reflected.

```
5. What is the output of the following piece of code?
```

```
class A:
            def __init__(self,x):
self.x = x 	 def count(self,x):
self.x = self.x+1 class B(A):
 init (self, y=0):
A.__init__(self, 3)
                         self.y = y
def count(self):
     self.y += 1
def main():
               obj
= B()
obj.count()
print(obj.x, obj.y)
main()
a) 3 0
                        b) 3 1
                                                c) 0 1
```

d) An exception in thrown

Explanation: Initially x=3 and y=0. When obj.count() is called, y=1.

6. What is the output of the following piece of code when executed in the Python shell?



b) Nothing is printed

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```
>>> class A: pass >>> class B(A):
       pass
>>> obj=B()
>>> isinstance(obj,A)
a) True
b) False
c) Wrong syntax for isinstance() method
d) Invalid method for classes
Explanation: isinstance(obj,class) returns True if obj is an object class.
7. Which of the following statements is true?
a) The new () method automatically invokes the init method
b) The init method is defined in the object class
c) The eq(other) method is defined in the object class
d) The repr () method is defined in the object class View Answer
Explanation: The __eq(other) method is called if any comparison takes place and it is defined in the object
class.
8. Method issubclass() checks if a class is a subclass of another class. True or False?
a) True
                       b) False
Explanation: Method issubclass() returns True if a class is a subclass of another class and False otherwise.
9. What is the output of the following piece of code?
class A:
 __init___(self):
self._x = 1 class B(A):
            display(self):
print(self. x) def main():
obj = B()
obj.display(
) main() a)
1
b) 0
c) Error, invalid syntax for object declaration
d) Error, private class member can't be accessed in a subclass
Explanation: Private class members in the superclass can't be accessed in the subclass.
10. What is the output of the following piece of
code? class A:
                  def init (self):
                                          self. x = 5
class B(A):
             def display(self):
                                    print(self. x) def
main():
          obj
= B()
obj.display()
main()
a) Error, invalid syntax for object declaration
```



super().test() class D(B,C):

test2(self):

obj=D() obj.test()

def

print("test of D called")

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```
c) 5
d) Error, private class member can't be accessed in a subclass
Explanation: The class member x is protected, not private and hence can be accessed by subclasses.
11. What is the output of the following piece of code?
           def init (self,x=3):
class A:
self._x = x
                class B(A):
def init (self):
super().__init__(5)
                       def
display(self):
print(self._x)
def main():
obj = B()
obj.display()
main() a) 5
b) Error, class member x has two values
d) Error, protected class member can't be accessed in a subclass View Answer
Explanation: The super() method re-assigns the variable x with value 5. Hence 5 is printed.
 11. What is the output of the following piece of code?
                                 print(" test of A called
class A:
           def test1(self):
") class B(A):
                 def test(self):
 print(" test of B called ")
class C(A):
              def
test(self):
 print(" test of C called ")
class D(B,C):
test2(self):
                 print("
test of D called ")
obj=D() obj.test()
a) test of B called test of C called
b) test of C called test of B called
c) test of B called
d) Error, both the classes from which D derives has same method test()
Explanation: Execute in Python shell to verify. If class D(B,C): is switched is class D(C,B): test of C is called.
13. What is the output of the following piece of code?
                                print("test of A called")
class A:
           def test(self):
class B(A): def test(self):
                                print("test of B called")
super().test() class C(A):
                             def test(self):
print("test of C called")
```



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| a) | test | of B | called | test | of C | called | test | of A | called |
|----|------|------|--------|------|------|--------|------|------|--------|
|----|------|------|--------|------|------|--------|------|------|--------|

- b) test of C called test of B called
- c) test of B called test of C called
- d) Error, all the three classes from which D derives has same method test()

Explanation: Since the invoking method, super().test() is called in the subclasses, all the three methods of test() in three different classes is called.

| | | | EXTRA MC | Q | | |
|---|--|---|--|------------------|--|---|
| >>> >>> | of a in the follow a = [1,2,3,4] a = a.append(5) print a | ving example is? | | | | |
| A. [1,2,3] | | B. [1,2,3,4] | C. [1,2,3 | 3,4,5] | D. None of the Above | |
| be include A. shebang 3. When usi A. First para C. Third para 4. When a py A. "main_ 5. Suppose the | ed in many place B. REI ng sys.argv - The ameter ameter /thon file is run d _void" B. " | first argument p B. Second para D. script itself irectly, the special para void_main" contains a "def | o alteration. C. boilerplate points to the ameter ial variable "n C. "m foo()". The fully | ame" is set | ibe sections of code that have D. header to . D. "void" ne of that foo function is D. "binky.foo" | t |
| | · · · · · · · · · · · · · · · · · · · | | _ | - | he defined symbols in python. | |
| A. snapshot | B. vie | W | C. help | D. dir | | |
| 7. In python, whitespace in B. space between C. Both A and D. D. None o | ween lines d B | | of a piece of coo | de affects its r | meaning. A. | |
| 8. Logical Co | nnectors are spe | lled out with | | | | |
| A. Letters | B. Into | | C. Symbols | D. All | of the above | |
| 9. In Python l | boolean operatio | ons, Empty string | ; is counted as _ | | | |
| A. True | B. Fal | se | C. None | D. Nor | ne of the above. | |



| = | teral is prefixed boof backslashes, | y an '' and passes a | all the chars through wi | thout special |
|-----------------------|-------------------------------------|---|--------------------------|----------------------|
| A. r | B. R | C. \r | D. \R | |
| 11. r'x\nx' evaluate | s to the length | string | | |
| A. 1 | B. 2 | C. 3 | D. 4 | |
| 12. list.append() ret | turns the special v | value | | |
| A. None | B. Error | C. True | D. Null | |
| 13. REPL stands for | | | | |
| A. Read-Evaluate-Pa | arse-Loop | B. Read-Evaluate-Print- | List | |
| C. Read-Enter-Print | -List | D. Read-Evaluate-Print- | Loop | |
| | ogramming, | is a methre fit for use. | nod by which individual | units of source code |
| A. Load Testing | B. Int | egration Testing C | . Stress Testing D. | Unit Testing |
| 15. A is | s the smallest tes | table part <mark>of an app</mark> li <mark>catio</mark> | n. | |
| A. Unit | B. Module | C. File | D. Library | |