CHAPTER 1 - GETTING STARTED WITH PYTHON

CLASS TEST - I

Time: 40 Min Max Marks: 20 1. Is Python case sensitive when dealing with identifiers? a) yes b) no c) machine dependent d) none of the mentioned 2. What is the maximum possible length of an identifier? a) 31 characters b) 63 characters c) 79 characters d) none of the mentioned 3. Which of the following is invalid? a) $_a = 1$ b) $_{a} = 1$ c) __str__ = 1 d) none of the mentioned 4. Which of the following is an invalid variable? a) my_string_1 b) 1st_string c) foo

d) _

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 6. Which of the following is not a keyword? a) eval b) assert c) nonlocal d) pass 7. All keywords in Python are in a) lower case b) UPPER CASE c) Capitalized d) None of the mentioned 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

9. Which of the following is an invalid statement?

a) abc = 1,000,000

b) a b c = 1000 2000 3000

d) none of the mentioned

- c) a,b,c = 1000, 2000, 3000
- d) a_b_c = 1,000,000

10. Which of the following cannot be a variable?

- a) __init__
- b) in
- c) it
- d) on

CHAPTER 2 - PYTHON FUNDAMENTALS

CLASS TEST - II

Time: 40 Min	Max Marks: 20
 1. Which is the correct operator for power(x^y)? a) X^xy b) X**y c) X^xy d) None of the mentioned 	
2. Which one of these is floor division?	
a) /	
b) //	
c) %	
d) None of the mentioned	
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,v,iii,v,vi	
d) i,ii,iii,iv,vi,v	
4. What is answer of this expression, 22 % 3 is?	
a) 7	
b) 1	
c) 0	
d) 5	

5. Mathematical operations can be performed on a string. State whether true or false.a) True
b) False6. 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
7. What is the output of this expression, 3*1**3? a) 27
b) 9 c) 3 d) 1
d) 18. Which one of the following have the same precedence?
a) Addition and Subtraction b) Multiplication and Division
c) Both Addition and Subtraction AND Multiplication and Divisiond) 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) Exponentialb) Additionc) Multiplication
d) Parentheses

CHAPTER 3 – DATA HANDLING

CLASS TEST III

Time: 40 Min

Max Marks: 20

d) round(7463.123,2,1)
5. What is the return type

pe of function id?

- a) int
- b) float
- c) bool
- d) dict

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

$$>>> x = 13 ? 2$$

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
- 7. What error occurs when you execute?

apple = mango

- a) SyntaxError
- b) NameError
- c) ValueError
- d) TypeError
- 8. Carefully observe the code and give the answer.

def example(a):

$$a = a + '2'$$

$$a = a^{*}2$$

return a

>>>example("hello")
a) indentation Error
b) cannot perform mathematical operation on strings
c) hello2
d) hello2hello2
9. What data type is the object below?
L = [1, 23, 'hello', 1].
a) list
b) dictionary
c) array
d) tuple
10. In order to store values in terms of key and value we use what core data type.
a) list
b) tuple
c) class
d) dictionary
11. Which of the following results in a SyntaxError?
a) "Once upon a time…", she said.'
b) "He said, 'Yes!'"
c) '3\'
d) "'That's okay"'
12. What is the average value of the code that is executed below?
>>>grade1 = 80

>>>grade2 = 90
>>>average = (grade1 + grade2) / 2
a) 85
b) 85.1

- c) 95
- d) 95.1
- 13. 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')
- 14. What is the return value of trunc()?
- a) int
- b) bool
- c) float
- d) None
- 15. What is the output of print 0.1 + 0.2 == 0.3?
- a) True
- b) False
- c) Machine dependent
- d) Error
- 16. Which of the following is not a complex number?
- a) k = 2 + 3j

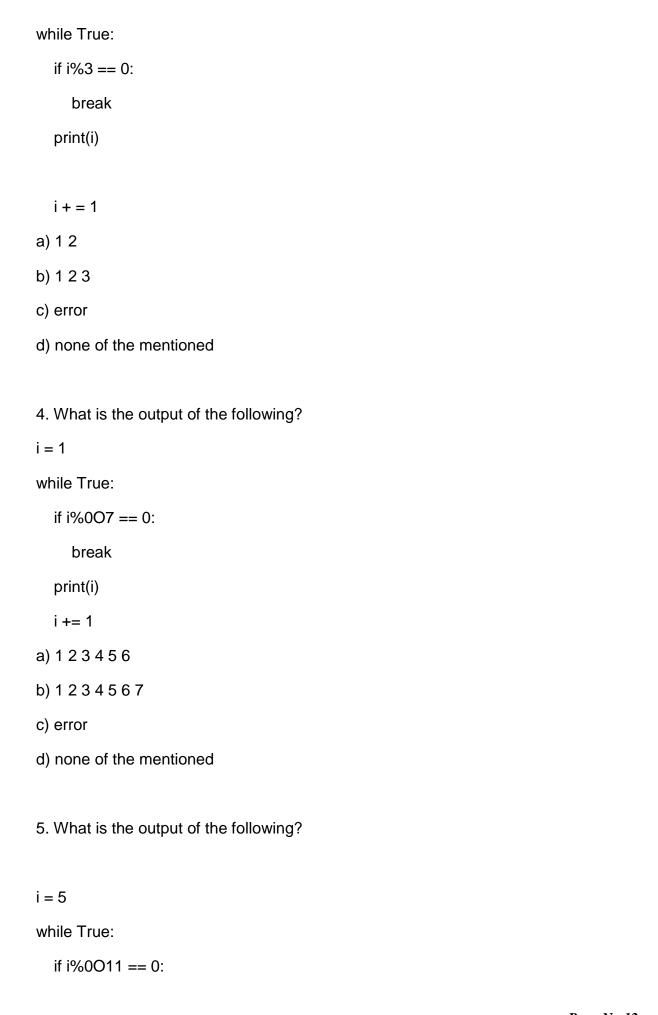
b) $k = complex(2, 3)$
c) k = 2 + 3l
d) $k = 2 + 3J$
17. What is the type of inf?
a) Boolean
b) Integer
c) Float
d) Complex
18. What does ~4 evaluate to?
a) -5
b) -4
c) -3
d) +3
19. What does ~~~~5 evaluate to?
a) +5
b) -11
c) +11
d) -5
20. Which of the following is incorrect?
a) $x = 0b101$
b) $x = 0x4f5$
c) x = 19023
d) $x = 03964$

CHAPTER IV - CONDITIONAL AND ITERATIVE STATEMENTS CLASS TEST IV

Time: 40 Min	Max Marks: 20
1. 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	
2. What is the output of the following?	
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	

3. What is the output of the following?

i = 1



```
break
  print(i)
  i += 1
a) 5 6 7 8 9 10
b) 5678
c) 5 6
d) error
6. What is the output of the following?
i = 5
while True:
  if i\%009 == 0:
     break
  print(i)
  i += 1
a) 5 6 7 8
b) 56789
c) 5 6 7 8 9 10 11 12 13 14 15 ....
d) error
7. What is the output of the following?
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
8. What is the output of the following?
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
9. What is the output of the following?
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

10. What is the output of the following?
True = False
while True:
print(True)
break
a) True
b) False
c) None
d) none of the mentioned
11. What is the output of the following?
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
12. What is the output of the following?
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
13. What is the output of the following?
x = "abcdef"
while i in x:
  print(i, end=" ")
a) a b c d e f
b) abcdef
c)iiiiiii...
d) error
14. What is the output of the following?
x = "abcdef"
i = "i"
while i in x:
  print(i, end=" ")
a) no output
b)iiiiiii...
c) a b c d e f
d) abcdef
```

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
16. What is the output of the following?
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
17. What is the output of the following?
x = 'abcd'
for i in range(len(x)):
x = 'a'
print(x)

15. What is the output of the following?

a) a
b) abcd abcd abcd
c) a a a a
d) none of the mentioned
18. What is the output of the following?
x = 'abcd'
for i in range(len(x)):
print(x)
x = 'a'
a) a
b) abcd abcd abcd
c) a a a a
d) none of the mentioned
19. What is the output of the following?
x = 123
for i in x:
print(i)
a) 1 2 3
b) 123
c) error
d) none of the mentioned
20 . What is the output of the following?
d = {0: 'a', 1: 'b', 2: 'c'}
for i in d:
print(i)

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

Answer 1: a

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

Answer 2: d

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

Answer 3: c

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

Answer 4: a

Explanation: Control exits the loop when i become

Answer 5: b

Explanation: 0O11 is an octal number.

Answer6: d

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

Answer 7: d

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

Answer 8: 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

Answer 9: d

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

Answer 10: d

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

Answer 11: b

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

Answer 12: b

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

Answer 13: d

Explanation: NameError, i is not defined.

Answer 14: a

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

Answer 15: b

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

Answe 16: c

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

Answer 17: c

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

Answer 18: d

Explanation: abcd a a a is the output as x is modified only after 'abcd' has been

printed once.

Answer 19: c

Explanation: Objects of type int are not iterable.

Answer 20: a

Explanation: Loops over the keys of the dictionary.

CHAPTER V

STRING MANIPULATION

CLASS TEST V

Time: 40 Min	Max Marks: 20
What is the output when following statement is executed?	
>>>"a"+"bc"	
a) a	
b) bc	
c) bca	
d) abc	
2. What is the output when following statement is executed?	
>>>"abcd"[2:]	
a) a	
b) ab	
c) cd	
d) dc	
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_upercase	
c) string.letters	
d) string.lowercase_string.upercase	

4. What is the output when following code is executed?
>>> str1 = 'hello'
>>> str2 = ','
>>> str3 = 'world'
>>> str1[-1:]
a) olleh
b) hello
c) h
d) o
5. What arithmetic operators cannot be used with strings?
a) +
b) *
c) –
d) All of the mentioned
6. What is the output when following code is executed?
>>>print r"\nhello"
The output is
a) a new line and hello
b) \nhello
c) the letter r and then hello
d) error
7. What is the output when following statement is executed?
>>>print('new' 'line')
a) Error
b) Output equivalent to print 'new\nline'

d) new line
8. What is the output when following statement is executed?
>>> print('x\97\x98')
a) Error
b) 97
98
c) x\97
d) \x97\x98
9. What is the output when following code is executed?
>>>str1="helloworld"
>>>str1[::-1]
a) dlrowolleh
b) hello
c) world
d) helloworld
10. $print(0xA + 0xB + 0xC)$:
a) 0xA0xB0xC
b) Error
c) 0x22
d) 33
11. What is the output of the following?
print("xyyzxyzxzxyy".count('yy'))
a) 2
b) 0

c) newline

c) error
d) none of the mentioned
12. What is the output of the following?
print("xyyzxyzxzxyy".count('yy', 1))
a) 2
b) 0
c) 1
d) none of the mentioned
13. What is the output of the following?
print("xyyzxyzxzxyy".count('yy', 2))
a) 2
b) 0
c) 1
d) none of the mentioned
14. What is the output of the following?
print("xyyzxyzxzxyy".count('xyy', 0, 100))
a) 2
b) 0
c) 1
d) error
15. What is the output of the following?
print("xyyzxyzxzxyy".count('xyy', 2, 11))
a) 2
b) 0
c) 1
d) error
16. What is the output of the following?

print("xyyzxyzxzxyy".count('xyy', -10, -1)) a) 2 b) 0 c) 1 d) error 1 Answer: d 2 Answer: c 3 Answer: b 4 Answer: d 5 Answer: c 6 Answer: b 7 Answer: c 8 Answer: c 9 Answer: a 10 Answer: d 11 Answer: a 12 Answer: a 13 Answer: c

14 Answer: a

15 Answer: b

16 Answer: b

CHAPTER VI - CHAPTER VI DEBUGGING PROGRAMS

CLASS TEST VI

Time: 40 Min	Max Marks: 20
Examination of the program step by step is called	
a) Controlling	
b) Tracing	
c) Stepping	
d) Testing	
2. The examination of changing values of variables is called steppin	g.
a) True	
b) False	
3. A freeware GNU Debugger is	
a) GDB	
b) GNB	
c) FDB	
d) FNB	
4. Which of the following is written for getting help in GDB?	
a) he	
b) h	
c) assist	
d) assistant	
5. h command gives	
a) A list of all the commands starting from h	

c) Displays a short description of the command
d) Displays all the programs
6 creates an inferior process that runs your program.
a) run
b) exit
c) execute
d) e
7. Which of the following does not affects the execution of the program?
a) Arguments
b) Environment
c) Control
d) I/o
8. 'set args ' without arguments can
a) initialize all the arguments
b) remove all the arguments
c) no change
d) show all the arguments
9. Which is not involved in debugging?
a) Identifying
b) Isolating
c) Test
d) Fixing

b) Describes all the commands

- 10. run > outfile command is used to _____
- a) direct output to the file outfile
- b) jump to a file outfile
- c) enter a file outfile
- d) edit a file outfile

CHAPTER VII - LISTS

CLASS TEST VII

Time: 40 Min Max Marks: 20

- 1. Process of removing errors called
- a) Error Free
- b) Debug
- c) Syntax Error
- d) Exception
- 2. 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
- 3. What is the output when we execute list("hello")?
- a) ['h', 'e', 'l', 'l', 'o'].
- b) ['hello'].
- c) ['llo'].
- d) ['olleh'].
- 4. Suppose list Example is ['h','e','l','o'], what is len(list Example)?
- a) 5
- b) 4
- c) None
- d) Error
- 5. Suppose list1 is [2445, 133, 12454, 123], what is max(list1)?
- a) 2445
- b) 133
- c) 12454
- d) 123
- 6. Suppose list1 is [3, 5, 25, 1, 3], what is min(list1)?
- a) 3
- b) 5
- c) 25
- d) 1

7. Suppose list1 is [1, 5, 9], what is sum(list1)? a) 1 b) 9 c) 15 d) Error
8. 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)
 9. 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
10. Suppose list1 is [2, 33, 222, 14, 25], What is list1[-1]? a) Error b) None c) 25 d) 2
11. 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].
12. What is the output when following code is executed?
>>>names = ['Amir', 'Bear', 'Charlton', 'Daman']
>>>print(names[-1][-1])
a) A
b) Daman
c) Error
d) n

```
13. What is the output when following code is executed?
names1 = ['Amir', 'Bear', 'Charlton', 'Daman']
names2 = names1
names3 = names1[:]
names2[0] = 'Alice'
names3[1] = 'Bob'
sum = 0
for Is in (names1, names2, names3):
  if ls[0] == 'Alice':
sum += 1
if Is[1] == 'Bob':
     sum += 10
print sum
a) 11
b) 12
c) 21
d) 22
14. 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].
15. Suppose list1 = [0.5 * x \text{ for } x \text{ 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].
16. What is the output when following code is executed?
>>>list1 = [11, 2, 23]
>>>list2 = [11, 2, 2]
>>>list1 < list2 is
a) True
b) False
c) Error
d) None
17. 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)
18. 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)
19. 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")

20. Suppose list1 is [3, 4, 5, 20, 5], what is list1.index(5)?

- a) 0
- b) 1
- c) 4
- d) 2

Answers

 $1-b\ 2-d,\ 3-a,4-a,5-c,6-d,7-c,8c,9-d,10-c,11-a,12-d,13-b,14-c,15-c,16-b,17-b,18-a,19-a,20-d$

CHAPTER VIII - TUPLES

CLASS TEST VII

Time: 40 Min Max Marks: 20

- 1. Which of the following is a Python tuple?
- a) [1, 2, 3].
- b) (1, 2, 3)
- c) {1, 2, 3}
- d) {}
- 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))
- 3. What will be the output?

- >>>t[1:3]
- a) (1, 2)
- b) (1, 2, 4)
- c) (2, 4)
- d) (2, 4, 3)
- 4. What will be the output?

- a) (1, 2)
- b) (1, 2, 4)
- c) (2, 4)
- d) (2, 4, 3)

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)

6. What will be the output?

d["john"]

- a) 40
- b) 45
- c) "john"
- d) "peter"

7. What will be the output?

$$>>t=(1, 2)$$

- >>>2 * t
- a) (1, 2, 1, 2)
- b) [1, 2, 1, 2].
- c) (1, 1, 2, 2)
- d) [1, 1, 2, 2].

8. What will be the output?

$$>>t1 = (1, 2, 4, 3)$$

$$>>t2 = (1, 2, 3, 4)$$

- a) True
- b) False
- c) Error
- d) None

9. What will be the output?

$$>> my_tuple = (1, 2, 3, 4)$$

>>>print len(my_tuple)

- a) 1
- b) 2
- c) 5
- d) Error

10. What will be the output?

numberGames
$$[(1,2,4)] = 8$$

numberGames
$$[(4,2,1)] = 10$$

$$numberGames[(1,2)] = 12$$

$$sum = 0$$

for k in numberGames:

print len(numberGames) + sum

a) 30	
b) 24	
c) 33	
d) 12	
11.	What is the data type of (1)?
a)	Tuple
b)	Integer
c)	List
d)	Both tuple and integer
12.	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)
13.	What is the output of the following 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
14.	What is the output of the following piece of code when executed in Python

shell?

>>> a=("Check")*3

- a) ('Check','Check','Check')
- b) * Operator not valid for tuples
- c) ('CheckCheckCheck')
- d) Syntax error
- 15. 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
- 16. 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
- 17. Is the following piece of 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
- 18. 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
- 19. What is the output of the following piece of code?

$$>>> a=(0,1,2,3,4)$$

- >>> a[b]
- a) Invalid syntax for slicing
- b) [0,2].
- c) (0,1)
- d) (0,2)
- 20. Is the following piece of code valid?

$$>>> a=(1,2,3)$$

- a) Yes, c will be ((1,2,3),('A','B','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

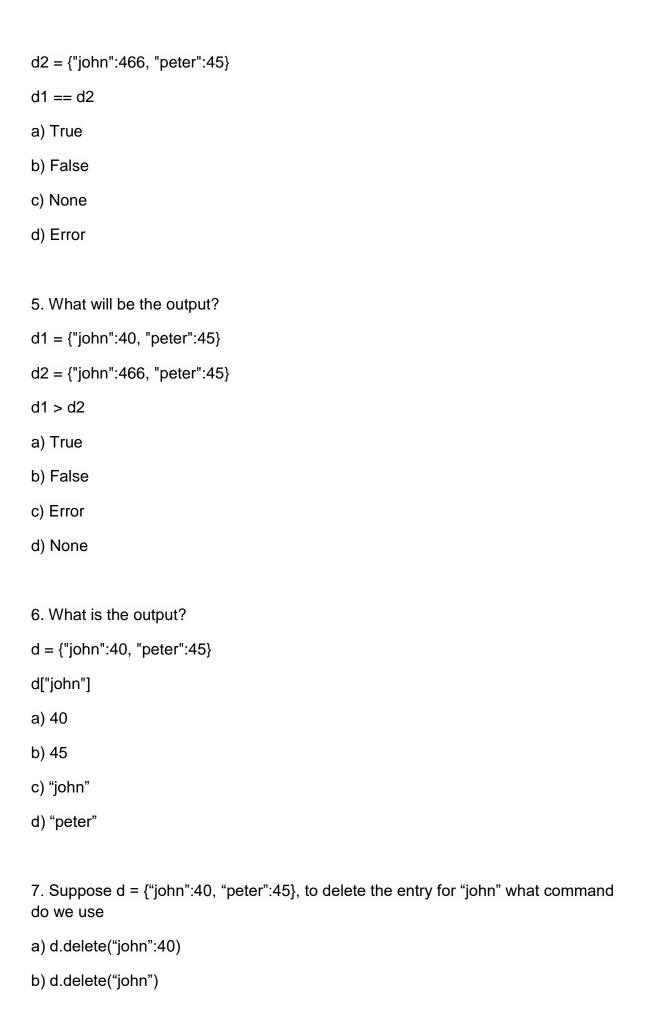
Answers

1 - b 2 - b, 3-c, 4-c, 5-c, 6-a, 7-a, 8-b, 9-d, 10-c, 11-b, 12-d, 13-a, 14-c, 15-d, 16-c, 17-c, 18-b, 19-c, 20-a

CHAPTER IX - DICTIONARIES

CLASS TEST IX

- 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
- 2. Read the code shown below carefully and pick out the keys?
- 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")
- 3. What will be the output?
- d = {"john":40, "peter":45}
- "john" in d
- a) True
- b) False
- c) None
- d) Error
- 4. What will be the output?
- d1 = {"john":40, "peter":45}



- c) del d["john"].
 d) del d("john":40)

 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()
- 9. What will be the output?

```
d = {"john":40, "peter":45}
```

print(list(d.keys()))

- a) ["john", "peter"].
- b) ["john":40, "peter":45].
- c) ("john", "peter")
- d) ("john":40, "peter":45)
- 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
- 11. 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 12. 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) {} 13. What is the output of the following code? 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) 123 c) ABC d) 1:"A" 2:"B" 3:"C" 14. What is the output of the following piece of code? a={1:"A",2:"B",3:"C"} print(a.get(1,4)) a) 1 b) A c) 4 d) Invalid syntax for get method 15. What is the output of the following code?

b) A
c) 5
d) 4
16. What is the output of the following code?
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
17. What is the output of the following code?
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].
18. What is the output of the following 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'}

a) Error, invalid syntax

- b) Method update() doesn't exist for dictionaries
- c) {1: 'A', 2: 'B', 3: 'C', 4: 'D', 5: 'E'}
- d) {4: 'D', 5: 'E'}
- 19. What is the output of the following code?

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
- 20. What is the output of the following code?

a.clear()

print(a)

- a) None
- b) { None:None, None:None, None:None}
- c) {1:None, 2:None, 3:None}
- d) {}

Answers

																			20
D	В	Α	В	С	Α	С	В	Α	С	В	С	Α	В	D	В	Α	C	В	D

CHAPTER X - UNDERSTANDING SORTING

CHAPTER XI - STATE AND TRANSITIONS

CLASS TEST X

Time: 40 Min Max Marks: 20

- 1. Which of the following is not a stable sorting algorithm?
- a) Insertion sort
- b) Selection sort
- c) Bubble sort
- d) Merge sort

ANSWER: B

- 2. Which of the following is a stable sorting algorithm?
- a) Merge sort
- b) Typical in-place quick sort
- c) Heap sort
- d) Selection sort

ANSWER: A

- 3. Which of the following is not an in-place sorting algorithm?
- a) Selection sort
- b) Heap sort
- c) Quick sort
- d) Merge sort

ANSWER: D

- 4. If the given input array is sorted or nearly sorted, which of the following algorithm gives the best performance?
- a) Insertion sort
- b) Selection sort
- c) Quick sort
- d) Merge sort

ANSWER: A

5. Which of the following algorithm pays the least attention to the ordering of
the elements in the input list?
a) Insertion sort b) Selection sort c) Quick sort d) None
ANSWER: B
6. Consider the situation in which assignment operation is very costly. Which of the following sorting algorithm should be performed so that the number of assignment operations is minimized in general?
a) Insertion sortb) Selection sortc) Heap sortd) None
ANSWER: B
7. Which of the following algorithms has lowest worst case time complexity?
a) Insertion sort b) Selection sort c) Quick sort d) Heap sort
ANSWER: D
8. Which of the following sorting algorithm is in-place
a) Counting sort b) Radix sort c) Bucket sort d) None

ANSWER: B

- 9. Which of the following sorting algorithm has the running time that is least dependant on the initial ordering of the input?
- a) Insertion sort
- b) Quick sort
- c) Merge sort
- d) Selection sort

ANSWER: D

- 10. Which of the following algorithm design technique is used in the quick sort algorithm?
- a) Dynamic programming
- b) Backtracking
- c) Divide-and-conquer
- d) Greedy method

ANSWER: C

- 11. Merge sort uses
- a) Divide-and-conquer
- b) Backtracking
- c) Heuristic approach
- d) Greedy approach

ANSWER: A

CHAPTER XII - COMPUTER OVERVIEW

CLASS TEST XII

Time: 40 Min Max Marks: 20 1. MSI stands for a. Medium Scale Integrated Circuits b. Medium System Integrated Circuits c. Medium Scale Intelligent Circuit d. Medium System Intelligent Circuit 2. The capacity of 3.5 inch floppy disk is a. 1.40 MB b. 1.44 GB c. 1.40 GB d. 1.44 MB 3. **EBCDIC** stands for a. Extended Binary Coded Decimal Interchange Code b. Extended Bit Code Decimal Interchange Code c. Extended Bit Case Decimal Interchange Code d. Extended Binary Case Decimal Interchange Code 4. Which of the following is a part of the Central Processing Unit? a. Printer b. Key board c. Mouse d. Arithmetic & Logic unit 5. Where are data and programme stored when the processor uses them? a. Main memory b. Secondary memory c. Disk memory d. Programme memory 6. represents raw facts, where-as..... is data made meaningful. a. Information, reporting b. Data, information c. Information, bits d. Records, bytes 7. Which programming languages are classified as low level languages? a. BASIC, COBOL, Fortran b. Prolog

c. C, C++

d. Assembly languages

	a. Tape	b. Ha	ard Disk	
	c. Floppy Disk	d. All	of the above	
	113			
9.	A normal CD- ROM	usually can	store up to	
	a. 680 KB	b. 680 Bytes	S	
	c. 680 MB	d. 680 GB		
10	What is a light pen?			
	a. Mechanical Input	device	b. Optical input device	
	c. Electronic input of	levice d. Op	otical output device	
11.	ASCII stands for			
a. Am	erican Stable Code t	or Internation	nal Interchange	
b. Am	erican Standard Cas	e for Institution	onal Interchange	
c. Am	erican Standard Cod	le for Informa	ation Interchange	
d. Am	erican Standard Cod	de for Intercha	ange Information	
12.	The computer size	was very larg	ge in	
	a. First Generation	b. Se	econd Generation	
	c. Third Generation	d. Fo	ourth Generation	
13.	The output quality of	of a printer is	measured by	
	a. Dot per inch		b. Dot per sq. inch	
	c. Dots printed per	unit time	d. All of above	
14. Sapie	_	referred to as	s Homosapinens, which device is called Sillic	0
	a. Monitor	b. Ha	ardware	
	c. Robot	d. Co	omputer	

Which of the following is a storage device?

8.

15.	Which of the following are input devices?									
	a. Keyboard	b. Mo	ouse	c. Card rea	der (d. Any of these				
16.	1 Byte =?									
	a. 8 bits	b. 4 bits	c. 2 bits	d. 9 bits						
17.	SMPS stand	ls for								
	a. Switched	mode Power	Supply	b. Start mo	de power	supply				
	c. Store mod	de power sup	ply	d. Single m	ode powe	er supply				
18.	BIOS stands	s for								
	a. Basic Inpu	ut Output sys	tem	b. Binary In	put outpu	t system				
	c. Basic Inpu	ut Off system		d. all the ab	oove					
19. under	Data become stand and use		when it is	presented in a fo	ormat that	people can				
	a. Processed	d b. Gr	raphs c	c. Information	d. Pres	entation				
20.	Which of the	following are	e the funct	ions of a operatir	ng system					
	a. Allocates	resources	b. Monit	ors Activities						
	c. Manages	disks and file	es d	. All of the above						

CHAPTER XIII - DATA REPRESENTATION

CLASS TEST XIII

Time:	40 Min				Max Marks: 20
1	ASCII code i	s a bit	code.		
	a) 1	b) 2	c) 7	d) 8	
2	8421 codes	is also called	as.		
	a) Gray code	b) AS	CII code	c) excess 3-code	d) BCD code
3	The binary s	ystem, 1+1=			
	(a) 2 (b) 0 (c) 1 (d) none of	f these		
4	110+110=				
	(a) 2	(b) 0	(c) 1	(d) none of these	
5	The digital s	ystem usually	operated on	system.	
	(a) binary	(b) decimal	(c)octal	(d) hexadecimal	
6	The binary s	system use po	wers of	for positional value	S.
	(a) 2	(b)10	(c) 8	(d)16	
7	After counting	ng 0, 1, 10, 11	, the next bina	ary number is	
	(a) 12	(b) 100	(c)101	(d) 110	
8.	The 2's com	plement of 10	0002 is		
	(a)0111	(b)0101	(c) 1000	(d)0001	
9.	110100112=	?16			
	a) D316	b) A316	c) B316	d) D216	
10	25?10= ?2_				
	a) 100012	b) 110012	c) 110002	d) 101012	

CHAPTER XIV - BOOLEAN ALGEBRA

CLASS TEST XIV

Time:	40 Min Max Marks: 20
1	In logic algebra, variables can assume only two values:eitheror 1.
	(a) 2 (b) 0 (c) 3 (d) 4
2	The gate is also called any-or-all gate.
	(a) OR (b) AND (c) NOT (d) EX-OR
3	A logic gate is an electronic circuit which
	(a) makes logic decisions (b) allows electron flow only in one direction
	(c) works on binary algebra (d) alternates between 0&1 values
4.	In positive logic, logic gate 1 corresponds to
	(a) positive voltage (b) higher voltage level
	(c) zero voltage level (d) lower voltage level
5.	In negative logic, the logic state 1 corresponds to
	(a) negative logic (b) zero voltage
	(c) more negative voltage (d) lower voltage level
6.	The output of a 2-input OR the gate is 0 only when it's
	(a) both inputs are 0 (b) either input is 1
	(c) both inputs are 1 (d) either input is 0
7.	In Boolean algebra, A+ A=
	a)A b)1 c)0 d)None of these
8.	In Boolean algebra , A . A=
	a) A2 b) A c)2A d)1
9.	In Boolean algebra A+ AB =
	a) B b) A c)AB d)A+B
10. WI	hen an input electrical signal A=10100 is applied to a NOT gate, it's output
Signal	
	(a) 01011 (b) 10101 (c) 10100 (d)00101

CHAPTER XV

INSIGHT INTO PROGRAM EXECUTION

CLASS TEST XV

- 1. What is translator?
- 2. List the compilation steps
- 3. What is Analysis or Front end phase?
- 4. What is Synthesis or Back end phase?
- 5. What is Linking?
- 6. What is Loader?
- 7. What is interpreter?
- 8. What is Cloud Computing?
- 9. What is public cloud?
- 10. What is private cloud?

CHAPTER XVI - RELATIONAL DATABASE

CLASS TEST XVI

Time: 40 Min Max Marks: 20

- 1 In the relational modes, cardinality is termed as:
 - (A) Number of tuples. (B) Number of attributes.
 - (C) Number of tables. (D) Number of constraints.

Ans: A

- 2 The view of total database content is
 - (A) Conceptual view. (B) Internal view.
 - (C) External view. (D) Physical View.

Ans: A

- 3. Cartesian product in relational algebra is
 - (A) a Unary operator. (B) a Binary operator.
 - (C) a Ternary operator. (D) not defined.

Ans: B Cartesian product in relational algebra is a binary operator.

(It requires two operands. e.g., P X Q)

- 4. DML is provided for
 - (A) Description of logical structure of database.
 - (B) Addition of new structures in the database system.
 - (C) Manipulation & processing of database.
 - (D) Definition of physical structure of database system.

Ans: C DML is provided for manipulation & processing of database.

(Data stored in the database is processed or manipulated using data manipulation language commands as its name)

5.	'AS' clause is used	d in SQ	QL for				
	(A) Selection opera	ation.	(B) Rename operation.				
	(C) Join operation.		(D) Projection operation.				
Ans: E	3 'AS' clause is used	l in SQ	L for rename operation.				
(e.g.,	SELECT ENO AS E	MPLO	YEE_NO FROM EMP)				
6.	Architecture of the	databa	ase can be viewed as				
	(A) two levels.	(B) fo	our levels.				
	(C) three levels.	(D) o	ne level.				
Ans: (C						
7.	In a relational mod	lel, rela	ations are termed as				
	(A) Tuples.	(B) A	ttributes				
	(C) Tables.	(D) R	(D) Rows.				
Ans:c							
8	The database sche	ema is	written in				
	(A) HLL (B) D	ML					
	(C) DDL (D) D	CL					
Ans: (C						
9.	An entity set that of	loes no	ot have sufficient attributes to form a primary key is a				
	(A) strong entity se	t.	(B) weak entity set.				
	(C) simple entity se	et.	(D) primary entity set.				
10.	A relational databa	ase dev	eloper refers to a record as				
	(A) a criteria.	(B) a	relation.				
	(C) a tuple.	(D) a	n attribute.				
Ans: (C						

CHAPTER XVII - SIMPLE QUERIES IN SQL,

CLASS TEST XVII

Time	e: 40 Min	Max Marks: 20
1.	The statement in SQL wh	nich allows to change the definition of a table is
	(A) Alter.	(B) Update.
	(C) Create.	(D) select.
Ans:	Α	
2.	The statement in SQL w	hich allows to change the definition of a table is
	(A) Alter.	(B) Update.
	(C) Create.	(D) select.
Ans:	Α	
3.	Key to represent relation	ship between tables is called
	(A) Primary key	(B) Secondary Key
	(C) Foreign Key	(D) None of these
Ans:	С	
4.	produces the re	elation that has attributes of R1 and R2
	(A) Cartesian product	(B) Difference
	(C) Intersection	(D) Product
Ans:	Α	
5.	It is better to use files that	an a DBMS when there are
	(A) Stringent real-time red	quirements.
	(B) Multiple users wish to	access the data.
	(C) Complex relationship	s among data.
	(D) All of the above.	
Ans:	В	
6.	The conceptual model is	

	(B) dependent on software.				
	(C) dependent on both	hardware and software .			
	(D) independent of both	th hardware and software.			
Ans:	D				
7.	What is a relationship	called when it is maintained between two entities?			
	(A) Unary (E	B) Binary			
	(C) Ternary (D) Quaternary			
Ans:	В				
8. colur	Which of the following mns of a table?	operation is used if we are interested in only certain			
	(A) PROJECTION	(B) SELECTION			
	(C) UNION	(D) JOIN			
Ans:	A				
9	Which of the following	is a valid SQL type?			
	(A) CHARACTER	(B) NUMERIC			
	(C) FLOAT	(D) All of the above			
Ans:	D				
10.	The RDBMS terminol	ogy for a row is			
	(A) tuple.	(B) relation.			
	(C) attribute.	(D) degree.			
Ans:	A				

(A) dependent on hardware.

CHAPTER XVIII - TABLE CREATION AND DATA MANIPULATION CLASS TEST XVIII - (TEST 1)

Time: 4	40 Min	Max Marks: 20			
1.	The full form of DDL is				
	(A Dynamic Data Language	(B) Detailed Data Language			
	(C) Data Definition Language	(D) Data Derivation Language			
Ans: C					
2.	Which of the following is a legal	expression in SQL?			
	(A) SELECT NULL FROM	I EMPLOYEE;			
	(B) SELECT NAME FROM	M EMPLOYEE;			
	(C) SELECT NAME FROM	M EMPLOYEE WHERE SALARY = NULL;			
	(D) None of the above				
Ans: B					
3.	Which of the following is a comp	parison operator in SQL?			
	(A) =	(B) LIKE			
	(C) BETWEEN	(D) All of the above			
Ans: D					
4.	A set of possible data values is	called			
	(A) attribute. (B) de	egree.			
	(C) tuple. (D) d	lomain.			
Ans: D					
5.	NULL is				
(A) the same as 0 for integer					
(B) the	same as blank for character				
(C) the	(C) the same as 0 for integer and blank for character				

(D) not a value

Ans: D

- 6. Write down the syntax of update command
- 7. Write down the syntax of insert into command
- 8. Write an example to delete all the records from the table
- 9. Give an example to Alter the table using alter command example
- 10. Give Example for dropping a table

CHAPTER XVIII - TABLE CREATION AND DATA MANIPULATION COMMANDS CLASS TEST XVIII (TEST 2)

Time: 40 Min Max Marks: 20

Consider the following tables SCHOOL and ADMIN. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii).

SCHOOL

CODE	TEACHERNAME	SUBJECT	DOJ	PERIODS	EXPERIENCE
1001	RAVI SHANKAR	ENGLISH	12/03/2000	24	10
1009	PRIYA RAI	PHYSICS	03/09/1998	26	12
1203	LISA ANAND	ENGLISH	09/04/2000	27	5
1045	YASHRAJ	MATHS	24/08/2000	24	15
1123	GANAN	PHYSICS	16/07/1999	28	3
1167	HARISH B	CHEMISTRY	19/10/1999	27	5
1215	UMESH	PHYSICS	11/05/1998	22	16

ADMIN

CODE	GENDER	DESIGNATION
1001	MALE	VICE PRINCIPAL
1009	FEMALE	COORDINATOR
1203	FEMALE	COORDINATOR
1045	MALE	HOD
1123	MALE	SENIOR TEACHER
1167	MALE	SENIOR TEACHER
1215	MALE	HOD

- (i) To display TEACHERNAME, PERIODS of all teachers whose periods less than 25.
- (ii) To display TEACHERNAME, CODE and DESIGNATION from tables SCHOOL and ADMIN whose gender is male.
- (iii) To display number of teachers in each subject wise.
- (iv) To display CODE, TEACHERNAME and SUBJECT of all teachers who have joined the school after 01/01/1999.
- (v) SELECT MAX (EXPERIENCE), SUBJECT FROM SCHOOL GROUP BY SUBJECT;
- (vi) SELECT TEACHERNAME, GENDER FROM SCHOOL, ADMIN WHERE DESIGNATION = 'COORDINATOR' AND SCHOOL.CODE=ADMIN.CODE;
- (vii) SELECT DESIGNATION, COUNT (*) FROM ADMIN GROUP BY DESIGNATION HAVING COUNT (*) <2;
- (viii) SELECT COUNT (DISTINCT SUBJECT) FROM SCHOOL;

CHAPTER XIX - TABLE JOINS AND INDEXES IN SQL

CLASS TEST XIX

- 1. What is join? Write a SQL command
- 2. What is cross join? Write a SQL command
- 3. What is left join? Write a SQL command
- 4. What is right join? Write a SQL command
- 5. What is Natural Join? Write a SQL command
- 6. What is equi join? Write a SQL command
- 7. What are table indexes? Write a SQL command
- 8. How left join is different from natural join? Write a SQL command
- 9. How cross join is different from natural join? Write a SQL command
- 10. Write a SQL command to create an index on hiredate field in table emp note that table already exists.

CHAPTER XX - BASICS OF NOSQL DATABASE

CLASS TEST XX

- 1. What are the types of No SQL databases?
- 2. List the Advantages of No SQL databases
- 3. List the Disadvantages of NoSQL databases
- 4. What is collection?
- 5. What is Document?
- 6. What is reference?
- 7. What is CRUD?
- 8. Write db.collection.insert() syntax and example
- 9. Write db.collection.insertOne() syntax and example
- 10. Write db.collection.insertMany() syntax and example
- 11. Write db.collection.update() syntax and example
- 12. Write db.collection.save() syntax and example
- 13. Write db.collection.remove() syntax and example
- 14. Write db.collection.find() syntax and example
- 15. Write db.collection.findOne() syntax and example

CHAPTER XXI – CYBER SAFTY

CLASS TEST XXI

- 1. What is cyber safety?
- 2. What is Cyber Stalking
- 3. What is identity theft?
- 4. What is Cyber Troll?
- 5. What is Cyber Bullying?

CHAPTER XXI – ONLINE ACCESS AND CYBER SAFETY

CLASS TEST XXII

- 1. What are PC Intrusions?
- 2. What is Malware?
- 3. What is adware?
- 4. What is Spyware?
- 5. What is Phishing?

https://www.sanfoundry.com/python-quiz/