MCQ

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

d) none of the mentioned

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

 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^y
b) X**y
c) X^^y
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,iv,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) False

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

7. What is the output of this expression, 3*1**3?
a) 27
b) 9
c) 3
d) 1

8. 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 Division
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) True
b) False

10. Which one of the following have the highest precedence in the expression?
a) Exponential
b) Addition
c) Multiplication
d) Parentheses

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CHAPTER 3 – DATA HANDLING

CLASS TEST III

Time: 40 Min   Max Marks: 20

1. Which of these in not a core data type?
a) Lists
b) Dictionary
c) Tuples
d) Class

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

3. Following set of commands are executed in shell, what will be the output?

>>>str="hello"

>>>str[:2]

>>>

a) he

b) lo

c) olleh

d) hello

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)

5. What is the return type 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

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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

```
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

4. What is the output of the following?

```
i = 1
while True:
    if i%0O7 == 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

5. What is the output of the following?


```
i = 5
while True:
    if i%0O11 == 0:
```

```
        break
    print(i)
    i += 1
```

a) 5 6 7 8 9 10

b) 5 6 7 8

c) 5 6

d) error

6. What is the output of the following?

```
i = 5
while True:
    if i%0O9 == 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

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) i i i i i i …

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) i i i i i i …

c) a b c d e f

d) abcdef

15. What is the output of the following?

```
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)
```

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 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.

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CHAPTER V

STRING MANIPULATION

CLASS TEST V

Time: 40 Min   Max Marks: 20

1. 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'

c) newline

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) 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

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CHAPTER VI - CHAPTER VI DEBUGGING PROGRAMS

CLASS TEST VI

Time: 40 Min   Max Marks: 20

1. 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 stepping.

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

b) Describes all the commands

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

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

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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','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 ls in (names1, names2, names3):

    if ls[0] == 'Alice':

        sum += 1

    if ls[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 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].

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

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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=(1,2,4,3)

>>>t[1:3]

a) (1, 2)

b) (1, 2, 4)

c) (2, 4)

d) (2, 4, 3)

4. What will be the output?

>>>t=(1,2,4,3)

>>>t[1:-1]

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":40, "peter":45}

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)

>>>t1 < t2

a) True

b) False

c) Error

d) None

9. What will be the output?

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

>>>my_tuple.append((5, 6, 7))

>>>print len(my_tuple)

a) 1

b) 2

c) 5

d) Error

10. 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

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

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)

>>> b=slice(0,2)

>>> 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)

>>> b=('A','B','C')

>>> c=zip(a,b)

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

MCQ

CHAPTER IX - DICTIONARIES

CLASS TEST IX

Time: 40 Min   Max Marks: 20

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}

d2 = {"john":466, "peter":45}

d1 == d2

a) True

b) False

c) None

d) Error

5. What will be the output?

d1 = {"john":40, "peter":45}

d2 = {"john":466, "peter":45}

d1 > d2

a) True

b) False

c) Error

d) None

6. What is the output?

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

d["john"]

a) 40

b) 45

c) "john"

d) "peter"

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)

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)   1 2 3

c)   A B C

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?

a={1:"A",2:"B",3:"C"}

print(a.get(5,4))

a) Error, invalid syntax

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'}

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?

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

20.   What is the output of the following 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)   { }

Answers

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
D	B	A	B	C	A	C	B	A	C	B	C	A	B	D	B	A	C	B	D

MCQ

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 sort
b) Selection sort
c) Heap sort
d) 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

MCQ

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

8. Which of the following is a storage device?

    a. Tape   b. Hard Disk

    c. Floppy Disk   d. All of the above

9. A normal CD- ROM usually can store up to _____ _data?

    a. 680 KB   b. 680 Bytes

    c. 680 MB   d. 680 GB

10 What is a light pen?

    a. Mechanical Input device   b. Optical input device

    c. Electronic input device   d. Optical output device

11. ASCII stands for

a. American Stable Code for International Interchange

b. American Standard Case for Institutional Interchange

c. American Standard Code for Information Interchange

d. American Standard Code for Interchange Information

12. The computer size was very large in

    a. First Generation   b. Second Generation

    c. Third Generation   d. Fourth Generation

13. The output quality 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. Human beings are referred to as Homosapinens, which device is called Sillico Sapiens?

        a. Monitor   b. Hardware

        c. Robot   d. Computer

15.   Which of the following are input devices?

a. Keyboard   b. Mouse   c. Card reader   d. Any of these

16.   1 Byte =?

a. 8 bits   b. 4 bits   c. 2 bits   d. 9 bits

17.   SMPS stands for

a. Switched mode Power Supply   b. Start mode power supply

c. Store mode power supply   d. Single mode power supply

18.   BIOS stands for

a. Basic Input Output system   b. Binary Input output system

c. Basic Input Off system   d. all the above

19.   Data becomes .... when it is presented in a format that people can understand and use

a. Processed   b. Graphs   c. Information   d. Presentation

20.   Which of the following are the functions of a operating system

a. Allocates resources   b. Monitors Activities

c. Manages disks and files   d. All of the above

MCQ

CHAPTER XIII - DATA REPRESENTATION

CLASS TEST XIII

Time: 40 Min   Max Marks: 20

1   ASCII code is a ……… bit code.

     a) 1   b) 2   c) 7   d) 8

2   8421 codes is also called as.

     a) Gray code   b) ASCII code   c) excess 3-code   d) BCD code

3   The binary system, 1+1=…………

     (a) 2 (b) 0 (c) 1 (d) none of these

4   110+110=…………

     (a) 2   (b) 0   (c) 1   (d) none of these

5   The digital system usually operated on ………system.

     (a) binary   (b) decimal (c)octal   (d) hexadecimal

6   The binary system use powers of……….for positional values.

     (a) 2   (b)10   (c) 8   (d)16

7   After counting 0, 1, 10, 11, the next binary number is

     (a) 12   (b) 100   (c)101   (d) 110

8.   The 2's complement of 10002 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

MCQ

CHAPTER XIV - BOOLEAN ALGEBRA

CLASS TEST XIV

Time: 40 Min   Max Marks: 20

1   In logic algebra, variables can assume only two values:either……….or 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. When an input electrical signal A=10100 is applied to a NOT gate, it's output

Signal is

(a) 01011   (b) 10101   (c) 10100   (d)00101

MCQ

CHAPTER XV

INSIGHT INTO PROGRAM EXECUTION

CLASS TEST XV

Time: 40 Min   Max Marks: 20

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?

MCQ

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 in SQL for

   (A) Selection operation. (B) Rename operation.

   (C) Join operation.   (D) Projection operation.

Ans: B 'AS' clause is used in SQL for rename operation.

(e.g., SELECT ENO AS EMPLOYEE_NO FROM EMP)

6. Architecture of the database can be viewed as

   (A) two levels.   (B) four levels.

   (C) three levels. (D) one level.

Ans: C

7. In a relational model, relations are termed as

   (A) Tuples.   (B) Attributes

   (C) Tables.   (D) Rows.

Ans:c

8 The database schema is written in

   (A) HLL   (B) DML

   (C) DDL   (D) DCL

Ans: C

9. An entity set that does not have sufficient attributes to form a primary key is a

   (A) strong entity set.   (B) weak entity set.

   (C) simple entity set.   (D) primary entity set.

10. A relational database developer refers to a record as

   (A) a criteria.   (B) a relation.

   (C) a tuple.   (D) an attribute.

Ans: C

MCQ

CHAPTER XVII - SIMPLE QUERIES IN SQL,

CLASS TEST XVII

Time: 40 Min   Max Marks: 20

1.   The statement in SQL which allows to change the definition of a table is

      (A) Alter.   (B) Update.

      (C) Create.   (D) select.

Ans: A

2.   The statement in SQL which allows to change the definition of a table is

      (A) Alter.   (B) Update.

      (C) Create.   (D) select.

Ans: A

3.   Key to represent relationship between tables is called

      (A) Primary key   (B) Secondary Key

      (C) Foreign Key   (D) None of these

Ans: C

4.   _____ produces the relation that has attributes of R1 and R2

      (A) Cartesian product   (B) Difference

      (C) Intersection   (D) Product

Ans: A

5.   It is better to use files than a DBMS when there are

      (A) Stringent real-time requirements.

      (B) Multiple users wish to access the data.

      (C) Complex relationships among data.

      (D) All of the above.

Ans: B

6.   The conceptual model is

(A) dependent on hardware.

(B) dependent on software.

(C) dependent on both hardware and software .

(D) independent of both hardware and software.

Ans: D

7.   What is a relationship called when it is maintained between two entities?

(A) Unary   (B) Binary

(C) Ternary   (D) Quaternary

Ans: B

8.   Which of the following operation is used if we are interested in only certain columns of a table?

(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 terminology for a row is

(A) tuple.   (B) relation.

(C) attribute.   (D) degree.

Ans: A

MCQ

CHAPTER XVIII - TABLE CREATION AND DATA MANIPULATION

CLASS TEST XVIII – (TEST 1)

Time: 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 EMPLOYEE;

                (B) SELECT NAME FROM EMPLOYEE;

                (C) SELECT NAME FROM EMPLOYEE WHERE SALARY = NULL;

                (D) None of the above

Ans: B

3.   Which of the following is a comparison 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) degree.

                (C) tuple.   (D) domain.

Ans: D

5.   NULL is

(A) the same as 0 for integer

(B) the same as blank for character

(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;

MCQ

CHAPTER XIX - TABLE JOINS AND INDEXES IN SQL

CLASS TEST XIX

Time: 40 Min   Max Marks: 20

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.

MCQ

CHAPTER XX - BASICS OF NOSQL DATABASE

CLASS TEST XX

Time: 40 Min   Max Marks: 20

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

MCQ

CHAPTER XXI – CYBER SAFTY

CLASS TEST XXI

Time: 40 Min   Max Marks: 20

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?**

MCQ

CHAPTER XXI – ONLINE ACCESS AND CYBER SAFETY

CLASS TEST XXII

Time: 40 Min   Max Marks: 20

  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/