

COMPUTER SCIENCE WITH PYTHON

MCQ's for
CLASS XII

(CBSE)
TERM I

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A complete questionnaire
for self assessment



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answers and explanation



As per updated CBSE
pattern.



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Explanation

Computer Science with Python

MCQ Bank for CBSE Term I

MAHESH VERMA

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Dedicated to My Parents, My Jaan, My Son, My Daughter (Diksha Verma) and a special thanks to Rehan Danish (designer). I would like to say thanks to all my family members, friends, the mentors who supported me to achieve my goals.

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Preface

The pandemic has brought different changes in our world and one of these, is the changed **CBSE pattern**. In accordance of this pattern, students will be evaluated in two terms.

Term-I of CBSE board exam will be objective and will include MCQ type questions and Term-II will be subjective.

The objective pattern of Term-I is new to the students and this, is quite unpredictable. Therefore, to help the students to cope up with this new CBSE pattern this book is designed.

It contains chapter wise Multiple choice questions (MCQs) with solutions and detailed explanation in an easy to understand language and manner.

This book covers almost all types of possible questions that can be asked from each and every chapter as per the syllabus.

It is designed to provide students quality practice questions that will help them generate confidence and make their preparation strong.

Author name : Mahesh Verma

Year : 2021

Syllabus/CBSE New Pattern

Unit	Unit Name	Marks
I	Computational Thinking and Programming -2	40
II	Computer Networks	10
III	Database Management	20
	Total	70

Marks Distribution :

Unit	Unit Name	Term I	Term II
I	Computational Thinking and Programming -2	35	5
II	Computer Networks	-	10
III	Database Management	-	20

Term – I, Programming And Computational Thinking

- Revision of Python topics covered in Class XI.
- Functions: types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)
- Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths
- Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause,

writing/appending data to a text file using `write()` and `writelines()`, reading from a text file using `read()`, `readline()` and `readlines()`, `seek` and `tell` methods, manipulation of data in a text file

- Binary file: basic operations on a binary file: open using file open modes (`rb`, `rb+`, `wb`, `wb+`, `ab`, `ab+`), close a binary file, import `pickle` module, `dump()` and `load()` method, `read`, `write/create`, `search`, `append` and `update` operations in a binary file

- CSV file: import `csv` module, open / close csv file, write into a csv file using `csv.writerow()` and read from a csv file using `csv.reader()`.

Python Revision Tour - Practice Paper I

1. Which of the following is not a token?
a) Keywords b) Operators
c) Punctuators d) Comments
2. Which of the following is not a valid identifier?
a) Myfile b) IF
c) FILE_13 d) 29_FILE
3.is a special literal in Python
a) Null b) Not
c) None d) none of the above
4. A variable pointing to a value of a certain type, can be made to point to a value of different type. This is called.....
a) Type Casting b) Static Typing
c) Dynamic Typing d) none of the above
5.conversion is user defined conversion that forces and expression to be of specific type.
a) Implicit b) Explicit
c) both a and b d) none of the above
6. What will be the output of the given statement, if you will enter 9

```
a=b=int(input("Enter a Number"))  
print(a,b)
```


a) 9 9 b) 9 0
c) Generate error d) none of the above
7. What will be the output of the given statement, if you will enter 9 7

```
a,b=int(input("Enter a Number")),int(input("Enter second number"))  
print(a,b)
```


a) 9 7 b) 9 0
c) Generate error d) none of the above
8. The statement is used to terminate the loop or statement in which it is present.

- a) pass b) break
 c) continue d) all of the above
9. The statement is opposite to the break statement, instead of terminating the loop, it forces to execute the next iteration of the loop.
 a) pass b) break
 c) continue d) all of the above
10. The statement in Python is used when a statement is required syntactically but you do not want any command or code to execute.
 a) pass b) break
 c) continue d) all of the above
11. In nested loop, a break statement terminates all the nested loop.
 a) True b) False
12. Which of the following is/are component(s) of variable?
 a) Id b) value
 c) type d) all of the above
13. By using function you can check the value of a variable
 a) id() b) type()
 c) print() d) all of the above
14. range() method is used to specify the length of a for-in loop.
 a) True b) False
15. What will be the output of the given statement, if value of n is 6
 if n%2==0 and n%3==0:
 print("Buzz Fizz!", end=" ")
 if n%2==0:
 print("Buzz", end=" ")
 if n%3==0:
 print("Fizz!")
- a) Buzz Fizz! b) Buzz
 c) Fizz d) Buzz Fizz! Buzz Fizz!
16. What will be the output of the given statement, if value of n is 6
 if n%2==0 and n%3==0:
 print("Buzz Fizz!", end=" ")
 elif n%2==0:

```
print("Buzz", end=" ")
elif n%3==0:
    print("Fizz!")
```

- a) Buzz Fizz! b) Buzz
c) Fizz d) Buzz Fizz! Buzz Fizz!

17. What will be the output of the given statement, if value of n is 6
if n%2==0:

```
print("Buzz ", end=" ")
elif n%2==0:
    print("Fizz ", end=" ")
elif n%2==0 and n%3==0:
    print("Buzz Fizz!")
```

- a) Buzz Fizz! b) Buzz
c) Fizz d) Buzz Fizz! Buzz Fizz!

18. What will be the output of the given statement
ans=0

```
for i in range(11,20,1):
    if i%2==0:
        ans+=5
    else:
        ans-=2
print(ans)
```

- a) 12 b) 10
c) 11 d) None of the above

19. What will be the output of the given statement
ans=20

```
while ans<50:
    if ans%10==0:
        ans+=5
    elif ans%5==0:
        ans+=10
    else:
        ans+=15
print(ans)
```

- a) 55 b) 45
c) 60 d) 65

20. Creating individual values from a tuple's elements is called.....

- a) Collection
- b) Unpacking
- c) Packing
- d) None of the above

21. Read the following statements, and find the output :

```
T1=(((('x',5),'y','z'),'w',6),'u',7)
print(len(T1))
```

- a) 8
- b) 3
- c) 4
- d) None of the above

22. What will be the output of the given statement, if the value of msg is "study4u@com"

```
txt=""
for i in range(0, len(msg)):
    if msg[i].isupper():
        txt+=msg[i].lower()
    elif text[i].islower():
        txt+=msg[i].upper()
    else:
        txt+='**'
print(txt)
```

- a) STUDY**U**COM
- b) STUDYUCOM
- c) Generate Error
- d) None of the above

23. Read the following statements, and find the output :

```
L=[7,12,16,5,4,28,25]
n1=n2=L[0]
for i in L:
    if n1<i:
        n1=i
    if n2>i:
        n2=i
print(n1,n2)
```

- a) 7 7
- b) 28 4
- c) 4 28
- d) 25 25

24. Read the following statements, and find the output :

```
L=[7,12,16,5,4,28,25]
n=L[0]
```



```
for i in range(len(L)-1):
    L[i]=L[i+1]
L[i+1]=n
print(L)
```

- a) [25,7,12,16,5,4,28] b) [12,16,5,4,28,25,7]
c) [28,25,7,12,16,5,4] d) None of the above

25. Read the following statements, and find the output :

```
L=[7,12,16,5,4,28,25,30]
for i in range(0,len(L)-1,2):
    L[i],L[i+1]=L[i+1],L[i]
print(L)
```

- a) [12, 7, 5, 16, 28, 4, 30, 25] b) [12, 7, 5, 16, 28, 4, 30, 25]
c) Generate Error d) None of the above

Answers

1. (d) 2. (b) 3. (c) 4. (c) 5. (b) 6. (a) 7. (a) 8. (b) 9. (c)
10. (a) 11. (b) 12. (d) 13. (c) 14. (a) 15. (d) 16. (a) 17. (b) 18. (b)
19. (a) 20. (b) 21.(b) 22.(a) 23.(b) 24.(b) 25. (a)

Explanation

- (d) Token are the smallest unit in Python. Python has the following tokens :
Keywords, Identifiers, Operators, Punctuators and Literals.
So, comments are not token in Python.
- (b) Identifier name cannot start with a number. However IF is valid identifier because as per keywords "if" is keyword not "IF".
- (c) None is a special literal in Python
- (c) A variable pointing to a value of a certain type, can be made to point to a value of different type. This is called Dynamic Typing

5. (b) There are two types of conversion (also called type casting):

1. Implicit Conversion :- provided by the Python.

2. Explicit Conversion :- provided by the user.

So, Explicit conversion is user defined conversion that forces an expression to be of specific type.

example :

```
a="5"
```

```
b=int(a) #change the type (string to integer)
```

6. (a) As per multiple assignment i.e. assigning same value to multiple variables like

```
a=b=c=5
```

The statement is true and it will print 9 9

7. (a) As per multiple assignment i.e. assigning multiple values to multiple variables like

```
a,b,c=5,10,15
```

The statement is true and it will print 9 7

8. (b) The break statement is used to terminate the loop or statement in which it is present.

9. (c) The continue statement is opposite to the break statement, instead of terminating the loop, it forces to execute the next iteration of the loop.

10. (a) The pass statement in Python is used when a statement is required syntactically but you do not want any command or code to execute.

11. (b) No, if you are using break in nested loop, then break statement terminates only the inner loop.

12. (d) There are 3 components of variable i.e.

value : value of a variable.

id : memory address/id of a variable

type : type of a variable

13. (c) By using print() function you will check the value of a variable.

14. (a) For loop is a counting loop which is used to iterate the sequence, so for loop uses range() method to specify the length.



15. (d) All conditions of "if" statements will be executed because their conditions are true, so the answer is Buzz Fizz! Buzz Fizz!
16. (a) If you use "if..elif...else" then if one of the condition is true then that "if statement" will be executed. Other than that none of the statement will be checked. Here, Only first condition is True so the answer is Buzz Fizz!
17. (b) If you use "if..elif...else" then if one of the condition is true then that "if statement" will be executed. Other than that none of the statement will be checked. Here, Only first condition is True so the answer is Buzz.
- 18.

ans	i	if i%2==0	ans=ans+5	else	ans-=2
0	11	False		True	= 0-2 => -2
	12	True	= -2+5 => 3	False	
	13	False		True	= 3-2 => 1
	14	True	= 1+5 => 6	False	
	15	False		True	= 6-2 => 4
	16	True	= 4+5 => 9	False	
	17	False		True	= 9-2 => 7
	18	True	= 7+5 => 12	False	
	19	False		True	= 12-2 => 10

Note : Due to range() function the value of "i" will execute from 11 to 19. So, when the value of "i" reaches 20 the loop will stop executing and the final value of ans will be printed as 10.

(b)

10, Let's understand with given table (dry run):

19.

ans	ans<50	if i%10==0	ans=ans+5	if i%5==0	ans+=10	else	ans+=15
20	True	True	=20+5=> 25				
25	True	False		True	=25+10 => 35		
35	True	False		True	=35+10 => 45		
45	True	False		True	=45+10 => 55		
55	False	-----	-----	-----	-----	----	-----

Note: starting value of ans is 20 and it will be executed till the value is less than 50. So, when the value of ans is 55, while condition is false and it will print the final value of ans as 55.

(a)

55. Dry run :-

20. (b) Creating individual values from a tuple's elements is called Unpacking. For example : if a tuple contains 4 values then you will assign these values to 4 different variables like :



T=(4,5,6,8)

a,b,c,d = T

the above 2 statements represent the concept of unpacking, and now the value of a=4, b=5, c=6 and d=8.

21. (b) T1=(((('x',5),'y','z'),'w',6),'u',7), as it is a nested tuple i.e. tuple inside the tuple. So, just break the elements like
 First tuple => ('x',5),'y','z'
 Second tuple => (First tuple, 'w',6)
 Third tuple => (Second tuple, 'u',7)
 So, length of above tuple is 3.

i	msg[i]	if msg[i].isupper()	txt+=msg[i].lower()	if msg[i].islower()	txt+=msg[i].upper()	else	txt+=**
0	s	False		True	=S		
1	t	False		True	=ST		
2	u	False		True	=STU		
3	d	False		True	=STUD		
4	y	False		True	=STUDY		
5	4	False		False		True	STUDY**
6	u	False		True	=STUDY**U		
7	@	False		False		True	STUDY**U**
8	c	False		True	=STUDY**U**C		
9	o	False		True	=STUDY**U**CO		
10	m	False		True	=STUDY**U**COM		

Note : from the above dry run the final value is "STUDY**U**COM"

22.

(a) Dry run :-

23.

(b) 28,4 . Dry run :-

n1=n2=L[0]	i	if n1<l	n1=i	if n2>i	n2=i
7	7	False		False	
	12	True	12	False	
	16	True	16	False	
	5	False		True	5
	4	False		True	4
	28	True	28	False	
	25	False		False	

Note : So, the final value of n1 and n2 is 28, 4.

24.

(b) Dry run :-

n=L[0]	i	L[i]=L[i+1]	New List	L[i+1]=n
7	0	L[0]=L[1]	12	



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	1	$L[1]=L[2]$	16	
	2	$L[2]=L[3]$	5	
	3	$L[3]=L[4]$	4	
	4	$L[4]=L[5]$	28	
	5	$L[5]=L[6]$	25	$L[6]=7$
Now, the final list is [12,16,5,4,28,25]				

25. (a) Dry run :-

i	$L[i],L[i+1] =$ $[i+1],L[i]$
0	$L[0],L[1] =$ $L[1],L[0]$
2	$L[2],L[3] =$ $L[3],L[2]$
4	$L[4],L[5] =$ $L[5],L[4]$

As per the above dry run, element of list swaps with its adjacent element and in for loop the step value is 2. So, the final list is [12, 7, 5, 16, 28, 4, 30, 25]



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Python Revision Tour - Practice Paper II

1. A is a sequence of characters.
a) Numeric b) Decimal
c) String d) None of the above
2. String index is Bi-Direction.
a) True b) False
3. Which of the following is not a basic string operator
a) + b) *
c) in d) all of the above
4. `print(("Study"+"Trigger"+"2021")*3)` `//statement1`
`print("Study"+"Trigger"+"2021"*3)` `//statement2`
Both the above statement will produce the same result.
a) True b) False
5. What will be the output of the given statement.
`print("Study"+5)`
a) StudyStudyStudyStudyStudy b) Study5
c) Generate Error d) None of the above
6. `print("Study"*3)` `//statement1`
`print(3*"Study")` `//statement2`
Both the above statement will produce the same result.
a) True b) False
7. Which of the following is not a membership operator
a) > b) not in
c) in d) all of the above
8. "study" in "Study Trigger" will return.

a) True b) False

9. The opposite of ord() is

a) chr() b) dro()
c) char() d) str()

10. The extraction of substring from string is called.....

a) Substring b) String
c) Slicing d) None of the above

11. If "name" is a string and 'i' is index of that string, then name[:i] + name[i:] will return the complete string "name".

a) True b) False

12. Strings are immutable, i.e. You cannot change the individual letters of a string in place by assignment .

a) True b) False

13. What will be the output of the given statement.
print("Study"[1])

a) Study b) S
c) t d) Generate Error

14. What will be the output of the given statement.
print("Study Trigger 2021"[6:14])

a) Study b) Trigger
c) Generate Error d) None of the above

15. How many times the word "Study" printed in the following code :
word="CBSE 2021"
for alpha in word[3:9]:
 print('Study')

a) 7 times b) 5 times
c) 6 times d) Generate error in for loop

16. Which function is used to check whether the string contains a digit or not.



- a) digit()
- b) todigit()
- c) isdigit()
- d) None of the above

17. function is used to check whether all letters of the string are in capital or not.

- a) capitalize()
- b) upper()
- c) isupper()
- d) toupper()

18. function is used to remove all the white spaces from the beginning of the string.

- a) remove()
- b) ltrim()
- c) rtrim()
- d) isspace()

19. lower() and islower() are the same method in string.

- a) True
- b) False

20. What will be the output of the given statement.
`print("Study Trigger 2021".lower().count("t"))`

- a) 2
- b) 1
- c) Generate Error
- d) None of the above

21. What will be the output of the given statement.
`board="CBSE"`
`print(board[-1::-1])`

- a) CBSE
- b) ESBC
- c) Generate Error
- d) None of the above

22. What will be the output of the given statement.
`name="Study Trigger"`
`for i in range(len(name)):`
`if i%2==0:`
`print(name[i].upper(), end="")`
`else:`
`print(name[i].lower(), end="")`

- a) StUdY TrlgGeR
- b) sTuDy tRiGgEr
- c) Study Trigger
- d) Generate Error



23. What will be the output of the given statement.

```
name="StudyTrigger2021"  
newName=""  
for i in range(len(name)):  
    if i%2==0:  
        newName+=name[i+1]  
    else:  
        newName+=name[i-1]  
print(newName)
```

- a) tSduTyirggre0212 b) 1utydrTgieg2r20
c)2021TriggerStudy d) None of the above

24. What will be the output of the given statement.

```
name="Study Trigger"  
newName=name[len(name)-1]  
for i in range(len(name)-1):  
    newName+=name[i]  
print(newName)
```

- a) rStudy Trigge b) erStudy Trigge
c) Study Trigger d) tudyS riggerT

25. What will be the output of the given statement.

```
name="Study Trigger"  
for i in range(0,len(name)-4,2):  
    print(i,end="")
```

- a) Suy Tigr b) 02468
c)Suy d) 0246

Answers

1. (c) 2. (a) 3. (c) 4. (b) 5. (c) 6. (a) 7. (a) 8. (b) 9. (a)
10. (c) 11. (a) 12. (a) 13. (c) 14. (b) 15. (c) 16. (c) 17. (c) 8. (b)
19. (b) 20. (a) 21. (b) 22. (a) 23. (a) 24. (a) 25. (b)

Explanation



1. (c) A string is a sequence of characters.
2. (a) You will iterate string from both the sides with the help of index no. If you are using index number 0 to size-1 (All positive) then it is called Forward Indexing and if you are using index number -1,-2 (all negative) and so on then it is called Backward Indexing. So, String index is Bi-Direction..
3. (c) in operator is not a basic string operator, it is membership operator.
4. (b) False, both gives the different result.
5. (c) Generate TypeError, as you can only concatenate str (not "int") to str
6. (a) Yes, both the statement will give the same result because replication operator work with both the conditions either you put numeric value first or put string first.
7. (a) > is a comparison operator.
8. (b) As "study" starts with lower case alphabet (s) and the word in which we find it i.e. "Study Trigger" starts with upper case so, "in" operator return False.
9. (a) The opposite of ord() is chr() as ord() function return numeric value as per ASCII value like ord('A') will return 65 and chr() function returns character value as per ASCII like chr(65) will return 'A'.
10. (c) The extraction of substring from string is called Slicing
11. (a) Yes, If "name" is a string and 'i' is index of that string, then name[:i] + name[i:] will return the complete string "name".
12. (a) Yes, Strings are immutable, i.e. You cannot change the individual letters of a string in place by assignment
13. (c) When you print a string with a number in square brackets, then it will take this number as an index of that string and print only that character, i.e. in this question "Study", it is a string and you will print [1] inside print function, then it will only print 't' which lies at 1 index in this string.
14. (b) This time it will take index number 6 to 13 which is "Trigger" as per the given question.
15. (c) In the given loop (for) you will use word[3:9] i.e. from "CBSE 2021" it will run for "E 2021" and it will contain 6 characters, so loop will execute 6

times.

16. (c) `isdigit()` function is used to check whether the string contains a digit or not.
17. (c) `isupper()` function is used to check whether all letters of the string are in capital or not.
18. (b) `ltrim()` function is used to remove all the white spaces from the beginning of the string.
19. (b) No, `lower()` and `islower()` are not the same method in string.
20. (a) First it convert "Study Trigger 2021" into lower case i.e. study trigger 2021 and then count total number of "t" in this string. So, the final answer is 2.
21. (b) As string slicing starts from end "-1" and also use backward indexing, so, it will reverse the given string and the answer you will get is "ESBC"

i	If i%2==0	Print name[i].upper()	else	Print name[i].lower()
0	True	S	False	
1	False		True	t
2	True	U	False	
3	False		True	d
4	True	Y	False	
5	False		True	
6	True	T	False	
7	False		True	r
8	True	I	False	
9	False		True	g
10	True	G	False	
11	False		True	e
12	True	R	False	

So, final output is **StUdY TrIGeR**

22.

Let's understand this code with the given dry run:

23. Same as question 22 only position will be change.

24. As per given code, at starting, the "newname" variable stores "r" from the given statement :

```
newName=name[len(name)-1]
newname=name[13-1]
newname=name[12] i.e. 'r'.
```



After that inside the for loop the "newName" will append all the characters of string.

25. Print the index number, not the alphabets/characters of a string.





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Python Revision Tour - Practice Paper III

1. List are..... i.e. you can change the elements of a list.

- a) mutable b) immutable
- c) both a and b d) None of the above

2. To create an empty list, L:

```
L=[]                      //statement 1  
L=list()                      //statement 2
```

- a) Both statements are true b) only statement 1 is true
- c) only statement2 is true b) both statements are false

3. List inside the list is called

- a) inner list b) nested list
- c) 2-D list d) none of the above

4. List index is bi-directional just like strings.

- a) True b) False

5. What will be the output of the given statement.

```
print([1,2,3,4,5]+5)
```

- a) [6,7,8,9,10] b) [1,2,3,4,5,5]
- c) Generate Error d) None of the above

6. What will be the output of the given statement.

```
print([1,2,3,4,5]+[5])
```

- a) [6,7,8,9,10] b) [1,2,3,4,5,5]
- c) Generate Error d) None of the above

7. What will be the output of the given statement.

```
print([1,2,3]*3)
```

- a) [3,6,9] b) [1,2,3,3]
- c) [1,2,3,1,2,3,1,2,3] d) Generate Error

8. What will be the output of the given statement.

```
print([1,2,3]*[3])
```

- a) [3,6,9] b) [1,2,3,3]
- c) [1,2,3,1,2,3,1,2,3] d) Generate Error



9. What will be the output of the given statement.
`print([10,20,30,40,50].index(90))`
- a) No Output b) 0
c) Generate Error d) None of the above
10. `append()` and `extend()` are the same method.
a) True b) False
11. Which of the following method is not use for insert an/are element(s) into list:
a) `insert()` b) `append()`
c) `extend()` d) `push()`
12. How many parameter(s) are taken by `insert()`:
a) 0 b) 1
c) 2 d) 3
13. What will be the output of the given statement.
`print([1,2,3,4,5].reverse())`
- a) [5,4,3,2,1] b) None
c) [1,2,3,4,5] d) Generate Error
14. What will be the output of the given statement.
`L=["Study","Trigger",["Welcome","to","Study","Trigger"],"Always","With","You!"]`
`print(L[2][0])`
- a) Study b) Trigger
c) Welcome d) Generate Error
15. What will be the output of the given statement.
`L=["Study","Trigger",["Welcome","to","Study","Trigger"],"Always","With","You!"]`
`print(L[2][0][2])`
- a) u b) l
c) l d) Generate Error
16. function is used to delete a given element from the list.
a) `remove()` b) `clear()`
c) `pop()` d) none of the above
17. function is used to add an element into beginning of the list.
a) `push()` b) `insert()`

- c) append() d) extend()
18. function is used to add an element into the end of the list.
 a) push() b) insert()
 c) append() d) extend()
19. List are immutable and strings are mutable
 a) True b) False
20. Strings store single type of elements and list can store different types of elements.
 a) True b) False
21. To create an empty tuple, T:
 T=() //statement 1
 T=tuple() //statement 2
 a) Both statements are true b) only statement 1 is true
 c) only statement2 is true d) both statements are false
22. User can also create nested tuple just like nested list
 a) True b) False
23. Tuples are immutable and list are mutable.
 a) True b) False
24. Creating tuple from a set of values is called.....
 a) Collection b) Sequence
 c) Packing d) None of the above
25. Read the following statements, and find the output :
 T1=(2,3)
 T2=('2','3')
 print(T1==T2)
 a) True b) False
 c) Generate Error d) None of the above

Answers

1. (a) 2. (a) 3. (b) 4. (a) 5. (c) 6. (b) 7. (c) 8. (d) 9. (c)



10. (b) 11. (d) 12. (c) 13. (b) 14. (c) 15. (c) 16. (a) 17. (b) 18. (c)

19. (b) 20. (a) 21. (a) 22 (a) 23. (a) 24. (c) 25. (b)

Explanation

1. (a) List are mutable i.e. you can change the elements of a list.
2. (a) Both statements are true
3. (b) List inside the list is called nested list.
4. (a) Yes, List index is also bi-directional just like strings
5. (c) It will generate error i.e you can only concatenate list (not "int") to list
6. (b)
7. (c)
8. (d) It will generate error i.e. you can't multiply sequence by non-int of type 'list'
9. (c)
10. (b) append() is used to insert single element into list, however extend() is use to insert multiple element into list.
11. (d) Push() is not a function.
12. (c) insert() function will take 2 parameters i.e. position and element to be inserted like: insert(<pos>,element)
13. (b) None
14. (c) Welcome
15. (c) I
16. (a)
17. (b)
18. (c)
19. (b) No,List are mutable and strings are immutable
20. (a) Yes, Strings store single type of elements and list can store different types of elements.

21. (a) Both are true
22. (a) Yes, user can create nested tuple.
23. (a) Yes, Tuples are immutable and list are mutable.
24. (c) Creating tuple from a set of values is called packing.
25. (b) False

Python Revision Tour - Practice Paper - IV

1. Dictionaries are mutable with elements in the form of a **key:element** pair.
a) True b) False
2. To create an empty dictionary, D:
D={} //statement 1
D=dict() //statement 2
a) Both statements are true b) only statement 1 is true
c) only statement2 is true d) both statements are false
3. Dictionaries are also called associative arrays, mappings or hashes.
a) True b) False
4. As dictionaries are mutable, so, a user can change the value of keys.
a) True b) False
5. A dictionary operation that takes a key and finds the corresponding value, is called
- a) vlookup b) searching
c) lookup d) None of the above
6. To see all the values of a dictionary.....function is used
a) value() b) item()
c) items() d) values()
7. To see all the keys of a dictionary.....function is used
a) key() b) item()

- c) items() d) keys()
8. If you want to add an element into a dictionary then key must not exist, but if you want to update an element then key must exist in a dictionary.
a) True b) False
9. The membership operator (in, not in) work on dictionary with.....
a) keys b) values
c) Both a and b d) None of the above
10. clear() and del are the same for deleting a dictionary
a) True b) False
11.of a dictionary must be unique.
a) keys b) values
c) Both a and b d) None of the above
12. Choose the correct way to declare a dictionary :
a) dic={'CBSE':1,'Exam':2,'2022':3}
b) dic={'CBSE':1;'Exam':2;'2022':3}
c) dic={'CBSE'=1,'Exam'=2,'2022'=3}
d) dic={'CBSE';1,'Exam';2,'2022'3}
13. What will be the output of the given statement.
dic={'Study':1,'Trigger':2,'Student':3,'CBSE':4}
t=""
for key in dic:
 if t<key:
 t=key
print(t)
a) Trigger b) Study
c) Student d) CBSE
14. What will be the output of the given statement.
a={{(1,2):"Study",(2,3):"Trigger"}}

print(a[1,2])

- a) Study b) Trigger
- c) Generate Error d) None of the above

15. In sorting each element is compared with the adjacent element and the elements are swapped if they are found in wrong order.

- a) Bubble b) Selection
- c) Insertion d) All of the above

16. In sorting each successive element is picked & inserted at an appropriate position in the previously sorted array.

- a) Bubble b) Selection
- c) Insertion d) All of the above

17. What will be the result after 3rd pass of insertion sort if applied on the following list.

[16, 19, 11, 15, 10]

- a) [11,15,16,19,10] b) [16,19,11,15,10]
- c) [16,11,15,19,10] d) [16,19,10, 11,15]

Answers

1. (b) 2. (a) 3. (a) 4. (b) 5. (c) 6. (d) 7. (d) 8. (a) 9. (a)

10. (b) 11. (a) 12. (a) 13. (a) 14. (a) 15. (a) 16. (c) 17. (a)

Explanation

1. (b) No, Dictionaries are mutable with elements in the form of a key:value pair.

2. (a) Both the statements are true.



3. (a) Yes, Dictionaries are also called associative arrays, mappings or hashes.
4. (b) No, As dictionary are mutable, so, a user can change the value of keys.
5. (c) A dictionary operation that takes a key and finds the corresponding value, is called lookup
6. (d) To see all the values of a dictionary values function is used
7. (d) To see all the keys of a dictionary keys function is used
8. (a) Yes
9. (a) The membership operator (in, not in) work on dictionary with keys only
10. (b) No, clear and del are not the same. Clear can only delete the values from dictionary but dictionary still exist, in case of del, it will delete dictionary with values from memory
11. (a) keys of a dictionary must be unique.
12. (a)
13. (a) Trigger
14. (a) Study
15. (a) In Bubble sorting each element is compared with the adjacent element and the elements are swapped if they are found in wrong order.
16. (c) In Insertion sorting each successive element is picked & inserted at an appropriate position in the previously sorted array.

17. (a) As per the insertion sort, following are the passes of given code :

After 1 Pass : [16, 19, 11, 15, 10]

After 2 Pass : [11, 16, 19, 15, 10]

After 3 Pass : [11, 15, 16, 19, 10]

After 4 Pass : [10, 11, 15, 16, 19]



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Functions Practice Paper - I

1. In Python, function can be return only one value.
a) True b) False
2. The variable declared outside a function is called a global variable.
a) True b) False
3. You can call a function only once after defining it.
a) True b) False
4. Value returning functions should be generally called from inside of an expression.
a) True b) False
5. Ais basically a block of code that will execute only when it is called.
a) function b) sub program
c) block d) all
6. Functions provide amechanism. The same function can be called any number of times.
a) call b) reuse
c) define d) none of the above
7. Actual parameters are the parameters specified within a pair of parenthesis in the function definition
a) True b) False
8. A function in Python is waste without calling it.
a) True b) False

9. A local variable having the same name as global variable
a) True b) False
10. Python passes arguments to function by.....
a) reference b) value
c) both d) none of the above
11. The variable declared inside the function is called a
.....variable
a) global b) local
c) external d) none of the above
12. Python passes parameters by value.
a) True b) False
13.is the blank space in the beginning of a
statement within a block.
a) indentation b) space
c) body d) none of the above
14. Every Functions return a value if function do not explicitly return
a value, then it will return.....
a) return b) None c) value d) all
15. Function header and function definition is the same thing
a) True b) False
16. These are predefined functions that are always available for use.
For using them we don't need to import any module
a) built function b) pre define function
c) user-defined d) none of the above
17. A function is said to beif it calls itself.
a) built function b) pre define function
c) recursive d) all

18. These are predefined functions that are available in a module.
For using them we need to import module
- a) built function b) pre define function
 - c) user-defined d) function define in module
19. The.....of a variable is the area of the program where it may be referenced
- a) external b) global
 - c) scope d) local
20. If you want to communicate between functions i.e. calling and called statement, then you should use.....
- a) values b) return
 - c) arguments d) none of the above
21. In Python, parameters and arguments are the same thing.
- a) True b) False
22. The syntax of function call and declaration is very similar, except that the keyword andare missing:
- a) colon,def b) argument,def
 - c) def, parameters d) none
23. Find the output of the following code :
- ```
x = 100
def study(x):
 x=50
 study(x)
 print("Value of x is ", x)
```
- a) 100                                  b) 50
  - c) Error                                d) none of the above
24. Find the output of the following code :
- ```
x = 100
def study(x):
    x=50
    print("Value of x is ", x)
```

- a) 100 b) 50
b) c) Error d) none of the above

25. Find the output of the following code :

```
def study(x,y,z):  
    print(x+y+z)  
a=study(2,3,4)  
print(a)
```

- a) 9, None b) 9,9
b) c) None, None d) none of the above

Answers

1. (b) 2. (a) 3. (b) 4. (a) 5. (a) 6. (b) 7. (b) 8. (a) 9. (a)
10. (b) 11. (b) 12. (a) 13. (a) 14. (b) 15. (b) 16. (a) 17. (c)
18. (d)
19. (c) 20. (c) 21. (b) 22. (a) 23. (a) 24. (a) 25. (a)

Explanation

- (b) No, In Python, you can return multiple values from functions.
- (a) Yes, the variable declared outside a function is called a global variable.
- (b) No, You can call a function as many time as you want after defining it.
- (a) Yes, Value returning functions should be generally called from inside of an expression
- (a) A Function is basically a block of code that will execute only when it is called.

6. (b) Functions provide a reuse mechanism. The same function can be called any number of times.
7. (b) No, Actual parameters are the parameters specified within a pair of parenthesis in the function calling, however Formal parameters are the parameters specified within a pair of parenthesis in the function definition.
8. (a) Yes, A function in Python is waste without calling it
9. (a) Yes, A local variable having the same name as global variable
10. (b) Python passes arguments to function by value.
11. (b) Local variable is the variable declared inside the function.
12. (a) Yes, Python passes parameters by value.
13. (a) Indentation is the blank space in the beginning of a statement within a block
14. (b) Every Functions return a value if function do not explicitly return a value, then it will return None
15. (b) No, Function header and function definition is not the same thing, function definition contain function header as well as function body, but function header contain only the first line of function definition.
16. (a) Built in functions are predefined functions that are always available for use. For using them we don't need to import any module. For Example : len(), type(), int(), input().
17. (c) Recursive function is a function which calls itself.

18. (d) Function defined in Modules are predefined functions that are available in a module. For using them we need to import module
19. (c) Scope of a variable is the area of the program where it may be referenced
20. (c) If you want to communicate between functions i.e. calling and called statement, then you should use Argument.
21. (b) No, In Python, parameters and arguments are not the same thing.
22. (a) The syntax of function call and declaration is very similar, except that the keyword def and colons are missing.
23. (a) 100
24. (a) 100
25. (a) 9, None



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Function Practice Paper - II

1. User can change the functionality or name of Built-in functions.
a) False b) True
2. The first line of a function header begins with def keyword and ends with a semi-colon.
a) False b) True
3. Which of the following function headers is correct.
a) def study(a=2,b=5,c): b) def study(a=2,b,c=5):
c) def study(a, b=2,c=5): d) none of the above
4. Which one of the following is the correct way of calling a function:
a) call function_name() b) def function_name()
c) ret function_name() d) function_name()
5. Positional arguments is also called Required Arguments.
a) True b) False
6. A function in python begins with which keywords
a) void b) return
c) int d) def
7. Which statement is used to send back a value from a function
a) print b) input
c) return d) none of the above
8. A variable created or defined within a function body is
a) local b) global
c) built-in d) instance

9. If we initialize some value to parameter at function header, it's called of that parameter
- a) keyword
 - b) required
 - c) variable length
 - d) default
10. In..... arguments, we can skip the default argument, but all the keyword arguments should match the parameters in the function definitions
- a) keyword
 - b) required
 - c) default
 - d) none of the above
11. When large programs are broken down into smaller units known as.....
- a) sub program
 - b) functions
 - c) class
 - d) none of the above
12. In function definition, the function name is called.....
- a) keyword
 - b) identifier
 - c) variable
 - d) none of the above
13. By default if you return multiple value separated by comma, then it is returned as:
- a) list
 - b) tuples
 - c) string
 - d) none of the above
14. A function cannot return a value in the form of.....
- a) Literals
 - b) Expression
 - c) Variable
 - d) none of the above
15. A function that does not have any return value is known as.....
- a) library function
 - b) void function
 - c) fruitful function
 - d) none of the above
16.means a function definition is starting.
- a) return
 - b) function name

c) def d) colon

17. There is aat the end of the def line, meaning it requires a block.

a) colon b) return
c) def d) none of the above

18. Write the output of the following code.

```
def Greet(name):  
    print("Hello! ",name)  
Greet('Mahesh')
```

a) Hello! Mahesh b) Hello!
c) Mahesh d) none of the above

19. How to call the given function:

```
def study(num=5):  
    print(num+5)
```

a) study() b) study(7)
c) call study(9) d) none of the above

20. What will be the output of the following code :

```
def calculate(a,b):  
    return a+b, a-b  
res=calculate(7,7)  
print(res)
```

a) (14,0) b) 14,0
c) 14 d) 0

21. What will be the output of the following code:

```
def study (n):  
    ans=0  
    for i in range(1,n):  
        ans+=i  
    return ans  
print(study(5))
```

a) 10 b) 15

b) c) Error d) No Output

22. What will be the output of the following code:

```
x = 100
def study():
    global x
    x=50
print(x)
```

- a) 100 b) 50
b) c) Error d) none of the above

Answers

1. (a) 2. (a) 3. (c) 4. (d) 5. (a) 6. (d) 7. (c) 8.(a) 9.(d)
10. (a) 11. (b) 12. (b) 13. (b) 14. (d) 15. (b) 16. (c) 17. (a) 18. (a)
19. (a,b) 20. (a) 21. (a) 22. (b)

Explanation

1. (a) No, User can't change the functionality or name of Built-in functions.
2. (a) The first line of a function header begins with def keyword but its end with colon instead of semi-colon.
3. (c) def study(a, b=2,c=5) :- default argument always follow the non-default arguments.
4. (d) You can call a function by simply writing the name of the function.
5. (a) Positional arguments is also called Required Arguments or Mandatory Arguments.
6. (d) A function in python begins with def keyword

7. (c) return statement is use to sends back a value from a function
8. (a) A variable created or defined within a function body is called Local variable
9. (d) default arguments works with implicit values that are used if no value is provided
10. (a) In Keyword Arguments, we can skip the default argument, but all the keyword arguments should match the parameters in the function definitions.
11. (b) When large programs are broken down into smaller units known as Functions
12. (b) In the definition of function, the function name is called as identifier. However, function definition start with Keyword “def” but function’s name is called identifier.
13. (b) By default if you return multiple value separated by comma, then it is return as Tuple.
14. (d) A function can return a value in the form of :
Literals like return 25
Expression like return a+c
Variable like return a
15. (b) Void function is a function that does not have any return value, it is also called Fruitless function. However, if a function return a value then it is called Fruitful function.
16. (c) def means a function definition is starting.
17. (a) There is a colon at the end of the def line, meaning it requires a block.

18. (a) As Mahesh passes as a parameter at calling statement that is received by "name" parameter in function definition and then it will print "Hello! Mahesh".

19. (a,b) You can call this function by both the options either by "a" or by "b", as this function contains default argument, so, it depends on you that you want to call this function with or without the value.

20. (a) When multiple values are returned by a function in a single variable (like in the given code, all values will be returned to res variable) then it will return as a tuple, so the output of the given code will be (14,0).

21. (a) 10

n	i	i<=n	ans+=i	return ans
5	1	True	0+1 = 1	
	2	True	1+2 = 3	
	3	True	3+3 = 6	
	4	True	6+4 = 10	
		False	----- --	10

22. (b) 50, As we use global variable inside local function by using keyword "global", so, the value will be changed.

Function Practice Paper - III

1. Find the flow of execution of the following code :

```
1. def calculate (a,b):
2.     res=a**b
3.     return res
4.
5. def study(a):
6.     ans=calculate(a,b)
7.     return ans
8.
9. n=2
10. a=study(n)
11. print(a)
```

a) 1->5->9->10->6->2->3->7->11
>11

b) 5->9->10->6->2->3->7-

c) 9->10->5->1->6->2->3->7->11

d) None of the above

2. What will be the output of the following code :

```
def display(s):
    l = len(s)
    m=""
    for i in range(0,l):
        if s[i].isupper():
            m=m+s[i].lower()
        elif s[i].isalpha():
            m=m+s[i].upper()
        elif s[i].isdigit():
            m=m+"$"
        else:
            m=m+"*"
    print(m)
display("STUDY21@trigger.com")
```

- a) study\$\$*TRIGGER*COM b) STUDY\$\$*trigger*COM
c) study21*TRIGGER*COM d) None of the above

3. Python resolves the scope of a name using the LEGB rule.

- a) True b) False

4. A python module can be imported in a program using the include statement.

- a) True b) false

5. User can also change the functionality of built in functions.

- a) True b) False

6. In which part of memory does the system stores the parameter and local variables of function call.

- a) Heap b) Stack
c) Both a and b d) None of the above

7. What will be the output of the following code:

```
def Display(str):  
    m=""  
    for i in range(0,len(str)):  
        if(str[i].isupper()):  
            m=m+str[i].lower()  
        elif str[i].islower():  
            m=m+str[i].upper()  
        else:  
            if i%2==0:  
                m=m+str[i-1]  
            else:  
                m=m+"@"  
    print(m.swapcase())  
Display('StudyTrigger$2021')
```

- a) StudyTriggerR@2@2 c) StudyTrigger\$@2@2
b) Studytrigger\$@2@2 d) None of the above

8. What is the output of the following statement

```
print(chr(ord(chr(97))))
```

- a) a b) A
- c) 97 d) error

9. Function returning value is also known as non-fruitful functions.

- a) True b) False

10. Find the flow of execution of the following code :

1. def calculate (a):
2. a+=1
- 3.
4. n=2
5. print(n)
6. calculate(n)
7. print(n)

- a) 1->4->5->6->1->2->7 b) 1->4->5->6->2->7
- c) 1->4->5->6->1->2->6->7 d) None of the above

11. You can define a function inside a function.

- a) True b) False

12. A function can only return a single value.

- a) True b) False

13. Positional argument is also calledargument

- a) default b) named
- c) keyword d) required

14. Named argument is also called argument

- a) default b) positional
- c) keyword d) required

15. When you use multiple type argument in function, then default argument take place

- a) at beginning
- b) at end
- c) anywhere
- d) none of the above

16. A void function internally returns legal empty value

- a) None
- b) close()
- c) Return
- d) all

17. The values being passed through a function-call statement are called.....

- a) arguments
- b) parameters
- c) values
- d) none

18. The values received in the function definition/header are called.....

- a) arguments
- b) parameters
- c) values
- d) none

19. A.....can be skipped in the function call statements.

- a) named parameter
- b) default parameter
- c) keyword parameters
- d) all of the above

20. What will be the output of the following code

```
total=0
def add(a,b):
    global total
    total=a+b
    print(total)
add(6,6)
print(total)
```

- a) 12 12
- b) 12 0
- c) 0 12
- d) None of the above



21. What will be the output of the following code

```
total=0
def add(a,b):
    global total
    total=a+b
    print(total)
add(6,6)
print(total)
```

- a) 12 12 b) 12 0
c) 0 12 d) None of the above

Answers

1. (a) 2. (a) 3. (a) 4. (b) 5. (b) 6. (b) 7. (a) 8. (a) 9. (b)
10. (a) 11. (b) 12. (b) 13. (d) 14. (c) 15. (b) 16. (a) 17. (a) 18. (b)
19. (b) 20. (a) 21. (b)

Explanation

1. 1->5->9->10->6->2->3->7->11
2. study\$\$*TRIGGER*COM
3. (a) Yes, Python resolves the scope of a name using the LEGB (Local, Enclosing, Global and Built) rule.
4. (b) No, A python module cannot be imported in a program using the include statement, it can be imported using import statement.
5. (b) No, User cannot change the functionality of built in functions.
6. (b) Stack, where variables are stored, alongwith information that is save each time a function is called. Each time a function is called, the address of where to return to and certain information about the caller statement.

7. (a) StudyTriggerR@2@2
8. (a) a
9. (b) No, Function returning value is also known as fruitful functions.
10. (a) 1->4->5->6->1->2->7
11. (b) No, you cannot define a function inside a function
12. (b) No, a function can also return multiple values.
13. (d) Positional argument is also called required argument.
14. (c) Named argument is also called Keyword argument.
15. (b) When you use multiple type argument in function, then default argument take place at the end or after the positional arguments.
16. (a) A void function internally returns legal empty value None
17. (a) The values being passed through a function-call statement are called arguments.
18. (b) The values received in the function definition/header are called parameters
19. (b) A default parameter can be skipped in the function call statements.
20. (a) 12 12
21. (b) 12 0



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Functions Practice Paper IV

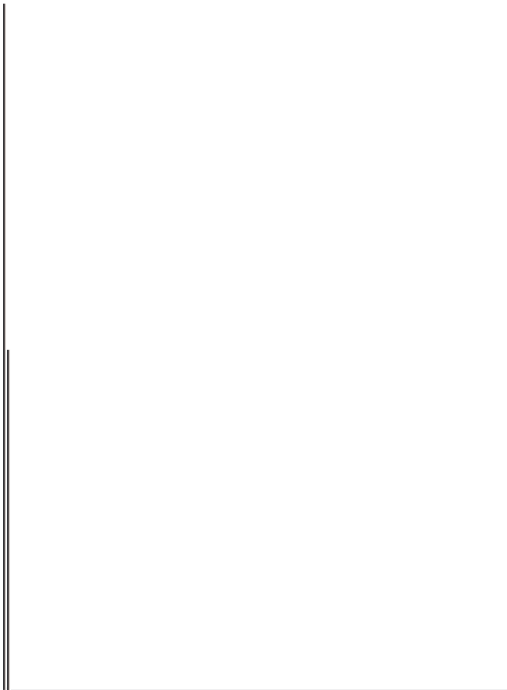
1. When a function call itself either directly or indirectly, is called.....
 - a) Nested Function
 - b) Recursion
 - c) Both a and b
 - d) None of the above
2. Recursion function must have termination condition called.....
 - a) Terminating point
 - b) End condition
 - c) Base case
 - d) Stop Condition
3. Recursion function consumes more storage space because the recursive calls along with local variables are stored on the stack.
 - a) True
 - b) False
4. Base case and.....case are the two cases of Recursive function.
 - a) Iterative
 - b) Body
 - c) Repeating
 - d) Recursive
5. When a recursive function calls itself endlessly is called.....recursion.
 - a) Infinite
 - b) Keep executing
 - c) Never Ending
 - d) Never Stop
6. Recursion function are relatively slower than their iterative counterparts.
 - a) True
 - b) False
7. Which of these is false about recursion?
 - a) Recursive function can be replaced by a non-recursive function

- b) Recursive functions usually take more memory space than non-recursive function
- c) Recursive functions run faster than non-recursive function
- d) Recursion makes programs easier to understand

8. Which of the following statements is false about recursion?

- a) Every recursive function must have a base case
- b) Infinite recursion can occur if the base case isn't properly mentioned
- c) A recursive function makes the code easier to understand
- d) Every recursive function must have a return value

Read the code and answers the following questions :



```
def calculate(n):  
    if n==1:  
        return 1  
    else:  
        return .....  
  
print(.....)
```

9. What is the base condition is this code :
- a) return 1 b) $n==1$
c) else part d) None of the above
10. What statement come after return, if we want to calculate sum of first 10 numbers?
- a) $n+calculate(n-1)$ b) $n+calculate(n+1)$
c) $calculate(n+1)$ d) None of the above
11. Choose the correct statement to call the calculate function in print statement to find sum of first 10 numbers?
- a) $calculate(n=10)$ b) call $calculate(10)$
c) $return calculate(10)$ d) $calculate(10)$

12. Choose the correct function (code) from the given to find factorial of a number using recursion

- a) `def factorial(n):
 if n==1:
 return 1
 else:
 return n*factorial(n-1)`
- b) `def factorial(n):
 if n==1:
 return 1
 else:
 return factorial(n-1)`
- c) `def factorial(n):
 if n==2:
 return 1
 else:
 return n*factorial(n-1)`
- d) `def factorial(n):
 if n==1:
 return 1
 else:
 return (n-1)* factorial(n-1)`

13. Find the output of the following :

```
def study(a,b):  
    if b==0:  
        return 1  
    elif b%2==0:  
        return study(a*a,b/2)  
    else:  
        return a*study(a,b-1)  
print(study(2,5))  
a) 16      b) 25  
c) 64      d)32
```

14. A directory of Python module(s) is referred to as _____

- a) Python Dictionaries b) Python object
c) Python libraries d) Python package

15. For using any python source file as a module, we need to include this by using..... statement.

- a) Include b) execute
c) import d) none of the above

16. To check the name of the module, you will use.....variable
 a) `_module_` b) `_module_name_`
 c) `name_module` d) `_name_`
17. To generate a random number, you will use.....module
 a) `math` b) `string`
 c) `random` d) all the above
18. `math` module and `cmath` module are the same module with different name
 a) True b) False
19.library offers Python user interface toolkit and helps to create user friendly GUI.
 a) NumPy b) SciPy
 c) Matplotlib d) TkInter
20.library offers some advance math functionalities along with tools to create and manipulate numeric arrays.
 a) NumPy b) SciPy
 c) Matplotlib d) TkInter

Answers

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

Explanation

1. (b) When a function call itself either directly or indirectly, is called Recursion

2. (c) Recursion function must have termination condition called base case.
3. (a) Yes
4. (d) Base case and Recursive case are the two cases of Recursive function.
5. (a) When a recursive function calls itself endlessly is called infinite recursion.
6. (a) Yes, Recursion function are relatively slower than their iterative counterparts.
7. (c) Recursive functions run faster than non-recursive function
8. (d) A recursive function needn't have a return value.
9. (b) $n=1$ is the base condition
10. (a) $n + \text{calculate}(n-1)$
11. (d) $\text{calculate}(10)$
12. (a)
13. (d) 32
14. (d) A directory of Python module(s) is referred to as Python package
15. (c) For using any python source file as a module, we need to include this by using import statement
16. (d) To check the name of the module, you will use `__name__` variable

17. (c) To generate a random number, you will use random module
18. (b) No, math module and cmath module are not the same module with different name
19. (d) TkInter library offers Python user interface toolkit and helps to create user friendly GUI.
20. (a) NumPy library offers some advance math functionalities along with tools to create and manipulate numeric arrays



Functions Practice Paper V

1.library offers algorithmic and mathematical tools for scientific calculations.
a) NumPy b) SciPy
c) Matplotlib d) TkInter
2.module offers url handling function to access websites from within your program.
a) math b) random
c) urllib d) statistics
3. If you want to access website controls like url, ip address etc in your python code, then you should usemodule.
a) statistics b) cmath
c) random d) urllib
4. behaves like a container which contains variable, class definitions, statements and function related to a particular task.
a) Library b) Module
c) Function d) Class
5.is useful for documentation purposes and should be written with triple quotes.
a) classes b) Object
c) statements d) docstrings
6.function resides inside the random module which generate random number between 0.0 to 1.0 and return a floating point number.
a) randint() b) rand()
c) random() d) None of the above

7. You cannot create your own modules in Python.

- a) True b) False

8.function resides inside the random module which generate random number in a range and return a integer value.

- a) randint() b) rand()
c) random() d) None of the above

9. If you want to import all names from a module into the current calling module, then you should use statement

- a) from b) from*
c) import d) import *

10. returns the current system date from date class function.

- a) now() b) today()
c) current() d) month()

11. Find the output(s) for the following codes:

```
import random
print(int(15+random.random()*5),end=' ')
print(int(15+random.random()*5),end=' ')
print(int(15+random.random()*5),end=' ')
print(int(15+random.random()*5))
```

- a) 19 15 16 19 b) 19 20 16 19
b) c) 20 14 16 19 d) 19 19 19 19

12. Find the minimum and maximum possible value from the code:

```
import random
print(random.randint(3,10)-3))
```

- a) min=0, max=7 b) min=-3, max=10
c) min=-3, max=7 d) none of the above

13. Find the output(s) for the following codes:



```
import random
L=[2,3,4,5,6,7]
N1=random.randint(1,3)
N2=random.randint(2,4)
for i in range (N1, N2+1):
    print(L[i],end="#")
```

- a) 1#4#7# b) 3#4#5#
b) c) 5#6#7# d) 4#5#7#

14. Find the output(s) for the following codes:

```
import random
import math
print(int(math.pow(random.randint(2,4),2)),end='*')
print(int(math.pow(random.randint(2,4),2)),end='*')
print(int(math.pow(random.randint(2,4),2)))
```

- a) 4*16*4 b) 4*4*32
b) c) 16*16*32 d) 16*16*16

15. Find the output(s) for the following codes:

```
import random
Name="STUDYTRIGGER"
Num=random.randint(0,3)
N=9
while Name[N]!='R':
    print(Name[N]+Name[Num]+"#", end=' ')
    Num+=1
    N-=1
```

- a) GD# GY# IT# b) GS# GT# IU#
c) GU# GD# IY# d) All the above

Answers

1. (b) 2. (c) 3. (d) 4. (b) 5. (d) 6. (c) 7. (a) 8. (a) 9. (d)
10. (b) 11. (a) and (d) 12. (a) 13. (b) 14. (a) and (d) 15. (d)

Explanation



1. (b) SciPy library offers algorithmic and mathematical tools for scientific calculations
2. (c) urllib module offers url handling function to access websites from within your program.
3. (d) If you want to access website controls like url, ip address etc in your python code, then you should use urllib module.
4. (b) Module behaves like a container which contains variable, class definitions, statements and function related to a particular task.
5. (d) docstrings is useful for documentation purposes and should be written with triple quotes.
6. (c) random function resides inside the random module which generate random number between 0.0 to 1.0 and return a floating point number.
7. (a) Yes, You cannot create your own modules in Python.
8. (a) randint() function resides inside the random module which generate random number in a range and return a integer value.
9. (d) If you want to import all names from a module into the current calling module, then you should use import * statement
10. (b) today() returns the current system date from date class function.
11. (a) and (d)
12. (a) min=0, max=7
13. (b)

14. (a) and (d)

15. (d).



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File Handling Practice Paper - I

1. A relative path always begins with the root folder.
a) True b) False
2. It is necessary to always create the file in the same default folder where Python has been installed.
a) True b) False
3. Files in Python can be opened in one of the three modes:
.....
a) real, modify, write b) read, append, create
c) read, write, delete d) read, write, append
4. The method of a file object flushes any unwritten information and closes the file object, after which no more writing can be done.
a) flush() b) close()
c) write() d) read()
5. readlines() reads the entire file at a time.
a) True b) False
6. A close() function breaks the link of the file object and the file on the disk.
a) True b) False
7. When you open a file in write mode, the given file must exist in the folder; otherwise Python will raise FileNotFoundError error.
a) True b) False
8. The default file open mode is write mode.
a) True b) False
9. Opening a file in write mode erases the previous data.

- a) True b) False
10. by means the information in the file remains even if the computer is switched off.
a) Files b) Strings
c) Streams d) None of the above
11. Themethod writes a list of strings to a file.
a) write() b) writelines()
c) append() d) dump()
12. readlines() function returns a list of strings, each separated by "\n".
a) True b) False
13. file() and open() functions have different usage.
a) True b) False
14. Data maintained inside the file is termed as "un-preserved" data.
a) True b) False
15. With statement ensures that all the resources allocated to the file objects get deallocated automatically.
a) True b) False
16. A file mode defines the type of operations that is to be performed on the file.
a) True b) False
17.function creates a file object which serves as a link to a file residing on the computer.
a) close() b) open()
c) load() d) dump()
18. A stream is defined as a sequence of characters.

a) True b) False

19. A binary file stores information in ASCII or Unicode characters.

a) True b) False

20. In binary file, there is no delimiter for a line.

a) True b) False

Answer the following questions (21 to 24) on the basis of ABOUT.txt file having the below content:



21. What is the output of the statement :
- ```
file ("about.txt", "r").readline().split()
```
- a) ['STUDY', 'TRIGGER', '?']      b) ['STUDYTRIGGER', '?']  
 b) ['STUDYTRIGGER?']              d) None of the above
22. What is the output of the statement
- ```
file("about.txt", "r").readline()
```
- a) STUDY TRIGGER ?\n b) ['STUDY TRIGGER ?\n']
 b) Whole content of the file. d) None of the above
23. What is the output of the statement
- ```
myfile=open("about1.txt", "r").readlines()
```
- a) Read whole data as a list              c) Generates an error  
 b) Read whole data as a string              d) None of the above
24. What is the output of the statement:
- ```
myfile=open("about.txt", "w")
myfile.write("Welcome to Study Trigger !")
```
- a) Erase existing data and write new line.
 b) Write new line with existing data.
 c) Generates an error
 d) None of the above
25. CSV stands for :
- a) Comma Split Value b) Common Split File
 c) Comma Separated Function d) Comma Separated File
- 26.

The separator character of CSV files is called a.....



- a) end of record b) end of file
- c) end of row d) delimiter

27. To work with CSV file you need to import.....
module in your program

- a) file b) pickle
- c) csv d) none of the above

28. Which of the following is/are function(s) not used for writing
into csv files

- a) writer() b) writelines()
- c) writerow() d) writerows()

Answers

1. (b) 2. (b) 3. (d) 4. (b) 5. (a) 6. (a) 7. (b) 8. (b) 9. (a)
10. (a) 11. (d) 12. (a) 13. (b) 14. (b) 15. (a) 16. (a) 17. (b) 18. (b)
19. (a) 20. (a) 21. (a) 22. (a) 23. (c) 24. (a) 25. (d) 26. (d) 27. (c)
28. (b)

Explanation

1. (b) The relative path denotes the current working directory. (.) one dot and (..) two dots can be used now in relative paths and pathname. Like :
..\StudyTrigger\MCQ.DOC
So, relative path not always begins with the root folder.

2. (b) You can create your file anywhere in the system, but at the time of opening the file you should be pass the path of file as per where it is store, in the open folder like :
myfile=open("StudyTrigger.txt","r")
myfile=open("E:\\Notes\\StudyTrigger.txt","r")
So, it is not necessary to always create the file in the same default folder where Python has been installed.

3. (d) Files in Python can be opened in one of the three modes i.e. Read (r), Write (w) and append (a).
4. (b) The close() method of a file object flushes any unwritten information and closes the file object, after which no more writing can be done. If you want to write data again into the file then you should open the file again using open().
5. (a) Yes, readlines() reads the entire file at a time and returns all lines as a list.
6. (a) Yes, A close() function breaks the link of the file object and the file on the disk.
7. (b) No, When you open a file in write mode, if the given file does not exist in the folder then it will create a file for you and write the data in it.
8. (b) No, The default file open mode is read mode.
9. (a) Yes, Opening a file in write mode erases the previous data.
10. (a) Files by means the information in the file remains even if the computer is switched off.
11. (b) writelines(): method writes a list of strings to a file, however write(): method writes only a string, not a list.
12. (a) Yes, readlines() function returns a list of strings, each separated by "\n".
13. (b) No, file() and open() functions have same usage.
14. (b) Data maintained inside the file is termed as Preserved or Persistent data.
15. (a) If you open your file with "with" statement then, with statement ensures that all the resources allocated to the file

objects get deallocated automatically.

16. (a) Yes, a file mode defines the type of operations that is to be performed on the file.
17. (b) open() function creates a file object which serves as a link to a file residing on the computer
18. (b) No, a stream is not defined as a sequence of characters.
19. (a) Yes, A binary file stores information in ASCII or Unicode characters.
20. (a) In binary file, there is no delimiter for a line.
21. (a) readline() reads the first line of the file i.e. "Study Trigger ?", but when you use split() function with it then split function split the line with spaces and make it as a list like ["Study" , "Trigger" , "?"].
22. (a) readline() reads the first line of the file so, the output is STUDY TRIGGER ?\n
23. (c) You will try to open "about1.txt" which is not present, so, it will generate an error.
24. (a) You will open existing file in write mode, so, it will erase existing data and write new line.
25. (d) CSV stands for Comma Separated File.
26. (d) The separator character of CSV files is called a delimiter.
27. (c) To working with CSV you need to import csv module in your program.

28. (b) writelines() not use to write data into csv files



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File Handling Practice Paper -II

1. With the help ofmethod you can find the name of the current working directory.
a) getcwd() b) getdir()
c) dir() d) getcur()
2. By usingmethod, you can rename the file or folder.
a) flush() b) filename()
c) rename() d) fname()
3. To remove/delete a file, method can be used.
a) filename() b) rename()
c) remove() d) flush()
4. A file cannot be read by human directly, to read this type of file you have to create a reading program.
a) text b) binary
c) special d) None of the above
5. The statement automatically closes the file after the processing on the file gets over.
a) try b) except
c) catch d) with
6. The readline() returns a list of line from the file till.....
a) end of file b) end of word
c) end of line d) end of characters
7. 'n' characters from the file can be read by method.
a) readline(n) b) reads(n)
c) read(n) d) readlines(n)

8. If you want transfer data from buffer to file forcefully, then..... function is used.
a) flush() b) with c) read() d) write()
9. To read 4 characters from a file object "myfile", which statement you should use :
a) myfile.read(4) b) myfile.read()
c) myfile.readline() d) myfile.readlines()
10. To read the complete content of a file as a string from a file object f, which statement you should use:
a) f.read(5) b) f.read()
c) f.readline() d) f.readlines()
11. A file object is also known as.....
a) file recover b) file cursor
c) file content d) file handle
12. When you open a file in this mode, the file pointer is placed at the beginning of the file and if the file is not existing, it will generate FileNotFoundError.
a) r+ b) rb c) w d) r
13. It opens a binary file for reading only. File must exist.
a) r+ b) rb c) w d) r
14. It opens a file for both reading and writing mode.
a) r+ b) rb c) w d) r
15. The read() function reads data from the of a file.
a) at the end b) from current position
c) from cursor position d) beginning
16. The pickle module contains two main methods called and for writing and reading operation.
a) flush() and get() b) dump() and load()

c) read() and write() d) open() and close()

17. To open a file e:\study.txt for reading, which statement you should use :

- a) f1=open("e:\study.txt ","r")
- b) f1=open("e:\\study.txt ","r")
- c) f1=open(file=" e:\study.txt ","r")
- d) f1=open(file=" e:\\s study.txt ","r")

18. To open a file d:\test.txt for writing, which statement you should use:

- a) fobj=open("d:\\test.txt","w")
- b) fobj=open("d:\\test.txt","r")
- c) fobj=open("d:\test.txt","w")
- d) fobj=open(file="d:\\test.txt","w")

19. To open a file c:\test.txt for appending data, which statement you should use:

- a) fobj=open("c:\\test.txt","a")
- b) fobj=open("c:\\test.txt","rw")
- c) fobj=open(file="c:\test.txt","w")
- d) fobj=open(file="c:\\test.txt","w")

20. How many parameters you can pass in open() method :

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

21. How many parameters you can pass in read() method:

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

22. Afunction is also built in function which breaks the link of file-object and the file on the disk

- a) flush() b) close()
- c) load() d) none of the above

23. What is the output of the following code :

myfile=open("about.txt","w")



```
myfile.write("Hello!")
myfile.write("Study Trigger")
myfile.close()
```

- a) Hello!Study Trigger b) Hello!\nStudy Trigger
c) Generate Error d) None of the above

24. What is the output of the following code:

```
myfile=open("about.txt","w")
myfile.write("[Hello!","Hi","How"])
```

- a) Hello!HiHow b) [Hello!HiHow]
c) Generate Error d) None of the above

25.

Serialisation is also

called.....

- a) Unpickling b) Pickling
c) both a and b d) none of the above

26.

.....is

the process in which an object converts into a byte stream

- a) Unpickling b) Pickling
c) both a and b d) none of the above

27.

.....is

the process in which a byte stream converts into object.

- a) Unpickling b) Pickling
c) both a and b d) none of the above

28.

Writing data into

Binary file is also called Unpickling

- a) True b) False

Answers

1. (a) 2. (c) 3. (c) 4. (b) 5. (d) 6. (c) 7. (c) 8. (a) 9. (a)
10. (b) 11. (d) 12. (d) 13. (b) 14. (a) 15. (d) 16. (b) 17. (b) 18. (a)
19. (a) 20. (b) 21. (a) 22. (a) 23. (a) 24. (c) 25. (b) 26. (b) 27. (a)
28. (b)

Explanation

1. (a) `getcwd()` : is the function by which you can find the name of the current working directory.
2. (c) By using `rename ()` method, you can rename the file or folder.
3. (c) `remove()` method is used to remove/delete a file.
4. (b) A binary file cannot be read by human directly, to read this type of file you have to create a reading program. However, a text file can be directly read by human without any help of program.
5. (d) The with statement automatically closes the file after the processing on the file gets over. So, if you will open your file with "with" statement then you don't require close(). method to close the file.
6. (c) The `readline()` returns a list of line from the file till end of line, as `readline()` method read only one line at a time.
7. (c) By passing *n (no of bytes)* as a parameter in *read()*. function, then you can read 'n' characters from the file.
8. (a) If you want transfer data from buffer to file forcefully, then `flush()` function is used.

9. (a) `myfile.read(4)` function should be used to read 4 characters from a file.
10. (b) `f.read()` function should be used to read the complete content of a file as a string.
11. (d) A file object is also known as file handle.
12. (d) When you open a file in read (r) mode, the file pointer is placed at the beginning of the file and if the file is not existing, it will generate `FileNotFoundError`.
13. (b) `rb` : It opens a binary file for reading only. File must exist.
14. (a) `r+` : It opens a file for both reading and writing mode.
15. (d) The `read()` function reads data from the beginning of a file.
16. (b) `load()` and `dump()` are the two methods which present inside the pickle library.
17. (b) `f1=open("e:\\study.txt","r")` statement is use to open a file for reading.
18. (a) `fobj=open("d:\\test.txt","w")` statement is use to open a file for writing.
19. (a) `fobj=open("c:\\test.txt","a")` statement is use to open a file for append.
20. (b) 2 parameters you can pass in `open()` methods i.e. "filename" and "mode of file".
21. (a) 1 parameter (optional) no of bytes.

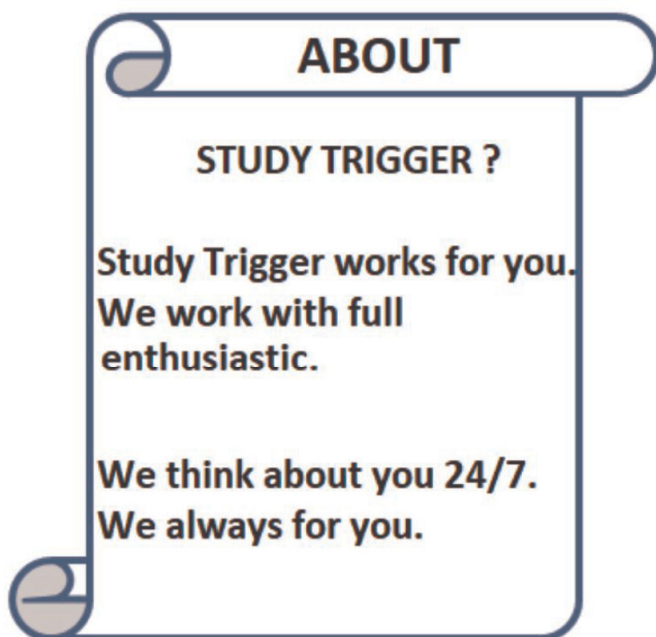
22. (a) close() function is also built in function which breaks the link of file-object and the file on the disk
23. (a) Hello!Study Trigger as first write(), writes the first line Hello! And second write() writes the second line Study Trigger.
24. (c) This code will “Generate Error” as write() method cannot work with list and you will pass “list” in this function.
25. (b) Serialisation is also called Pickling
26. (b) Pickling is the process in which, it converts an object in byte stream
27. (a) Unpickling is the process in which, it converts a byte stream into object.
28. (b) No, Writing data into Binary file is also called Pickling.

File Handling Practice Paper - III

1. A binary file can store data in the form of 0 and 1
a) True b) False
2. File object and file handle is the same thing
a) True b) False
3. r and r+ are the same mode
a) True b) False
4. You may combine the file() or open() with the file object's function.
a) True b) False
5. write() method can be used to write multiple lines simultaneously.
a) True b) False
6. It opens a binary file for both reading and writing. The file pointer is placed at the beginning of the file.
a) r+ b) rb c) rb+ d) r
7. It opens a binary file for writing only. Overwrite the file if the file exist. If file not exist then create new file.
a) w b) w+ c) wb+ d) wb
8. It opens a file for both reading and writing. Overwrite the existing file if the file exists.
a) w b) w+ c) wb+ d) wb
9. It opens a binary file for both reading and writing. The file pointer is placed at the beginning of the file.
a) w b) w+ c) wb+ d) wb

10. It opens a binary file for writing only. The file pointer is placed at the beginning of the file.
a) w b) w+ c) wb+ d) wb
11. It opens a file for appending. The file pointer is placed at the end of the file. If the file is not exist, it will create new file.
a) a b) ab c) a+ d) ab+
12. It opens a binary file for appending. The file pointer is placed at the end of the file.
a) a b) ab c) a+ d) ab+
13. It opens a file for both appending and reading.
a) a b) ab c) a+ d) ab+
14. It opens a binary file for both appending and reading. The file pointer is placed at the end of the file.
a) a b) ab c) a+ d) ab+
15. Which of the following is not a mode of a file
a) r b) r+ c) w+ d) wa+
16. Which of the following is not a function
a) open() b) close() c) splits() d) dump()
17. Which of the following is not a used for writing data into file
a) write() b) writes() c) writeline() d) None of the above
18. readline() method will return
a) string b) a list of integers
c) integer d) a list of strings
19. getcwd() function is present inside which module :
a) sys b) os c) ms d) ts
20. Directories and folders are the same thing
a) True b) False

Answer the following questions (21 to 24) on the basis of ABOUT.txt file having the below content:



21. What is the output of the statement :
- ```
data=open("about.txt").read().split()
print(data[2])
```
- a) STUDY  
b) TRIGGER  
c) ?  
d) None of the above
22. What is the output of the statement
- ```
data=open("about.txt").read().split()
print(data[0][3])
```
- a) S b) T c) D d) ?
23. What is the output of the statement
- ```
data=open("about.txt").read().split()
```

`print(data[1][3])`  
a) S            b) T            c) G            d) ?

24. What is the output of the statement:  
`data=open("about.txt").read()`  
`print(data.count('S'))`  
a) 2            b) 6  
c) Generates an error            d) None of the above

25.

Reading data from

Binary file is also called Pickling  
a) True            b) False

26. ....function places the file pointer at the specified position by in an open file.  
a) `tell()`            b) `seek()`  
c) both a and b            d) none of the above

27. ....function return the current position of the file pointer.  
a) `tell()`            b) `seek()`  
c) both a and b            d) none of the above

28. The csv files can only take comma as delimiter.  
a) True            b) False

### Answers

1. (b) 2. (a) 3. (b) 4. (a) 5. (b) 6. (c) 7. (c) 8. (b) 9. (c)  
10. (d) 11. (a) 12. (b) 13. (c) 14. (d) 15. (d) 16. (c) 17. (b) 18. (a)  
19. (b) 20. (a) 21. (b) 22. (c) 23. (c) 24. (a) 25. (b) 26. (a) 27. (a)  
28. (b)

### Explanation



1. (b) It's true that data in binary file cannot be directly read, but binary file cannot store data in the form of 0 and 1.
2. (a) File Handle and File Object are the same thing.
3. (b) No, r (read only) and r+ (read and write) are not the same mode.
4. (a) True, You may combine the file() or open() with the file object's function.
5. (b) No, you cannot write multiple line simultaneously using wite() function, writelines() functions is used for write multiple lines.
6. (c) rb+ mode opens a binary file for both reading and writing. The file pointer is placed at the beginning of the file
7. (c) wb+ mode opens a binary file for writing only. Overwrite the file if the file exist. If file not exist then create new file.
8. (b) w+ mode opens a file for both reading and writing. Overwrite the existing file if the file exists.
9. (c) wb+ mode opens a binary file for both reading and writing. The file pointer is placed at the beginning of the file.
10. (d) wb mode opens a binary file for writing only. The file pointer is placed at the beginning of the file.

11. (a) a mode opens a file for appending. The file pointer is placed at the end of the file. If the file is not exist, it will create new file.
12. (b) ab mode opens a binary file for appending. The file pointer is placed at the end of the file.
13. (c) a+ mode opens a file for both appending and reading.
14. (d) ab+ mode opens a binary file for both appending and reading. The file pointer is placed at the end of the file.
15. (d) wa+ Which of the following is not a mode of a file
16. (c) splits() is not a function, split() is a function.
17. (b) writes() is not a used for writing data into file
18. (a) readline() method will return string
19. (b) getcwd() is use to find current working directory and this function is present inside os module.
20. (a) True, directories and folders are the same thing.
21. (b) `data=open("about.txt").read().split()`  
`print(data[2])`  
It will print "?". As data will read it as a list like ["Study", "Trigger", "?", .....], so, in this list, on index no 2 "?" is present, so it will print this value.

22. (c) `print(data[0][3])` means index value of 3rd of index value of 0, so , it will print D
23. (c) `print(data[1][3])`
24. (a) 2, it will count only Capital letter 'S'.
25. (b) No, Reading data from Binary file is also called Unpickling
26. (a) seek function places the file pointer at the specified position by in an open file.
27. (a) `tell()` function return the current position of the file pointer.
28. (b) No, The csv files cannot only take comma as delimiter..

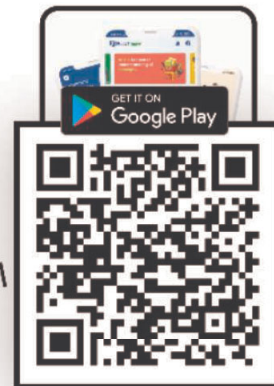


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# Data Visualisation with PyPlot

## Practice Paper I

1. The matplotlib is a Python library.  
a) True                      b) False
2. To save the plot, we have to use save\_graph() function.  
a) True                      b) False
3. Plot can be saved only png format.  
a) True                      b) False
4. To create a horizontal bar chart, barh() function is used.  
a) True                      b) False
5. A line chart is a type of chart displaying information as a series of data points connected by straight line segment.  
a) True                      b) False
6. Line charts are created by using the \_\_\_\_\_ function.  
a) plot()                      b) pyplot()  
c) draw()                      d) None of the above
7. A bar graph can be created using \_\_\_\_\_ function.  
a) plot()                      b) hbar()  
c) bar()                      d) None of the above
8. We can specify only one colour for all the bars of a bar chart.  
a) True                      b) False
9. ....is the function to display the plot after creating it.  
a) showfig()                      b) display()

c) print()

d) show()



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10. Data visualization is graphical representation of compiled data.

- a) True                      b) False

11. .... is the Python library that provides many interface and functionality for 2D graphics.

- a) Matplotlib                      b) Pyplot  
c) Matplotlib                      d) All the above

12. To add a Title to your plot, you have to call function head().

- a) True                      b) False

13. markersize argument inside plot() take the value as.....

- a) float                      b) int  
c) both a & b                      d) None of the above

14. The plot area is a figure containing only image of the chart.

- a) True                      b) False

15. Barh () function is used to create \_\_\_\_\_ bar chart.

- a) horizontal                      b) vertical  
c) both a & b                      d) None of the above

16. Pyplot, plots every chart into an area called \_\_\_\_\_.

- a) figure                      b) canvas  
c) drawarea                      d) None of the above

17. linewidth argument inside plot() take the value as.....

- a) float                      b) int  
c) both a & b                      d) None of the above

18. The function used to save the plot created by pyplot functions is \_\_\_\_\_.

- a) SaveImg()                      b) Savefig()  
c) SaveDraw()                      d) FigSave()

19. To specify common width for all bars in a bar graph, we have to use the thick argument.

- a) True                      b) False

20. User cannot change the position of the legends.

- a) True                      b) False

21. How many parameters can be taken by plot() method.

- a) 8                      b) 6                      c) 4                      d) 10

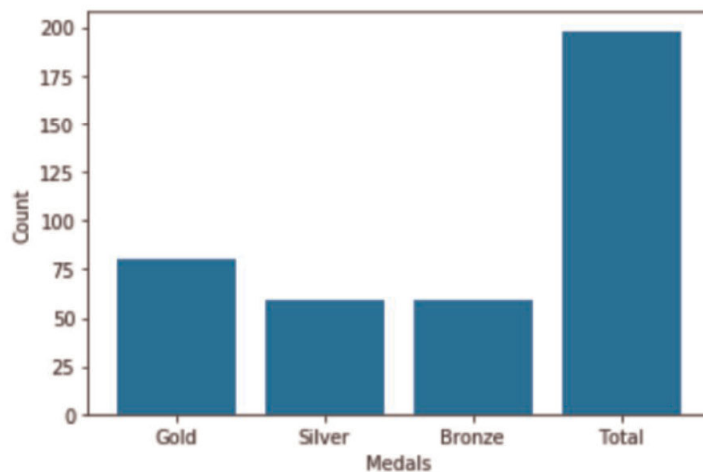
22. linestyle argument inside plot() take the value as.....

- a) float                      b) int  
c) string                      d) None of the above

23. Python will plot multiple lines in the same plot with different colors but these colors are decided internally by Python if you skip color argument.

- a) True                      b) False

24. Look the graph carefully and find the correct code(s) to generate this graph.



- a) `import matplotlib.pyplot as pl`  
`info=['Gold','Silver','Bronze','Total']`  
`Aus=[80,59,59,198]`  
`pl.bar(info, Aus)`  
`pl.xlabel("Medals")`  
`pl.ylabel("Count")`  
`pl.show()`
- b) `import matplotlib.pyplot as pl`  
`info=['Gold','Silver','Bronze','Total']`  
`Aus=[80,59,59,198]`  
`pl.bar(Aus,info)`  
`pl.xlabel("Count")`  
`pl.ylabel("Medals")`  
`pl.show()`
- c) Both a and b
- d) None of the above

25. By default, legends are shown in \_\_\_\_\_ part of plot.

- a) Left Upper side or corner                      c) Right Upper side or corner  
b) both a & b                                              d) None of the above

### Answers

1. (a) 2. (b) 3. (a) 4. (a) 5. (a) 6. (a) 7. (c) 8. (b) 9. (d)  
10. (a) 11. (a) 12. (b) 13. (a) 14. (b) 15. (a) 16. (a) 17. (a) 18. (b)  
19. (d) 20. (b) 21. (a) 22. (c) 23. (a) 24.(a) 25. (c)

### Explanation

1. (a) Matplotlib is a plotting library for the Python programming language and its numerical mathematics extension NumPy. matplotlib.pyplot is a collection of functions that make matplotlib

work like MATLAB. Each pyplot function makes some change to a figure: e.g., creates a figure, creates a plotting area in a figure, plots some lines in a plotting area, decorates the plot with labels, etc.

2. (b) `savefig()` is a function which is used to save the plot.
3. (a) Plot can be saved in many formats like pdf, png, eps.
4. (a) To create a horizontal bar chart, `barh()` function is used.
5. (a) Yes, A line chart is a type of chart displaying information as a series of data points connected by straight line segment.
6. (a) Line charts are created by using the `plot()` function.
7. (c) A bar graph can be created using `bar()` function.
8. (b) We can specify different colours for different bars of a bar chart.
9. (d) `show()` is the function to display the plot after creating it.
10. (a) Yes, Data visualization is graphical representation of compiled data
11. (a) `Matplotlib` is the Python library that provides many interface and functionality for 2D graphics
12. (b) To add a Title to your plot, you have to call function `title()` like: `plot.title("My Chart")`
13. (a) `markersize` argument inside `plot()` take the value as float.
14. (b) No, the plot area is a figure containing every element of the chart not contain only the image of the chart.

15. (a) Barh () function is used to create horizontal bar chart.
16. (a) Pyplot, plots every chart into an area called figure
17. (a) linewidth argument inside plot() take the value as float
18. (b) The function used to save the plot created by pyplot functions is savefig().
19. (b) To specify common width for all bars in a bar graph, we have to use the width argument.
20. (b) User can change the position of the legends using the loc argument inside the legend function like : plt.legend(loc='upper left')
21. (a) 8 parameters i.e.  
plot(x-axis data, y-axis data, colorcode, linewidth, linestyle, marker, markersize, markeredgecolor)  
however, except x-axis data and y-axis data all parameters are optional.
22. (c) linestyle argument inside plot() take the value as string
23. (a) Yes, if you skip color argument inside plot() then Python will plot multiple lines in the same plot with different colors but these colors are decided internally by Python.
24. (a)
25. (c) By default, legends are shown in Right upper side or corner part of plot.

# Data Visualisation with PyPlot

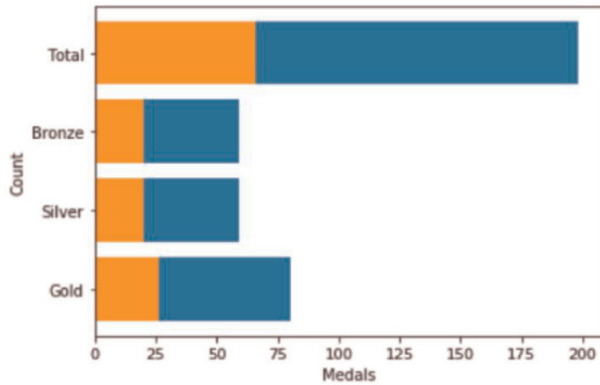
## Practice Paper-II

1. "labels" is used to give the x-axis label to line chart  
a) True                      b) False
2. .... is not a valid plotting function of PyPlot.  
a) plot()                      b) bar()  
c) pie()                        d) barh()
3. To differentiate multiple ranges on a single plot, it becomes necessary that.....are specified.  
a) Legend                      b) Tittle  
c) Axes                         d) Figure
4. ....is a collection of methods within matplotlib  
a) PyPlot                      b) Matplotlib  
c) both a & b                      d) None of the above
5. ....is a type of chart which displays information as series of data points called "markers" connected by straight line segments  
a) Line Chart                      b) Bar Chart  
c) Pie Chart                        d) All the above
6. ....is a circular statistical graphic which is divided into slices to illustrate numerical proportions  
a) Line Chart                      b) Bar Chart  
c) Pie Chart                        d) All the above
7. ....represents "black" color code of line color in line chart  
a) c                      b) y                      c) k                      d) w
8. Which is not a line style in line graph  
a) solid                      b) dashed



- c) dotted                      d) dashdotted
9. Which of the following is not a valid parameter of plot functions  
a) markertype                      b) marker  
c) linewidth                      d) markerwidth
10. Which of the following is not a valid parameter of plot functions  
a) linewidth                      b) linestyle  
c) markeredgecolor                      d) markerstyle
11. A.....chart is a graphical display of data using bars of different heights  
a) Line Chart                      b) Bar Chart  
c) Pie Chart                      d) All the above
12. Pyplot is an interface of Python's..... library  
a) seaborn                      b) plotly  
c) ggplot                      d) matplotlib
13. ....library interface is often use for 2D plotting using a Python library.  
a) seaborn                      b) plotly  
c) matplotlib                      d) matplotlib.pyplot
14. Data visualization in representation of information and data using visual elements like :  
a) Charts, graphs and maps                      b) Digits  
c) Symbols                      d) Tables
15. Pyplot is a collection of :  
a) methods                      b) classes  
c) objects                      d) None of the above
16. The plot() function allows you to specify multiple setting for your chart/graph such as :  
a) Width, height, etc.                      b) Show  
c) Color, marker type, size etc.                      d) None of the above

17. A line chart is a type of chart
- a) which presents data with rectangular bars.
  - b) which displays information as a series of data points called 'markers' connected by straight line segments.
  - c) which represents data using dots.
  - d) which represents data using fragments.
18. The plot which tells the trends between two graphed variable is the.....graph/chart
- a) line
  - b) scatter
  - c) bar
  - d) pie
19. .... graph tells the correlation between two variables which may not be directly related.
- a) line
  - b) scatter
  - c) bar
  - d) pie
20. The datapoints plotted on a graph are called.....
- a) points
  - b) pointers
  - c) marks
  - d) markers
21. To create scatter charts using plot(), which argument is skipped
- a) marker
  - b) linestyle
  - c) markeredgecolor
  - d) linewidth
22. In scatter(), which argument is used to specify the size of datapoints.
- a) size
  - b) s
  - c) marker
  - d) markersize
23. Look the graph carefully and find the correct code(s) to generate this graph.



- a) `import matplotlib.pyplot as pl`  
`info=['Gold','Silver','Bronze','Total']`  
`Aus=[80,59,59,198]`  
`India=[26,20,20,66]`  
`pl.barh(info, Aus)`  
`pl.barh(info, India)`  
`pl.xlabel("Medals")`  
`pl.ylabel("Count")`  
`pl.show()`
- b) `import matplotlib.pyplot as pl`  
`info=['Gold','Silver','Bronze','Total']`  
`Aus=[80,59,59,198]`  
`India=[26,20,20,66]`  
`pl.bar(info,Aus)`  
`pl.bar(info,India)`  
`pl.xlabel("Count")`  
`pl.ylabel("Medals")`  
`pl.show()`
- c) Both a and b
- d) None of the above

Answers



1. (b) 2. (c) 3. (a) 4. (a) 5. (a) 6. (c) 7. (c) 8. (d) 9. (d)  
10. (d) 11. (b) 12. (d) 13. (d) 14. (a) 15. (a) 16. (c) 17. (b) 18. (a)  
19. (b) 20. (d) 21. (b) 22. (b) 23. (a)

### Explanation

1. (b) xlabel is used to give the x-axis label to line chart
2. (c) pie() is not a valid plotting function of PyPlot.
3. (a) To differentiate multiple ranges on a single plot, it becomes necessary that legends are specified. Legends are the part of chart which identifies different sets of data plotted on plot by using different colours.
4. (a) Pyplot is a collection of methods within matplotlib
5. (a) Linechart is a type of chart which displays information as series of data points called "markers" connected by straight line segments.
6. (c) Pie chart is a circular statistical graphic which is divided into slices to illustrate numerical proportions.
7. (c) k represents "black" color code of line color in line chart
8. dashdotted is not a line style in line graph.
9. (d) markerwidth is not a valid parameter of plot functions.
10. (d) markerstyle is not a valid parameter of plot functions
11. (b) Bar chart is a graphical display of data using bars of different heights.
12. (d) Pyplot is an interface of Python's matplotlib library

13. (d) matplotlib.pyplot library interface is often use for 2D plotting using a Python library.
14. (a) Data visualization in representation of information and data using visual elements like charts, graphs and map.
15. (a) Pyplot is a collection of methods.
16. (c) The plot() function allows you to specify multiple setting for your chart/graph such as color, marker type, size etc.
17. (b) A line chart is a type of chart which displays information as a series of data points called 'markers' connected by straight line segments.
18. (a) The plot which tells the trends between two graphed variable is the line graph/chart.
19. (b) Scatter graph tells the correlation between two variables which may not be directly related.
20. (d) The datapoints plotted on a graph are called markers.
21. (b) To create scatter charts using plot(), you can skip linestyle argument.
22. (b) In scatter(), s argument is used to specify the size of datapoints.
23. (a).

# Visualisation Data with PyPlot

## Practice Paper- III

1. matplotlib library contain Pyplot as its sub library.  
a) True                      b) False
2. For working on pyplot functions you need to import matplotlib as  
"include pyplot.matplotlib"  
a) True                      b) False
3. By default, elliptical or oval shape is printed by pie chart function.  
a) True                      b) False
4. The default shape of pie chart cannot be change from oval.  
a) True                      b) False
5. User can draw line chart using pyplot library's line() function.  
a) True                      b) False
6. Which argument must be set with plotting functions for legend() to display the legends  
a) data                      b) label  
c) name                      d) sequence
7. Histogram is created with ..... function  
a) histo()                      b) histogram()  
c) hist()                      d) histtype
8. Name the argument in hist() function, which is used to create a stacked bar type histogram()  
a) histt                      b) histtype  
c) type                      d) barstacked

9. With the help of which function we can plot only one data series  
a) plot()            b) bar()  
c) boxplot()        d) pie()
10. To create wedges out of a pie chart, which argument must be provided  
a) label              b) autopct  
c) explode            d) wedge
11. User cannot plot multiple series of values in the same bar graph.  
a) True                b) False
12. A standard marker of representing a non-number data in Python libraries is NaN.  
a) True                b) False
13. If the linestyle argument is missing along with markerstyle-string in a plot(), a scatter type chart gets created.  
a) True                b) False
14. The plot is always as per the data series being plotted irrespective of the xlim()  
a) True                b) False
15. Histogram is used to create Frequency polygon  
a) True                b) False
16. Which argument should be set to display percentage share of each pie on a pie chart  
a) label              b) autopct  
c) explode            d) wedge
17. Boxplot is created by ..... function  
a) box()              b) plot()  
c) boxplot()        d) showbox()

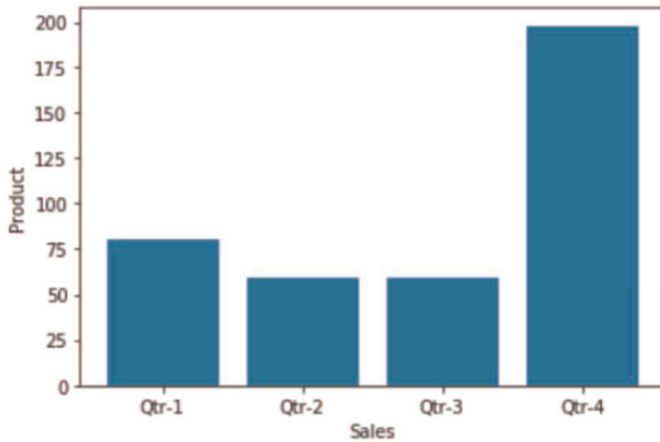
18. ....argument is used inside boxplot() to create a filled boxplot?

- a) fill
- b) box
- c) patch\_artist
- d) patch

19. show() and plot() are the same thing:

- a) True
- b) False

20. Look the graph carefully and find the correct code(s) to generate this graph..



- a) 

```
import matplotlib.pyplot as pl
info=['Qtr-1','Qtr-2','Qtr-3','Qtr-4']
Sales=[80,59,59,198]
pl.bar(info, Aus)
pl.xlabel("Sales")
pl.ylabel("Product")
```





- ```
pl.show()
b) import matplotlib.pyplot as pl
info=['Qtr-1','Qtr-2','Qtr-3','Qtr-4']
Sales=[80,59,59,198]
pl.bar(Sales,info)
pl.xlabel("Product")
pl.ylabel("Sales")
pl.show()
```
- c) Both a and b
d) None of the above

Answers

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

Explanation

1. (a) matplotlib library contain Pyplot as its sub library.
2. (b) For working on pyplot functions you need to import matplotlib as “import pyplot.matplotlib”
3. (a) Yes, elliptical or oval shape is printed by pie chart function by default.
4. (b) No, you can change the default shape of pie chart.
5. (b) No, user cannot draw line chart using pyplot library's line() function, because line() is not a function.
6. (b) label argument must be set with plotting functions for legend() to display the legends
7. (c) Histogram is created with hist() function.

8. (b) histtype the argument in hist() function, which is used to create a stacked bar type histogram()
9. (d) With the help of pie() function we can plot only one data series
10. (c) To created wedges out of a pie chart, explode argument must be provided to the function.
11. (b) Yes, User can plot multiple series of values in the same bar graph.
12. (a) Yes, a standard marker of representing a non-number data in Python libraries is NaN.
13. (a) Yes, If the linestyle argument is missing along with markerstyle-string in a plot(), a scatter type chart get created.
14. (b) No, the plot is not always as per the data series being plotted irrespective of the xlim()
15. (a) Yes, Histogram is used to create Frequency polygon
16. (b) autopct argument should be set to display percentage share of each pie on a pie chart
17. (c) Boxplot is created by boxplot() function
18. (c) patch_artist argument is used inside boxplot() to create a filled boxplot
19. (b) show() and plot() are not the same thing.
20. (a)

Data Structure Practice Paper - I

1. In Data Structure queue is a type of queue data structure.
a) True b) False
2. Reversing a word/line is an application of queue.
a) True b) False
3. The insertion and deletion from a stack takes place only from one ended called the 'TOP'.
a) True b) False
4. A queue follows the LIFO principle.
a) True b) False
5. When a queue is implemented with the help of a list ,it is termed as a linear queue
a) True b) False
6. is a data organization, management, and storage format that enables efficient access and modification.
a) Data Manage b) Data Structure
c) Data Manipulation d) None of the above
7. A _____ is a linear list, which follow LIFO principle.
a) stack b) queue
c) both a & b d) None of the above
8. A _____ is a linear list ,which follow FIFO principle.
a) stack b) queue
c) both a & b d) None of the above

9. A _____ is a mutable sequence of data elements indexed by their position .
- a) list b) tuple
c) both a & b d) None of the above
10. _____ means accessing/processing each element of any data structure.
- a) searching b) traversing
c) insert d) None of the above
11. CPU uses queues to implement round-robin scheduling among waiting processes.
- a) True b) False
12. Pop operation is the Deletion of an element from the queue.
- a) True b) False
13. In Queue, an element is always added from the front end.
- a) True b) False
14. The most important application of queues are “Handling the processes of a network printer”.
- a) True b) False
15. You can insert an element at the rear in queue using append () function.
- a) True b) False
16. Insertion of elements in a stack is also termed as _____.
- a) pop b) push
c) remove d) None of the above
17. A queue contains elements "S1", "S2", "S3", and "S4". You want to delete elements one by one, then the order in which they will be removed is :
- a) S4S3S2S1 b) S1S2S3S4
c) S2S3S1S4 d) None of the above

18. Insertion of elements in a queue is also termed as_____.

- a) Create b) Push
- c) Enqueue d) Pop

19. If a user tries to remove an element from the empty stack ,then it called _____.

- a) underflow of stack b) overflow of stack
- c) both a & b d) None of the above

20. In search, each element of the list is compared with the given item to be searched for, one by one.

- a) linear b) binary
- c) both a & b d) None of the above

21. Consider a Stack with TOP=3

Diksha, Reena, Bhawna, Teena, ,
.....

What will be the value of TOP when “Pihu” and “Khushi” are added to the stack.

- a) 5 b) 6 c) 4 d) None of the above

22. Consider a Stack with TOP=3

Diksha, Reena, Bhawna, Teena

What will be the value of TOP when “Teena” is deleted from the stack.

- a) 5 b) 2 c) 4 d) None of the above

23. Consider a Stack with TOP=-1 and Size = 9

What will be the value of TOP when an element is deleted from the stack.

- a) 0 b) 1 c) -1 d) underflow

24. Consider a Stack with TOP=8 and Size = 9

What will be the value of TOP when an element is insert from the stack.

- a) 9 b) 8 c) overflow d) underflow

Answers

1. (b) 2. (b) 3. (a) 4. (b) 5. (a) 6. (b) 7. (a) 8. (b) 9. (a)
10. (b) 11. (a) 12. (b) 13. (b) 14. (a) 15. (a) 16. (b) 17. (b) 18. (c)
19. (a) 20. (a) 21. (a) 22. (b) 23. (c) 24. (c)

Explanation

1. (b) No, In Data Structure queue is a type of linear data structure.
2. (b) No, Reversing a word/line is an application of stack.
3. (a) Yes, he insertion and deletion from a stack takes place only from one ended called the 'TOP'.
4. (b) No, A queue follow the FIFO (First In First Out) principle.
5. (a) Yes, when a queue is implemented with the help of a list ,it is termed as a linear queue
6. (b) Data Structure is a data organization, management, and storage format that enables efficient access and modification.
7. (a) A Stack is a linear list, follow LIFO principle.
8. (b) A Queue is a linear list ,which follow FIFO principle.
9. (a) A list is a mutable sequence of data elements indexed by their position .
10. (b) Traversing means accessing/processing each element of any data structure.

11. (a) Yes, CPU uses queues to implement round-robin scheduling among waiting processes
12. (b) No, Pop operation is the Deletion of an element from the stack.
13. (b) No, In Queue, an element is always added from the end which is also called adding element from the rear.
14. (a) Yes, the most important application of queues are “Handling the processes of a network printer”.
15. (a) Yes, You can insert an element at the rear in queue using append () function. append() is a list function which is used to append an element into list, so if you create a queue using list and insert an element using append() function then it automatically get added to the rear(end) of the queue.
16. (b) Insertion of elements in a stack is also termed as push
17. (b) If a queue contains elements "S1","S2","S3", and "S4" and you want to delete one element at a time, then the order in which they will be removed is “S1S2S3S4”, because Queue follows FIFO principle and according to this, element is removed on the basis of First In.
18. (c) Insertion of elements in a queue is also termed as Enqueue.
19. (a) If a user tries to remove an element from the empty stack ,then it called Underflow of stack and in this situation the top variable will always contain -1.
20. (a) In linear search, each element of the list is compared with the given item to be searched for, one by one

21. (a) At starting the value of TOP is 3 and when you added 2 elements i.e. Pihu and Khushi then it will increment by 2. So, the final value of TOP is 5
22. (b) At starting the value of TOP is 3 and when you delete 1 element i.e. Teena, then it will decrement by 1. So, the final value of TOP is 2
23. (c) At starting the value of TOP is -1 that it is an empty stack and if you try to delete an element from empty stack, then it will give "underflow". But it cannot change the value of TOP and the final value of TOP is -1.
24. (c) At starting the value of TOP is 8 and the size is given as 9 that it is full stack and if you try to insert an element into full stack, then it will give "overflow". But it cannot change the value of TOP and the final value of TOP is 8..

Data Structure Practice Paper - II

1. Removing an element from stack is called:
a) Create b) Push
c) Dequeue d) Pop
2. An element can be deleted from a Stack using
method
a) pop() b) del()
c) remove() d) all of the above
3. Stack size is 5 and it already contains 5 elements, now if you
push an element into this stack, then you will get :
a) User flow b) Crash
c) Underflow d) Overflow
4. If insertion can take place at one end (rear) and deletion can be
done from another end (front) from a list, this list is called :
a) Queue b) Stack
c) Tree d) Linked list
5. An element can be added to a Stack using
method?
a) extend() b) insert()
c) append() d) none of the above
6.is the best way to implement the type of sharing
when a “resource is shared among multiple consumers”.
a) stack b) queue
c) both a & b d) None of the above
7. When you are waiting for paying a bill in super market, a
..... is formed to hold all the customers in a line until the

- billing executive is free.
- a) stack b) queue
c) both a & b d) None of the above
8. Airport authorities make use ofin situations of sharing a single runway of airport for both landing and take-off flights.
- a) stack b) queue
c) both a & b d) None of the above
9. "Reversal of a String/Number or any sequence" is application of
- a) stack b) queue
c) both a & b d) None of the above
10. A.....is a physical implementation that clearly defines a way of storing, accessing, manipulating data stored
- a) Data Structure b) Data Type
c) both a & b d) None of the above
11. is/are example(s) of linear data structure
- a) stack b) queue
c) both a & b d) None of the above
12. Which of the following operation are performed on data structure?
- a) Traversal b) Sorting
c) Merging d) All of the above
13. Insertion and deletions take place from different end in
- a) Stack b) Queue
c) both a & b d) None of the above
14.data structures are single level data structures
- a) Linear b) Non-Linear
c) both a & b d) None of the above

15.data structures are multi-level data structures.
- a) Linear b) Non-Linear
c) both a & b d) None of the above
16. Which of the following is/are Python's built in linear data structure.
- a) List b) Tuples
b) Dictionaries d) All of the above
17. A defines a set of values along with well-defined operations stating its input-output behaviours:
- a) Data Structure b) Data Type
c) both a & b d) None of the above
18. Applications of Stack is/are:
- a) A parentheses balancing program
b) Tracking of local variable at run time
c) Compiler syntax Analyzer
d) All of the above
19. A empty queue named "que" can be created using list with the help of
- a) que=() b) que={}
c) que=[] d) Linear Tree
20. An element can be deleted from a Queue usingmethod
- a) pop() b) del()
c) remove() d) all of the above.
21. Consider a Queue with front=2, rear=4 and size=6
Diksha, Reena, Bhawna, Teena,,
.....
What will be the queue after insertion of "Khushi" and "Pihu" and deletion of one element from the queue.

- a) Diksha, Reena, Teena, Khushi, Pihu
- b) Reena, Bhawna, Teena, Khushi, Pihu
- c) Diksha, Bhawna, Teena, Khushi, Pihu
- d) None of the above

22. Consider a Queue with front=0, rear=3 and size=5
Diksha, Reena, Bhawna, Teena
What will be the value of front and rear when "Teena" is deleted from the queue.

- a) f=0, r=2
- b) f=1, r=2
- c) f=1, r=3
- d) None of the above

23. Consider a Queue with rear=front=-1 and Size = 9
What will be the value of front and rear when an element is deleted from the queue.

- a) 0
- b) 1
- c) -1
- d) underflow

24. Consider a Queue with rear=8 and Size = 9
What will be the value of rear when an element is insert from the queue.

- a) 9
- b) 8
- c) overflow
- d) underflow

Answers

1. (d) 2. (a) 3. (d) 4. (a) 5. (c) 6. (b) 7. (b) 8. (b) 9. (a)
10. (a) 11. (c) 12. (d) 13. (b) 14. (a) 15. (b) 16. (d) 17. (b) 18. (d)
19. (c) 20. (a) 21. (a) 22. (a) 23. (d) 24. (d)

Explanation

1. (d) Removing an element from stack is called pop.
2. (a) An element can be deleted from a Stack using pop method
3. (d) Stack size is 5 and it already contains 5 elements, now if you push an element into this stack, then you will get Overflow.

4. (a) If insertion can take place at one end (rear) and deletion can be done from another end (front) from a list, this list is called Queue.
5. (c) An element can be added to a Stack using append() method.
6. (b) queue is the best way to implement the type of sharing when a "resource is shared among multiple consumers". You can also count it as an application of Queue.
7. (b) When you are waiting for paying a bill in super market, a queue is formed to hold all the customers in a line until the billing executive is free.
8. (b) Airport authorities make use of queue in situations of sharing a single runway of airport for both landing and take-off flights
9. (a) "Reversal of a String/Number or any sequence" is application of stack.
10. (a) A Data Structure is a physical implementation that clearly defines a way of storing, accessing, manipulating data stored.
11. (c) Stack and Queue are examples of linear data structure.
12. (d) Traversal, Sorting and Merging (all of the above) operations are not performed on data structures.
13. (b) Insertion and deletions take place from different end in Queue.
14. (a) Linear data structures are single level data structures
15. (b) Non Linear data structures are multi-level data structures
16. (d)

17. (b) A data type defines a set of values along with well-defined operations stating its input-output behaviours.
18. (d)
19. (c) A empty queue named “que” can be created using list with the help of `que=[]`.
20. (a) An element can be deleted from a Queue using pop method
21. (a) Diksha, Reena, Teena, Khushi, Pihu
We are given the value of rear as 4 so, the elements “Khushi” and “Pihu” will be inserted at position 4 and 5. Now, the value of front is given as 2 and element is being deleted from the front, so, “Bhawna” is removed from the queue.
22. (a) $f=0, r=2$
We are given the value of rear as 3 and front is 0 and the element “Teena” is being deleted from position 0. But after deleting an element the next element i.e. 1 becomes front (0) and accordingly rear become size-1 i.e. 2.
23. (d) At starting the value of front and rear is -1 that it is an empty queue and if you try to delete an element from empty queue, then it will give “underflow”. But it cannot change the value of front and rear, so, the final value is -1.
24. (d) At starting the value of rear is 8 and the size is given as 9 that queue is full and if you try to insert an element into full queue, then it will give “overflow”. But it cannot change the value of rear and its final value is 8.

SQL Connectivity Practice Paper I

1. Fetching an information from the table is same as read operation on that table.
a) True b) False
2. fetch() and fetchall() methods gives the same result.
a) True b) False
3. Rowcount is a read-only attribute.
a) True b) False
4. We use connect() method to disconnect database connection
a) True b) False
5. To insert the data into a table “update” statement is used.
a) True b) False
6. The resultset return only one row as a tuple by usingmethod.
a) fetchone() b) fetchmany()
c) fetchall() d) all of the above
7. How many parameters can be accepted by is_connected() method.
a) 2 b) 3 c) 1 d) 0
8. A logical set of records that is fetched from the database refers to
a) resultset b) dataset
c) both d) none of the above

9.statement is used to open a connector to MySQL database
- a) connector b) connect
c) password d) username
10. is called a session between the application program and the database.
- a) bridge b) connection
c) gap d) none of the above
11. A resultset is returned when a cursor object is used to query a table.
- a) True b) False
12. execute() method will be use, after establishing a connection
- a) True b) False
13. the next row of resultset is fetched via fetchone().
- a) True b) False
14. 'hostname' argument inside the connect() function define its name of database server or IP address.
- a) True b) False
15. How many parameters can be accepted by connect() method.
- a) 2 b) 3 c) 4 d) 5
16. The Is a property of cursor object that returns the number of rows allowed from the cursor so far.
- a) fetchall() b) resultset
c) rowcount d) none of the above
17.package need to import before working with MySQL.

- a) mysql.connector b) mysql.connect
c)sql.connector d) none of the above

18. Which one is correct form to connect the database from Python code, if host is "localhost", user="Study", password="Trigger" and the database is "StudyTrigger".

- a) connect(host="localhost", user="Study", password="Trigger", database="StudyTrigger")
b) connect(host="localhost", user="Study", passwd="Trigger", database="StudyTrigger")
c) connect(host="localhost", user="root", passwd="Trigger", database="StudyTrigger")
d) connector(host="localhost", user="Study", passwd="Trigger", database="StudyTrigger")

19. A.....is a special control structure that facilitates the row-by-row processing of records in the result set.

- a) database cursor b) dataset cursor
c) database row d) none of the above

20. is_connected() method is used to check the connection is successfully connected or not.

- a) True b) False

Answers

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

Explanation

1. Yes, Fetching an information from the table is same as read operation on that table.

2. Yes, fetch() and fetchall() methods gives the same result.
3. Yes, rowcount is a read-only attribute
4. No, we use close() method to disconnect database connection
5. No, to insert the data into a table “update” statement is used.
6. (a) The resultset return only one row as a tuple by using fetchone() method.
7. (d) No parameters can be accepted by is_connected() method i.e.) parameters, because this method only check that connection is successfully established or not.
8. (a) A logical set of records that is fetched from the database refers to resultset
9. (b) connect statement is used to open a connector to MySQL database
10. (a) bridge is called a session between the application program and the database.
11. (a) Yes, A resultset is returned when a cursor object is used to query a table
12. (a) Yes, execute() method will be use, after establishing a connection
13. (a) Yes, the next row of resultset is fetched via fetchone().
14. (a) Yes, ‘hostname’ argument inside the connect() function define its name of database server or IP address.

15. (c) 4 parameters can be accepted by connect() method i.e. Host, Database, User and Password.
16. (c) The rowcount is a property of cursor object that returns the number of rows allowed from the cursor so far
17. (a) mysql.connector package need to import before working with MySQL
18. (a)
19. (b) A dataset cursor is a special control structure that facilitates the row-by-row processing of records in the result set.
20. (a) Yes, is_connected() method is used to check the connection is successfully connected or not..

SQL Connectivity Practice Paper II

1. To count the number of rows in a database,command is used
 - a) row
 - b) rowcount
 - c) count()
 - d) row_count
2. To displaying only one row from resultset, we use method
 - a) fetchmany
 - b) fetchno
 - c) fetchall
 - d) fetchone
3.method is used to execute all the rows from the result set.
 - a) fetchmany
 - b) fetchone
 - c) fetchall
 - d) none of the above
4. fetchmany(1) and fetchone() gives the same result
 - a) True
 - b) False
5. Which of the following method require parameters to execute.
 - a) fetchall()
 - b) fetchmany()
 - c) fetchone()
 - d) none of the above
6. What will fetchone() method the return if there are no record in the database
 - a) error
 - b) None
 - c) crash the program
 - d) none of the above
7. Which command is used for cleaning up the environment.
 - a) my.close()
 - b) is.close ()

- c) con.close()
- d) mycon.close()

8. Read the given code, assume that all the necessary file already imported:

```
mycon=sql.connect(host="localhost", user="study",  
passwd="Trigger", database="Students")  
cursor=mycon.cursor()  
query="Select * from Students"
```

.....
Which method will you use for executing the above query?

- a) fetchall()
- b) cursor()
- c) execute()
- d) None of the above

9.statement will be executed to ensure that changes you made in the code related to table are also being reflected in the database.

- a) fetchall()
- b) commit()
- c) execute()
- d) None of the above

10. Whenever you run Insert, Update and Delete query using Python code, you must run method within the connection object.

- a) fetchall()
- b) commit()
- c) execute()
- d) None of the above

Read the given code, and answers the following :

```
import mysql.connector as ..... //Line 1  
mycon=sql.connect(host="localhost", user="study",  
passwd="Trigger", database="Students")  
cursor=mycon.cursor()  
query="....." //Line 2  
cursor.execute(query)  
data=..... //Line 3
```



```

for row in data:
    print(row)
print("Total no of rows is ", ..... ) //Line 4
..... //Line 5

```

11. What is the correct statement for line 1 to import the mysql file
 - a) sql
 - b) mysql
 - c) connection
 - d) None of the above

12. What is the correct statement for line 2 to select all student whose marks is greater than 70
 - a) select * from Students where marks >=70
 - b) select Name from Students where marks >=70
 - c) select * from Students where marks >70
 - d) None of the above

13. What is the correct statement for line 3 to fetch all records
 - a) fetchone()
 - b) fetchall()
 - c) fetchmany()
 - d) None of the above

14. What is the correct statement for line 4 to display total number of rows you will from the database
 - a) rows
 - b) rowcount
 - c) data.count
 - d) data.length

15. What is the correct statement for line 5 to cleanup the environment as well as remove the connection
 - a) clear()
 - b) clean()
 - c) close()
 - d) none of the above

Answers

1. (b) 2. (d) 3. (c) 4. (a) 5. (b) 6. (b) 7. (c) 8. (c) 9. (b)
 10.(b) 11. (a) 12. (c) 13. (b) 14. (b) 15. (c)

Explanation



1. (b) To count the number of rows in a database, rowcount command is used
2. (d) To displaying only one row from resultset, we use fetchone method
3. (c) fetchall() method is used to execute all the rows from the result set.
4. (a) Yes, fetchmany(1) and fetchone() gives the same result.
5. (b) fetchmany() method require 1 parameter to execute.
6. (b) None will return by fetchone() method if there are no record in the database
7. (c) con.close() command is used for cleaning up the environment.
8. (c) execute() function is used.
9. (b) commit() statement will be executed to ensure that changes you made in the code related to table are also being reflected in the database
10. (b) Whenever you run Insert, Update and Delete query using Python code, you must run commit() method within the connection object
11. (a) sql
12. (c) select * from Students where marks >70
13. (b) fetchall()
14. (b) rowcount
15. (c) close()

SQL Practice Paper I

1. COUNT(*) functions ignore duplicates and null values while counting the records.
a) True b) False
2. Max() function is return an integer field.
a) True b) False
3. Count() and Count(*) are aggregate functions and can be used with any columns (any data types).
a) True b) False
4. The SQL statement : SELECT Salary + Comm as Total From Emp; add two fields salary and comm from each row together and lists the results in a column named Total.
a) True b) False
5. Total numbers of columns are called cardinality of a relation.
a) True b) False
6. Count(*) function applicable on integer column only.
a) True b) False
7. Total numbers of attributes are called degree of a relation.
a) True b) False
8. IN and "Between_And" are used for pattern matching.
a) True b) False
9.query is use to sort the name in reverse order.
a) sort by b) sort by asc

- c) sort by desc d) all of the above
10. You can find the total number of rows, including duplicates and NULL in a table using function.
 a) count() b) count(*)
 c) countif() d) all of the above
11. function applied on integer (numeric) column which returns the lowest value from the column.
 a) max() b) minimum()
 c) min() d) all of the above
12. Order by statement sort the result in order by default.
 a) ascending b) descending
 c) none of the above d) both a & b
13. An AVG() function take parameter as.....type.
 a) int b) string
 c) char d) depends on data
14. You can work on multiple rows at a time and get (return) an aggregate value by using function.
 a) group b) single
 c) scalar d) all of the above
15. You can arrange the result set in specific order by using..... Function. However, it can not change the actual data (table).
 a) sort by b) order by
 c) group by d) none of the above
16. A is a column of a table which can be used as Primary key of a table.

- a) Primary b) Foreign
c) Candidate d) Alternate
17. Select the query used to open the STUDY database.
a) Use Study; b) Show Study;
c) Open Study; d) none of the above
18. Select the query which is used to show all the tables present in the currently opened database.
a) Desc Tables; b) Open Tables
c) Use Tables; d) Show Tables;
19. In which of the following cases a DML statement is not executed.
a) new row is added b) row in deleted
c) row is modified d) new column is added
20. Select the query which is used to display the structure of the table STUDENT.
a) Desc Student; b) Show Student;
c) both a & b d) none of the above

Answers

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

Explanation

1. (b) No, COUNT(*) functions count duplicates and null values while counting the records
2. (a) Yes, Max() function is return an integer field.
3. (a) Yes, Count() and Count(*) are aggregate functions and can be used with any columns (any data types).

4. (a)
5. (b) No, total numbers of columns are called degree of a relation
6. (b) No, Count(*) function applicable on any type (data type) of columns
7. (b) No, total numbers of attributes are called cardinality of a relation.
8. (b) No, IN and "Between_And" are used for range based selection.
9. (c) sort by desc query is use to sort the name in reverse order
10. (b) You can find the total number of rows, including duplicates and NULL in a table using count(*) function.
11. (c) min() function applied on interger (numeric) column which returns the lowest value from the columns
12. (a) Order by statement sort the result in ascending order by default.
13. (a) An AVG() function take parameter as int type.
14. (a) You can work on multiple rows at a time and get (return) an aggregate value by using group function.
15. (b) You can arrange the result set in specific order by using order by() Function. However, it can not change the actual data (table).
16. (c) Candidate Key is a column of a table which can be used as Primary key of a table

17. (a)

18. (d)

19. (d)

20. (a).



SQL Practice Paper II

1. You can combine all the records that have identical values in a particular field or a group of fields by using ORDER BY statement.
a) True b) False
2. To filter the conditions for groups, WHERE clause is used.
a) True b) False
3. Single row function and Function are the two type of functions supported by MySql.
a) scalar functions b) multi row functions
c) both a & b d) none of the above
4.function is also termed as Group Functions.
a) aggregate b) scalar
c) both a & b d) none of the above
5. statement helps you to consider only unique values from the given column.
a) all b) distinct
c) both a & b d) none of the above
6. To count the total number of records in a table, we use sum() function.
a) True b) False
7.clause is used to specify filtering condition for groups.
a) where b) having
c) group by d) none of the above

15. Write a query to display the record of all students from "Study" table whose last name contains 6 letters ending with "A".

- a) SELECT * FROM Study WHERE LNAME LIKE '%A';
- b) SELECT * FROM Study WHERE LNAME LIKE '_____A';
- c) SELECT * FROM Study WHERE LNAME LIKE '_____%A';
- d) SELECT * FROM Study WHERE LNAME LIKE '%%%%%A';

16. Write a query to return the number of not null records in the Project field of " Study" table?

- a) SELECT COUNT(PROJECT) FROM Study;
- b) SELECT COUNT(*) FROM Study;
- c) SELECT PROJECTS (NOT NULL) FROM Study;
- d) SELECT COUNT(DISTINCT PROJECT) FROM Study;

17. Write a query to find the average salary of all employee from Salary field of "Employee" table

- a) SELECT AVERAGE(SALARY) FROM EMP;
- b) SELECT AVG(SALARY) FROM EMP;
- c) SELECT SALARY(AVG) FROM EMPLOYEE;
- d) None of the above.

18. Select correct SQL query from below to find the temperature in increasing order of all cities from weather table

- a) SELECT city FROM weather ORDER BY temperature ;
- b) SELECT city, temperature FROM weather ;
- c) SELECT city, temperature FROM weather ORDER BY temperature;
- d) SELECT city, temperature FROM weather ORDER BY city;

19.wild card (symbol) is used for matching a single character in a string.

- a) @
- b) #
- c) %
- d) _

20. The HAVING clause does which of the following ?



- a) Acts EXACTLY like a WHERE clause.
- b) Acts like a WHERE clause but is used for columns rather than groups.
- c) Acts like a WHERE clause but is used for group rather than rows.
- d) Acts like a WHERE clause but is used for rows rather than columns.

Answers

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

Explanation

1. (b) No, You can combine all the records that have identical values in a particular field or a group of fields by using ORDER BY statement.
2. (b) No, to filter the conditions for groups, WHERE clause is used.
3. (b) Single row function and multi row Function are the two type of functions supported by MySql.
4. (a) Aggregate function is also termed as Group Functions.
5. (b) Distinct statement helps you to consider only unique values from the given column.
6. (b) No, to count the total number of records in a table, we use sum() function.

7. (b) Having clause is used to specify filtering condition for groups.
8. (a) Yes, Group functions can be applied on any data type i.e. numeric, date, string.
9. (d) With is not an aggregate functions
10. (a) max() function applied on integer (numeric) column which returns the highest value from the column.
11. (a) Primary Key is a column of a relation which uniquely identifies each row of a table.
12. (b) DDL (Data Definition Language) commands are used to change the structure of the table
13. (c) To change data stored in the table, you will use DML(Data Manipulation Language) commands
14. (c) DELETE and UPDATE commands comes under DML command
15. (b) `SELECT * FROM Study WHERE LNAME LIKE '_____A';`
16. (a) `SELECT COUNT(PROJECT) FROM Study;`
17. (d) None of the above.
18. (d) `SELECT city, temperature FROM weather ORDER BY city;`
19. (d) `_` wild card (symbol) is used for matching a single character in a string.

20. (c) Acts like a WHERE clause but is used for group rather than rows..



SQL Practice Paper III

1. When you execute SELECT statement, it will return sorted result but only by one column.
a) True b) False
2. When you don't want to consider duplicate rows, then you will use DISTINCT.
a) True b) False
3. Behaviour of DISTINCT is different from ALL.
a) True b) False
4.wild card (symbol) is used for matching multiple characters in a string.
a) @ b) # c) % d) _
5. Choose the option which is used to specify the list of values in SQL commands.
a) IN b) Like c) Or d) And
6. You can use ORDER BY with SELECT and as well as with GROUP BY Statements.
a) True b) False
7. Where is use with Select statement however Having is use with GROUP BY Statement.
a) True b) False
8. Which command is used to add new column in a table.
a) Add b) insert into
c) Alter table.....Add d) None of the above

9.clause is used to apply condition with Group By statement.
- a) Group by b) With
c) Where d) Having
10. Which command is used to update the size of column in a table.
- a) Add b) update
c) Alter table.....Modify d) None of the above
11. _____ clause of SELECT query allows us to select only those rows in the result that satisfy a specified condition.
- a) Where b) from
c) having d) like
12. Drop and Delete are the same thing
- a) True b) False
13.command is used to delete all table with values from memory. After executing this command you will able to create new table with the deleted table name.
- a) delete b) drop
c) Both a & b d) none of the following
14.command is used to delete values from the table, but it lies on memory. After executing this command you will not able to create new table with the same table name.
- a) delete b) drop
c) Both a & b d) none of the following
15. Select the correct option, table name is "Study", Rno is field name, then:
- a) Select * from Study where Rno=10;
b) Show * from Study where Rno=10;
c) Select * from Study where Rno is 10;

d) Show * from Study where Rno in 10;

16. If table name is "Study", Rno is field name, then display all data except whose Rno is 10

- a) Select * from Study where Rno<>10;
- b) Show * from Study where Rno Not in 10;
- c) Select * from Study where Rno Not in 10;
- d) Show * from Study where Rno != 10;

17. By mistake, a teacher wrote 75 as 57 in marks column of "Study" table where roll no (Rno) is 10. Now, choose the correct command to update the above marks

- a) Update Study Set Marks=75;
- b) Update Table Study Set Marks=75;
- c) Update Study Set Marks=75 where Rno=10;
- d) Update From Study Set Marks=75;

18. In an institute some student didn't pay the fees and in fees column "Null" is automatically filled. Choose the correct statement to display all the students who haven't paid the fees. Table name is "Study", Field name is "Fees"

- a) Select * from Study where Fees=NULL;
- b) Show * from Study where Fees IS 10;
- c) Select * from Study where Fees==Null;
- d) Select * from Study where Fees IS NULL;

19. In an institute some students left who didn't pay the fees, but instead of deleting the record of these students, teacher updated a field called "IsDeleted" to 1. Choose the correct statement to handle the above situation. Table name is "Study", Field name is "Fees" and "IsDeleted".

- a) Update Study Set IsDeleted =1 where Fees Is NULL;

- b) Update Table Study Set IsDeleted =1 where Fees Is NULL;
- c) Update Study Set IsDeleted =1;
- d) Update From Study Set IsDeleted =1 where Fees Is NULL;;

20.is primary key of some other table and a non-key attribute whose values are derived from the existing table.
- a) Primary Key
 - b) Candidate Key
 - c) Foreign Key
 - d) None of the above

Answers

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

Explanation

1. (b) No, when you execute SELECT statement, it will return sorted result but only by one column.
2. (a) Yes, when you don't want to consider the duplicate rows, then you will use DISTINCT.
3. (a) Yes, behaviour of DISTINCT is different from ALL.
4. (c) % wild card (symbol) is used for matching multiple characters in a string.
5. (a) IN is used to specify the list of values in SQL commands.
6. (a) Yes, you can use ORDER BY with SELECT and as well as with GROUP BY Statements.
7. (a) Yes, where is use with Select statement however Having is use with GROUP BY Statement.

8. (c) Alter table..Add command is used to add new column in a table.
9. (d) Having clause is used to apply condition with Group By statement.
10. (c) ALter table...Modify command is used to update the size of column in a table.
11. (a) Where clause of SELECT query allows us to select only those rows in the result that satisfy a specified condition.
12. (b) No, Drop and Delete are the same thing
13. (b) Drop command is used to delete all table with values from memory. After executing this command you will able to create new table with the deleted table name.
14. (a) delete command is used to delete values from the table, but it lies on memory. After executing this command you will not able to create new table with the same table name.
15. (a) Select * from Study where Rno=10;
16. (a) Select * from Study where Rno<>10;
17. (c) Update Study Set Marks=75 where Rno=10;
18. (d) Select * from Study where Fees IS NULL;
19. (a) Update Study Set IsDeleted =1 where Fees Is NULL;
20. (c) Foreign key is primary key of some other table and a non-key attribute whose values are derived from the existing table.

SQL Practice Paper IV

1. After applying Where clause in Select Statement you will get only one value.
a) True b) False
2. AS keyword is use to assign a meaningful column name to the result of queries.
a) True b) False
3. SQL is a programming language.
a) True b) False
4. If you want to see duplicate result in a query, then you should use DISTINCT
a) True b) False
5. Creating a database, including creating, altering, an dropping tables and establishing constraints are example of Data Manipulation Language (DML).
a) True b) False
6. To work with range of values, LIKE keyword is used with WHERE statement.
a) True b) False
7. The keyword BETWEEN can be used while working with a range of values.
a) True b) False
8.keyword is used to specify the table that contains the data to be retrieved.
a) from b) where

c) having d) like

9. What is the output of the following query :

Select CHAR(70,65,67,69);

- a) Face b) Fbce
c) FACE d) '70656769'

10. To get all the columns, use instead of column names.

- a) % b) \$ c) * d) #

11. clause contains the condition in SELECT statement.

- a) having b) like
c) group by d) where

12. If you want to execute a statement when both the conditions are true in Where clause, then you will use..... operator.

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

13. If you want to execute a statement when one of the condition is true in Where clause, then you will use..... operator.

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

14. Consider the query :

SELECT name FROM Study where Fees.....NULL;

Fill in the above blank with an appropriate operator

- a) AND b) IS
c) LIKE d) NOT LIKE

15. If you want to exclude one or more values (from list), then you will use.....

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



16. Pattern matching is possible by Keyword.
a) LIKE b) NOT LIKE
c) both a & b d) none of these
17. What is the output of the following query :
Select SUBSTR('Study Trigger', 6, 7);
a) Study b) Trigger
c) Study Trigger d) none of these
18. What is the output of the following query :
Select INSTR('Study Trigger', 'ri');
a) 8 b) 7
c) 6 d) none of these
19. What is the output of the following query :
Select DATE('2021-08-03 01:02:03');
a) 2021-08-03 b) 03
c) 08 d) 2021-08-03 01:02:03
20. What is the output of the following query :
Select MOD(15,4);
a) 0 b) 1
c) 2 d) 3

Answers

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

Explanation

1. (b) No, After applying Where clause in Select Statement you will get multiple as well as single values.

2. (a) Yes, AS keyword is use to assign a meaningful column name to the result of queries.
3. (b) No, SQL is not a programming language.
4. (b) No, If you want to see duplicate result in a query, then you should use ALL
5. (b) No, Creating a database, including creating, altering, an dropping tables and establishing constraints are example of Data Manipulation Language (DML).
6. (b) No, To work with range of values, LIKE keyword is used with WHERE statement.
7. (a) Yes, The keyword BETWEEN can be used in a WHERE clause to refer to a range of values.
8. (a) From keyword is used to specify the table that contains the data to be retrieved.
9. (c) You will get FACE because CHAR() method will return the character for each integer pass as per ASCII value.
10. (c) To get all the columns, use * instead of column names.
11. (d) Where clause contains the condition in SELECT statement.
12. (d) If you want to execute a statement when both the conditions are true in Where clause, then you will use and operator.
13. (a) If you want to execute a statement when one of the condition is true in Where clause, then you will use or operator
14. (b) SELECT name FROM Study where Fees Is NULL;

15. (b) If you want to exclude one or more values (from list), then you will use NOT IN
16. (a) Pattern matching is possible by LIKE Keyword.
17. (b) Trigger, SUBSTR() method returns the substring.
18. (a) 8
19. (a) 2021-08-03
20. (d) 3



Computer Networks Practice Paper I

1. If data is transmitted at the same time from 2 devices on the same ethernet then it will result as a Collision
a) True b) False
2. Different protocols are handled by repeater
a) True b) False
3. is known as an intelligent device on the network
a) hub b) switch
c) both a and b d) none of the above
4. is not an example of guided media
a) Coaxial Cable b) Twisted Pair Cable
c) Microwave d) none of the above
5. HTTP and HTTPS are the same for every webpage.
a) True b) False
6. To forwards data packets along networks device is preferable.
a) Router b) Bridge
c) Repeater d) Gateway
7. A is a host computer which always depends on the server for request and services
a) server b) client
c) both a & b d) none of the above

8. Thetype of transmission media works on waves.
- a) Guided b) Unguided
c) Both a & b d) None of the above
9. Thetype of transmission media works on physical path
- a) Guided b) Unguided
c) Both a & b d) None of the above
10. device is an extension of hub and more efficient than hub.
- a) Hub b) Switch
c) Modem d) All of the above
11. Modem is used to segment networks into sub-networks or subnets.
- a) True b) False
12. SMTP is used by Email for sending and receiving messages.
- a) True b) False
13. The degeneration of a signal over distance on a network is called attenuation.
- a) True b) False
14. optical fiber is more expensive as well as more faster than coaxial cable.
- a) True b) False
15.is a network of networks that spread all over the world.
- a) Internet b) Intranet
c) Networking d) None of the above

16. The standard measurement for data transfer speed is in terms of Megabits per second (Mbps).
a) True b) False
17.is a network device that connects dissimilar networks.
a) bridge b) gateway
c) both a & b d) none of the above
18. WAN stands for.....
a) Wide Area Network b) World Area Network
c) Working Area Network d) None of the above
19. Google Drive is an example of.....
a) public cloud b) private cloud
c) both a & b d) none of the above
20. PAN stands for.....
a) Post Area Network b) Person Area Network
c) Personal Area Network d) None of the above

Answers

- 1.(a) 2. (b) 3. (b) 4. (c) 5. (b) 6. (a) 7. (b) 8. (b) 9. (a)
10. (b) 11. (b) 12. (a) 13. (a) 14. (a) 15. (a) 16. (a) 19. (b) 18. (a)
19. (a) 20. (c)

Explanation

1. (a) Yes, If data is transmitted at the same time from 2 devices on the same ethernet then it will result as a Collision
2. (b) No, Different protocols are not handled by repeater
3. (b) switch is known as an intelligent device on the network

4. (c) Microwave is not an example of guided media
5. (b) No, HTTP and HTTPS are not the same for every webpage.
6. (a) To forwards data packets along networks router device is preferable.
7. (b) Client is a host computer which always depends on the server for request and services
8. (b) The unguided type of transmission media works on waves.
9. (a) The guided type of transmission media works on physical path
10. (b) Switch device is an extension of hub and more efficient than hub.
11. (b) No, Switch is used to segment networks into sub-networks or subnets.
12. (a) SMTP (Simple Mail Transfer Protocol) is used by Email for sending and receiving messages.
13. (a) Yes, The degeneration of a signal over distance on a network is called attenuation.
14. (a) Yes, Optical fiber is more expensive as well as more faster than coaxial cable.
15. (a) Internet is a network of networks that spread all over the world.
16. (a) Yes, The standard measurement for data transfer speed is in terms of Megabits per second (Mbps).

17. (b) Gateway is a network device that connects dissimilar networks.
18. (a) WAN stands for Wide Area Network.
19. (a) Google Drive is an example of public cloud
20. (c) PAN stands for Personal Area Network

Computer Networks Practice

Paper II

1. In secure communication no one can interfere when 2 devices are communicating with each other.
a) True b) False
2. OSI Reference Model containslayers
a) 4 b) 5
c) 6 d) 7
3. IP address and IPv4 address are the same.
a) True b) False
4. Aset of rules that computers and other devices use when communicating with each other.
a) Client b) Server
c) Standards d) Protocol
5. Hub is a
a) Broadcast device b) Unicast device
c) Multicast device d) None of the above
6. Any computer which has to be connected to a network must have
a
a) NIC b) NIA
c) NID d) None of the above
7. The device that can operate in place of hub is a :
a) Switch b) Bridge
c) Router d) Gateway

8. A weak and corrupted signal is _____ by repeater .

- a) Amplified
- b) Regenerated
- c) Resembled
- d) Reroutes

9. A central controller is required bynetwork topology.

- a) Star
- b) Bus
- c) Mesh
- d) Tree

10. SMTP is the abbreviation of

- a) Simple Mail Transfer Protocol
- b) Simplified Mail Transfer Protocol
- c) Single Mail Transfer Protocol
- d) Simple Mailed Transfer Protocol

11. VoIP is the abbreviation of

- a) Voice over Internet Protocol
- b) Voice over Intranet Protocol
- c) Video over Internet Protocol
- d) None of these

12. DHCP is the abbreviation of

- a) Dynamic Host Control Protocol
- b) Dynamic Host Config Protocol
- c) Dynamic Hyper Controller Protocol
- d) Dynamic High Configuration Protocol

13. DNS is the abbreviation of

- a) Dynamic Name System
- b) Dynamic Network System
- c) Domain Name System
- d) Domain Network Service

14. ADSL is the abbreviation of :

- a) Asymmetric Dual Subscriber line
- b) Asymmetric Dual System Line



- c) Asymmetric Duplex System Line
- d) Asymmetric Digital Subscriber Line

15. The transmission capacity of a communication channel is called

- a) Baud
- b) Speed
- c) Bandwidth
- d) None of the above

16. IMAP stand for

- a) Intranet Mail Access Protocol
- b) Internet Mailed Access Protocol
- c) Internet Mail Accessed Protocol
- d) Internet Mail Access Protocol

17. IoT is a phenomenon that connects the smart devices to the internet over wired or wireless connection.

- a) True
- b) False

18. Which of the following is not referred to as Mailer

- a) Mail Program
- b) Mailbox
- c) Mail Application
- d) Mail Client

19.is a network diagnostic tool used to track the pathway taken by a packet on an IP network from source to destination.

- a) traceroute
- b) traceping
- c) both a and b
- d) None of the above

20. MAC address and IP address are same in every system.

- a) True
- b) False

Answers

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



Explanation

1. (a) Yes, In secure communication no one can interfere when 2 devices are communicating with each other.
2. (d) 7 (Application Layer, Presentation Layer, Session Layer, Transport Layer, Network Layer, Data Link Layer, Physical)
3. (b) No, IP address and IPv4 address are the same.
4. (d) Protocol is a set of rules that computers and other devices use when communicating with each other.
5. (a) hub is broadcast device.
6. (a) Any computer which has to be connected to a network must have a NIC (Network Interface Card).
7. (a) Switch is the device that can operate in place of hub.
8. (b) A weak and corrupted signal is regenerated by repeater .
9. (a) A central controller is required by star network topology.
10. (a) SMTP is the abbreviation of Simple Mail Transfer Protocol.
11. (a) VoIP is the abbreviation of Voice Over Internet Protocol.
12. (a) DHCP is the abbreviation of Dynamic Host Control Protocol
13. (c) DNS is the abbreviation of Domain Name System.
14. (d) ADSL is the abbreviation of Asymmetric Digital Subscriber Line

15. (c) The transmission capacity of a communication channel is called Bandwidth
16. (d) IMAP stands for Internet Mail Access Protocol.
17. (a) Yes, IoT is a phenomenon that connects the smart devices to the internet over wired or wireless connection
18. (b) Mailbox is not referred to as Mailer.
19. (a) traceroute is a network diagnostic tool used to track the pathway taken by a packet on an IP network from source to destination.
20. (b) No, MAC address and IP address are same in every system

Computer Networks Practice

Paper-III

1. multipoint connection on a single cable is required by topology.
a) Star b) Bus
c) Mesh d) Tree
2. Two friends create a network for sharing the practical files, this is a kind of network
a) LAN b) WAN
c) PAN d) MAN
3. A combination of any two or more than two topologies are called a Topology
a) Combination b) Hybrid
c) Mesh d) Tree
4. Intopology all systems are placed in a circular way.
a) Star b) Bus
c) Mesh d) Ring
5. Data is converted in analog to digital and vice versa usingdevice on network
a) Modem b) Hub
c) Switch d) Router
6. Repeater is a device that regenerates and retransmits the weak signals.
a) True b) False

7. If you want to connect networks of similar types (same protocols), then you will use..... device
- a) Hub b) Router
c) Bridge d) Gateway
8. device connects dissimilar networks
- a) Hub b) Router
c) Bridge d) Gateway
9. is a device which is used to decide the path(route) over the networks.
- a) Hub b) Router
c) Bridge d) Gateway
10. In topology each node is directly connected to the server.
- a) Bus b) Star
c) Ring d) Mesh
11. protocol is used for direct communication between two computers, typically a personal computer connected by phone line to a server.
- a) FTP b) PPP
c) SMTP d) IP
12. is not an example of unguided media
- a) Coaxial Cable b) Radiowave
c) Microwave d) none of the above
13. is the costliest mode of transmission data.
- a) Satellite b) Radiowave
c) Microwave d) None of the above
14. In topology all the nodes are connected to a main cable.
- a) Hybrid b) Star

- c) Mesh d) Bus
15. By using....., phone calls can be done using internet connection.
- a) GSM b) CDMA
c) VoIP d) None of the above
16. Telnet is the internet protocol for creating a connection with a remote machine.
- a) True b) False
17. Which communication channel(s) is/are suitable in communication in hilly areas:
- a) Radiowave b) Bluetooth
c) WiFi d) None of the above
18. Spam are the unwanted messages or mails.
- a) True b) False
19. receives and holds email for an individual until they pick it up.
- a) TCP/IP b) SMTP
c) POP3 d) PPP
20. IP address of two computers on a network can be the same.
- a) True b) False

Answers

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

Explanation

1. (b) multipoint connection on a single cable is required by bus topology.

2. (c) Two friends create a network for sharing the practical files, this is a kind of PAN network
3. (b) A combination of any two or more than two topologies are called a Hybrid Topology.
4. (d) In ring topology all systems are placed in a circular way.
5. (a) Data is converted in analog to digital and vice versa using Modem device.
6. (a) Yes, Repeater is a device that regenerates and retransmits the weak signals.
7. (c) If you want to connects networks of similar types (same protocols), then you will use Bridge device
8. (d) Gateway device connects dissimilar networks
9. (b) Router is a device which is use to decide the path(route) over the networks.
10. (c) In Star topology each node is directly connected to the server.
11. (b) PPP (point to point) protocol is used for direct communication between two computers, typically a personal computer connected by phone line to a server
12. (a) Coaxial cable is not an example of unguided media
13. (a) Satellite is the costliest mode of transmission data.
14. (d) In Bus topology all the nodes are connected to a main cable.

15. (c) By using VOIP, phone calls can be done using internet connection.
16. (a) Yes, Telnet is the internet protocol for creating a connection with a remote machine.
17. (a) Radiowave channel is suitable in communication in hilly areas.
18. (a) Yes, Spam are the unwanted messages or mails.
19. (c) POP3 receives and holds email for an individual until they pick it up.
20. (b) No, IP address of two computers on a network cannot be the same

Society, Law and Ethics Practice Paper - I

1. Open Source Software are available free with their source code.
a) True b) False
2. Open Source Software and Free Software, both the same
a) True b) False
3. The rights of owners to decide how much information/data is to be shared or exchanged are comes under Intellectual Property Rights.
a) True b) False
4. Copying someone's else data for our benefit is ethical.
a) True b) False
5. After digital signed you can say that e-documents are legal.
a) True b) False
6. Digital property is something when user's information about him/her that existing in digital form
a) True b) False
7. When we use other's intellectual work and present it as our own work is called.....
a) Scam b) Identity Theft
c) Plagiarism d) none of the above
8. Patents, trademark and copyright comes under.....
Property
a) Intellectual b) Identity Theft

c) Plagiarism d) None of the above

9. FOSS stand for....

- a) Free and Open Source Software
- b) Freely Opened Source Software
- c) Free and Opened Source Software
- d) None of the above

10.is a software which limit the functionality after the trial period had expired.

- a) Freeware b) Shareware
- c) Both a & b d) None of the above

11. If we not handled E-waste carefully then it can be very hazardous for us

- a) True b) False

12. You cannot update the biometric database.

- a) True b) False

13. Proprietary software come along with the source code.

- a) True b) False

14. Free software is same as shareware.

- a) True b) False

15. You should never give response to an e-mail or advertisement that claims you have won something.

- a) True b) False

16. DRM stand for....

- a) Digitally Rights Management
- b) Digital Right Management
- c) Digital Rights Manager
- d) Digital Rights Management



17. When someone use your personal information online in order to commit fraud, it will be called.....
- a) Intellectual b) Identity Theft
c) Plagiarism d) None of the above
18. GNU stand for....
- a) Good Not Unix b) GNU's Not Unix
c) Good Network Unix d) None of the above
19. not comes under online fraud
- a) internet addiction
b) non delivered goods
c) fraudulent payments
d) Non-existent companies
20. The practice of attempting to acquire sensitive information from individuals over the internet by means of deception is called.....
- a) phishing b) scam
c) Both a & b d) None of the above

Answers

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

Explanation

1. (a) Yes, Open Source Software are available free with their source code
2. (b) No, Open Source Software are free of cose and available with code but Free Software are freely available without any source code.



3. (a) Yes, The rights of owners to decide how much information/data is to be shared or exchanged are come under Intellectual Property Rights.
4. (b) No, Copying someone's else data for our benefit is ethical
5. (a) Yes, After digital signed you can say that e-documents are legal
6. (a) Yes, Digital property is something when user's information about him/her that existing in digital form
7. (c) When we use other's intellectual work and present it as our own work is called Plagiarism
8. (a) Patents, trademark and copyright comes under Intellectual Property
9. (a) FOSS stand for Free and Open Source Software.
10. (b) Shareware is a software which limit the functionality after expire the trial period.
11. (a) Yes, If we not handled E-waste carefully then it can be very hazardous for us
12. (b) No, You can update the biometric database.
13. (b) No, Proprietary software cannot come along with the source code.
14. (b) No, Free software is not same as shareware.
15. (a) Yes, You should never give response to an e-mail or advertisement that claims you have won something.

16. (d) DRM stands for Digital Rights Management
17. (b) When someone use your personal information online in order to commit fraud, it will be called Identity Theft.
18. (b) GNU stands for GNU's Not Unix
19. (a) Internet addiction is not comes under online fraud
20. (a) The practice of attempting to acquire sensitive information from individuals over the internet by means of deception is called Phishing

Society, Law and Ethics Practice Paper - II

- Using someone else's online account (twitter/facebook/Instagram) to handle to post something will be termed as
 - Fraud
 - Identity Theft
 - Online Stealing
 - Violation
- Example of e-waste is
 - a banana peel
 - an old computer
 - old utensils
 - old wooden things
- Gaining unauthorised access to a network with malicious intention, is called _____.
 - Cracking
 - Hacking
 - Banging
 - Phishing
- MySQL is an open source software
 - True
 - False
- "Rice Bucket Challenge" is an example of
 - Crowd Sourcing
 - Online Campaigns
 - Smart mobs
 - Internet Addiction
- Code written by programmers for a software is known as _____.
 - Source Code
 - Free Code
 - Both a & b
 - None of these
- IAD means.....
 - Internet Addon Discovery
 - Intranet Addiction Disorder
 - Internet Addiction Disorder

- d) None of these
8. Secure Sockets Layer (SSL) Technology is a Standard security protocol that establishes encrypted links between a web server and a browser.
a) True b) False
9. Any fraud done by cards (credit/debit) may include
a) Stealing of Cards b) Unauthorized and illegal use of card
c) Identity Theft d) Spam
10. Cybercrime does not include
a) Data theft b) Forgery
c) Damage to data d) Installing antivirus for protection
11. is a technology related health condition affecting eyesight.
a) Computer Vision Syndrome b) Repetitive Strain Injury
c) Both a & b d) None of these
12. Disadvantage of 'proprietary' software
a) You will not be able to edit code b) You have to pay for this
c) It's licensed d) None of the above
13. Discarded electronic device are known as _____.
a) e-work b) e-asset
c) e-waste d) None of these
14. Shareware software allows you to try the software before you buy it.
a) True b) False
15. _____ are the permissions given to use a product or someone's creator by the copyright holder.
a) Licenses b) Propertieri Software

c) Both a & b d) None of these

16. Cracking is a cybercrime

a) True b) False

17. Advantage of 'open source ' software

- a) you can edit the source code as per your requirement.
- b) you need to be an expert to edit code.
- c) you have to pay
- d) all the above

18. Your activity on the internet can be accessed by

....., that is the digital trail of your activity on the internet.

- a) digital wallet b) digital property
- c) digital footprint d) None of these

Answers

1. (b) 2. (b) 3. (b) 4. (a) 5. (b) 6. (a) 7. (c) 8. (a) 9. (b)
10. (d) 11. (a) 12. (a) 13. (c) 14. (a) 15. (a) 16. (b) 17. (a) 18. (c)

Explanation

- 1. (b) Using someone else's online account (twitter/facebook/Instagram) to handle to post something will be termed as Identity Theft
- 2. (b) Example of e-waste is an old computer
- 3. (b) Gaining unauthorised access to a network with malicious intention, is called Hacking.
- 4. (a) Yes, MySql is an open source software
- 5. (b) "Rice Bucket Challenge" is an example of online campaign
- 6. (a) Code written by programmers for a software is known as Source Code
- 7. (c) IAD means Internet Addiction Disorder



8. (a) Yes, Secure Sockets Layer (SSL) Technology is a Standard security protocol that establishes encrypted links between a web server and a browser.
9. (b) Any fraud done by cards (credit/debit) may include Unauthorized and illegal use of card
10. (d) Cybercrime does not include Installing antivirus for protection
11. (a) Computer Vision Syndrome is a technology related health condition affecting eyesight.
12. (a) Disadvantage of 'proprietary' software is that you will not be able to edit code
13. (c) Discarded electronic device are known as e-waste.
14. (a) Yes, Shareware software allows you to try the software before you buy it
15. (a) Licenses are the permissions given to use a product or someone's creator by the copyright holder.
16. (b) No, Cracking is a cybercrime
17. (a) Advantage of 'open source ' software is that you can edit the source code as per your requirement
18. (c) Your activity on the internet can be accessed by Digital Footprint, that is the digital trail of your activity on the internet.



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