

Please Check that this question paper contains **35** questions and ____ pages.

D.A.V. INSTITUTIONS, CHHATTISGARH
Practice Paper - 10 : 2023-24
Class : XII

Time : 3 Hrs.**Subject : Computer Science-Python (083)****Max. Marks : 70****General Instructions :**

- Question paper is containing 35 questions.
- The paper is divided into 5 Sections- A, B, C, D and E.
- Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.
- Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.
- Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.
- Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.
- Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.
- In some questions of Section B,C & E there will be internal choice.
- All programming questions are to be answered using Python Language only.

Section : A (1 Mark each)**Select the most appropriate option out of the options given or write answer in one word/line.****Attempt all the questions from question No. 1 to 18.**

- 1 What is the output of the following python statements? 1
x = 2
while x < 9:
 print(x, end=" ")
 x = x + 1
(a)12345678 (b) 123456789 (c)2345678 (d)23456789
- 2 In SQL, write the query to display the list of databases stored in MySQL 1
- 3 What will be the output of the following statement: 1
Print(5 + 3**2/2)
(a) 32 (b) 8.0 (c) 9.5 (d) 32.0
- 4 What is the output of the following python statements? 1
x=[[10.0,11.0,12.0],[13.0,14.0,15.0]]
y=x[1][2]
(a) 12.0 (b) 13.0 (c) 14.0 (d) 15.0
- 5 All aggregate functions except _____ ignore null values in their input collection. 1
(a) Count (attribute) (b) Count (*) (c) Avg () (d) Sum ()
- 6 Which switching technique follows the store and forward mechanism? 1
(a) Circuit (b)Packet (c)Message (d)All of these
- 7 Which is the correct form of declaration of dictionary? 1
(a)Day={1:'monday',2:'tuesday',3:'wednesday'}
(b)Day=(1;'monday',2;'tuesday',3;'wednesday')
(c)Day=[1:'monday',2:'tuesday',3:'wednesday']
(d)Day={1'monday',2'tuesday',3'wednesday'}
- 8 Consider the statements given below and then choose the correct output from the given 1
options:
s="\$I Love Python Programming Language"
print(s[-3:3:-3])

- 9 (a) \$L eyo Pg (b) an iao hPv (c) aniaohpv (d) error
Which of the following is incorrect? 1
tup1=(10,12,25,45,78)
- 10 (a) print(T[1]) (b) T[2] = -29 (c) print(max(T)) (d) print(len(T))
What is possible output(s) will be obtained when the following code is executed? Also 1
specify the minimum values that can be assigned to each of the variables BEGIN and
LAST.
import random
VALUES = [10, 20, 30, 40, 50, 60, 70, 80]
BEGIN = random.randint(1, 3)
LAST = random.randint(2, 4)
for I in range (BEGIN, LAST+1):
 print (VALUES[I], end = "-")
- 11 (a) 30-40-50- (b)10-20-30-40- (c) 30-40-50-60- (d) 30-40-50-60-70-
Bluetooth is an example of – 1
(a)PAN (b)LAN (c)VPN (d)WAN
- 12 How can you access a global variable inside the function, if function has a variable with 1
same name?
- 13 State whether the following statement is True or False: 1
Exceptions and errors are same.
- 14 Which command is used to change some values in existing rows? 1
(a) ORDER (b)INSERT (c)ALTER (d) UPDATE
- 15 A _____ is a program running on the server which accepts requests from a browser and 1
send HTML.
(a)Web server (b)Web transmitter (c)Web intermediate (d)Web multitasker
- 16 Which statement is used to retrieve the current position within the file? 1
(a)seek() (b) tell() (c) loc (d) pos
- Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice
as
- 17 (a) Both A and R are true and R is the correct explanation for A
(b) Both A and R are true and R is not the correct explanation for A
(c) A is True but R is False
(d) A is False but R is True
Assertion(A): Dictionary is an unordered collection of data values that stores the key : value 1
pair
Reason(R):Immutable means they cannot be changed after creation
- 18 Assertion(A): math.pow(2,4) gives the output:16.0 1
Reason(R): The math.pow () method receives twp float arguments, raises the first to the
second and returns the result.

Section B

Attempt all the questions from Q.No. 19 to 25 . Each question carries 2 mark

- 19 (i)Write one example each of URL and IP address. 1+1
(ii)Expand the following terms: IPR , IMAP
- 20 Rewrite the following code after removing the error(s). Underline each correction. 2
for name in ['Shruthi', 'Priya', 'Pradeep', 'Vaishnav']:
print name
 if name[0] = 'P':
 break
 else:
 print('Over')
 print("Done")

21 Write a function generatesq() that display the square roots of numbers from 100 to n where n is passed as an argument. 2

OR

22 What are the differences between parameters and arguments
Predict the output of the following code: 2

```
s="welcome2kv"  
n = len(s)  
m=""  
for i in range(0, n):  
    if (s[i] >= 'a' and s[i] <= 'm'):  
        m = m +s[i].upper()  
    elif (s[i] >= 'n' and s[i] <= 'z'):  
        m = m +s[i-1]  
    elif (s[i].isupper()):  
        m = m + s[i].lower()  
    else:  
        m = m +'#'  
print(m)
```

23 Write the python statement for each of the following tasks using Built-In functions/methods only: 2

- (i) To count an element 17 in the list L1.
- (ii) To find maximum value in tuple t1.

24 What is Degree and Cardinality in relational table? 2

25 Predict the output of the following code: 2

```
v=25  
def fun(ch):  
    v=50  
    print(v,end=ch)  
v*=2  
print(v,end="**")  
fun("!")  
print(v)
```

Section C

Attempt all the questions from Q.No. 26 to 30 . Each question carries 3 mark

26 Predict the output of the code given below: 3

```
s="welcome2cs"  
n = len(s)  
m=""  
for i in range(0, n):  
    if (s[i] >= 'a' and s[i] <= 'm'):  
        m = m +s[i].upper()  
    elif (s[i] >= 'n' and s[i] <= 'z'):  
        m = m +s[i-1]  
    elif (s[i].isupper()):  
        m = m + s[i].lower()  
    else:  
        m = m +'&'  
print(m)
```

EmployeeId	Name	Sales	JobId
E1	Sumit Sinha	110000	102
E2	Vijay Singh Tomar	130000	101
E3	Ajay Rajpal	140000	103
E4	Mohit Kumar	125000	102
E5	Sailja Singh	145000	103

Table: Job

JobId	JobTitle	Salary
101	President	200000
102	Vice President	125000
103	Administrator Assistant	80000
104	Accounting Manager	70000
105	Accountant	65000
106	Sales Manager	80000

- (i) Select max(salary),min(salary) from job
(ii) Select Name,JobTitle, Sales from Employee,Job where Employee.JobId=Job.JobId and JobId in (101,102)
(iii) Select JobId, count(*) from Employee group by JobId

28

Write a function in python that displays the number of lines starting with 'H' in the file

3

"para.txt". Example, if file contains:

Whose woods these are I think I know.

His house is in the village though;

He will not see me stopping here

To watch his woods fill up with snow

Then the lines count should be 2

OR

Write a function country() in Python to read file Data.txt and count the number of times "my" occur in file. For example, if the file contain This is my website. I have displayed my preferences in the choice section The country() function should display the output as : "my occurs 2 times"

29

Consider the table TEACHER given below. Write commands in SQL for (a) to (c)

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TEACHER						
ID	Name	Department	Hiredate	Category	Gender	Salary
1	Taniya	SocialStudies	03/17/1994	TGT	F	25000
2	Abhishek	Art	02/12/1990	PRT	M	20000
3	Sanjana	English	05/16/1980	PGT	F	30000
4	Vishwajeet	English	10/16/1989	TGT	M	25000
5	Aman	Hindi	08/1/1990	PRT	F	22000
6	Pritam	Math	03/17/1980	PRT	F	21000
7	RajKumar	Science	09/2/1994	TGT	M	27000
8	Sital	Math	11/17/1980	TGT	F	24500

- (a). To display all information about teachers of Female PGT Teachers.
(b). To list names, departments and date of hiring of all the teachers in descending order of date of joining.
(c). To count the number of teachers and sum of their salary department wise.

30

Write a user define function in Python for push(list) and pop(list) for performing push and pop operations with a stack of list containing integers.

3

Section D

Attempt all the questions from Q.No. 31 to 32 . Each question carries 4 mark

31 Write queries (a) to (d) based on the tables EMPLOYEE and DEPARTMENT given below: 4

Table: EMPLOYEE

EMPID	NAME	DOB	DEPTID	DESIG	SALARY
120	Alisha	23-Jan-1978	D001	Manager	75000
123	Nitin	10-Oct-1977	D002	AO	59000
129	Navjot	12-Jul-1971	D003	Supervisor	40000
130	Jimmy	30-Dec-1980	D004	Sales Rep	
131	Faiz	06-Apr-1984	D001	Manager	65000

Table: DEPARTMENT

DEPTID	DEPTNAME	FLOORNO
D001	Personal	4
D002	Admin	10
D003	Production	1
D004	Sales	3

- (a) To display the average salary of all employees, department wise.
- (b) To display name and respective department name of each employee whose salary is more than 50000.
- (c) To display the names of employees whose salary is not known, in alphabetical order.
- (d) To display **DEPTID** from the table **EMPLOYEE** without repetition.

32 Ravi is a programmer and has been assigned to write functions Add_data() and search_data() for working with records of products. 4

(i) Add_data()- To accept and add more data of products to a CSV file 'product.csv'. Each record consists of a list with field elements as ProdId, Prodname and qty to store product Id, Product name and qty of the products respectively

(ii) search_data(p)- To display the records present in the CSV file, whose producted matches with the argument of the function, and display. Help Ravi in writing the code

Section E

Attempt all the questions from Q.No. 33 to 35 . Each question carries 5 mark

33 Rehaana Medicos Center has set up its new center in Dubai. It has four buildings as shown in the diagram given below: 5



Distance between various building are as follows:

Accounts to Research Lab	55m
Accounts to Store	150m
Store to Packaging Unit	160m
Packaging Unit to Research Lab	60m
Accounts to Packaging Unit	125m
Store to Research Lab	180m

No of Computers

Accounts	25
Research Lab	100
Store	15
Packaging Unit	60

As a network expert, provide the best possible answer for the following queries:

- Suggest a cable layout of connections between the buildings.
- Suggest the most suitable place (i.e. buildings) to house the server of this organization.
- Suggest the placement of the Repeater device with justification.
- Suggest a system (hardware/software) to prevent unauthorized access to or from the network.
- Suggest the placement of the Hub/ Switch with justification.

- 34 (a) What happens when we use file open() function in python? 5
 (b) Create file phonebook.txt that stores the details in the following format:
 Name Phone
 Jivin 86666000
 Kriti 1010101
 Obtain the details from the user.

OR

- What is closed attribute of a file object ?
- A file phonebook.txt stores the details in the following format:
 Name Phone
 Jivin 86666000
 Kriti 1010101

Write a program to edit the phone numbers of “Arvind” in file. If there is no record for “Arvind” report error.

- 35 What is Constraint ? Give example of any two constraints 2+3
 Write the steps to perform an Insert query in database connectivity application. Table ‘student’ values are rollno, name, age (1,’AMIT’,22),(2,”ROHAN”,35)