Roll No.: _____ **Sub. Code: 083**

Please check that this question paper contains 35 questions and 8 printed pages.

D.A.V. INSTITUTIONS, CHHATTISGARH

Practice Paper - 9 2023-24

Class: XII

Subject: Computer Science -Python (083)

Time: - 3 Hrs. **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 question of Section B,C & E there will be internal choice.***
- ***All programming questions are to be answered using Python Language only.***

SECTION - A

Q1. Which of the following options isare not Python Keywords? 1

(a) False (b) Math (c) WHILE (d)break

Q2. Given the dictionary **D={'Rno':1,'Name':'Suraj'}**, write the output of**print(D('Name'))**. 1

Q3. Identify the statement(s) from the following options which will raise Type Error exception(s): 1

(a) print('5'*3) (b) print(5*3)

(c) print('5'+3) (d) print('5'+'3')

Q4. Identify the valid relational operator(s) in Python from the following: 1

(a) = (b) < (c) <> (d) not

Q5. For a string S declared as **S='PYTHON'**,which of the following is incorrect? 1

(a) N=len(S) (b) N=len(S) (c) 'T'inS (d) S[0]='M'

Q6. Write a single line statement in Python to assign the values**'BLUE','GREEN','RED'** to a tuple named **Colours.** **1**

A List is declared as **L=['ONE','TWO','THREE']** What will be the output of the statement?

Print(max(L))

Q7. Write the name of the built-infunctionmethod of the mathmodulewhich when executed upon5·8 as parameter,would return the nearest smaller integer 5. 1

Q8. In context of Cyber Crimes and CyberThefts, the term IPR Rrefers to: 1

(a) Internet Protocol Rights (b) Inter Personnel Rights

(c) Intellectual Property Rights (d) Individual Property Rights

Q9. InSQL, write the name of the aggregate function which will display the cardinality of a table. 1

Q10. Which of the following clauses in SQL is most appropriate to use to select matching tuples in a specific range of values? 1

(a) IN (b) LIKE (c) Between (d) IS

Q11. Which of the following is nota valid DML command in SQL? 1

(a) INSERT (b) UPDATE (c) ALTER (d) DELETE

Q12. Which of the following wireless transmission media is best suited for MAN? 1

(a) Microwave (b) RadioLink (c) Infrared (d) Bluetooth

Q13. Which of the following is/are immutable object type(s) in Python? 1

(a) List (b) String (c) Tuple (d) Dictionary

Q14. What shall be the output for the execution of the following Python Code? 1

```
Cities=['Delhi','Mumbai']
Cities[0],Cities[1]=Cities[1],Cities[0]
print(Cities)
```

Q15. Which of the following statements correctly explains the term Firewall in context of Computer Network Society? 1

(a) A device that protects the computer network from catching fire.

(b) Adevicesoftware that controls incoming and outgoing network traffic.

(c) Using abusive language on a social network site.

(d) Stealling someone's text and submitting it as his/her own work.

Q16. Which of the following is not a valid python string operation? 1

(a) 'Wlcome' + '10' (b) 'Wlcome' * 10

(C) 'Wlcome' * 10.0 (d) "10" + 'Wlcome'

Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as

(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

Q17. Assertion (A): Opening a text file using 'W' mode deletes the existing

content of the file. 1

Reason (R): 'W' mode opens the file for writing and truncates the file to zero length, which means all the existing content of the file will be deleted.

Q18. Assertion: The peek operation in a stack returns the value of the topmost item in the stack without removing it. 1

Reasoning: This operation is also known as the pop operation.

Section - B

Q19. Evaluate the following Python expressions: 2

(a) 2*3+4**2 5//2

(b) 6<12 and not (20>15) or (10>5)

Q20. Explain the concept of distinct in SQL. 2

Q21. Which of the following command is DDL/DML? 2

(i) DROP TABLE student;

(ii) UPDATE student SET marks = 75 WHERE name LIKE 'ramesh';

Q22. Explain the use of positional parameters in a Python function with the help of a suitable example. 2

OR

Explain the use of a default parameter in a Python function with the help of a suitable example.

Q23. Rewrite the following code in Python after removing all syntax error(s): Underline each correction done in the code 2

```
Runs=(10,5,0,2,4,3)
for i in Runs:
    if i =0
        print(MaidenOver)
else
    print(NotMaiden)
```

Q24. What possible output(s) is/are expected to be displayed on the screen at the time of execution of the program from the following code ? Also specify the maximum and minimum value that can be assigned to the variable R when K isassigned value as 2. 2

```
import random
Signal=['Stop','Wait','Go']
for K in range(2,0,-1):
R=randrange(K)
print(Signal[R],end='#')
```

Stop#Wait#Go#

Wait#Stop#

Go#Wait#

Go#Stop#

Q25. What are Tuples in a SQL Table? Write a suitable example with a SQL Table to illustrate your answer. 2

Section -C

Q26. Write the names of any three constraints and their respective uses in SQL. 3

Q27. Write the output for the execution of the following Python code: 3

```
def change(A):
S=0
for I in range (len(A)//2):
    S+=(A[i]*2)
return S
B=[10,11,12,30,32,34,35,38,40,2]
C =Change(B)
print('Outputis',C)
```

Q28. (a) What are cookies in a web browser? Write one advantage and one disadvantage of enabling cookies in a web browse. 3

(b) Differentiate between the terms Domain Name and URL in context of web services Also write one example of each to illustrate the difference.

Q29. (a)Write the definition of a function **ChangeGender()** in Python, which reads the contents of a text file **"BIOPIC.TXT"** and displays the content of the file with every occurrence of the word **'he'** replaced by **'she'.**For example, if the content of the file**"BIOPIC.TXT"**is as follows: 3

Last time he went to Agra,
There was too much crowd, which he did not like.So this time he decided to visit some hill station.

The function should read the file content and display the output as follows:

Last time she went to Agra, there was too much crowd ,which she did not like .So this time she decided to visit some hill station.

or

(b) Write the definition of a function **Count_Line()** in Python, which should read each line of a Text file "SHIVAJI.TXT" and count total number of lines present in Shivaji was born in the Family of Bhonsle .He was devoted to his mother Jijabai.India at that time was under Muslim rule.

The function should read the file content and display the out put as follows:

Total number of lines: 3

Q30. Write the outputs of the SQL queries (i) to (iii) based on the relations **CUSTOMER** and **TRANSACTION** given below: 3

Table: **CUSTOMER**

AC NO	NAME	GENDER	BALANCE
C1	RISHABH	M	15000
C2	AAKASH	M	12500
C3	INDIRA	F	9750
C4	TUSHAR	M	14600

C5	ANKITA	F	22000

AC NO	TDATE	AMOUNT	TYPE
C1	2020-07-21	1000	DEBIT
C5	2019-12-31	1500	CREDIT
C3	2020-01-01	2000	CREDIT

Table:**TRANSACTION**

SELECT MAX(BALANCE),MIN(BALANCE) FROM CUSTOMER WHERE GENDER='M';

SELECT SUM(AMOUNT),TYPE FROM TRANSACTION GROUP BY TYPE;

SELECT NAME,TDATE, AMOUNT FROM CUSTOMERC,TRANSACTIONT
WHERE C.ACNO=T.ACNO AND TYPE='CREDIT';

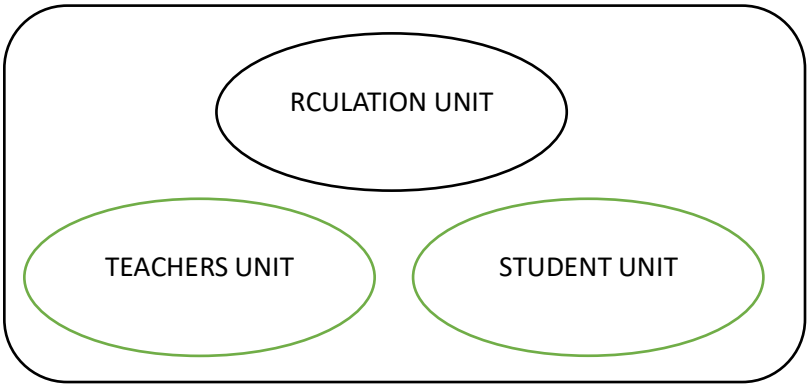
Section - D

Q31. Write the definition of a function **POP_PUSH(LPop,LPush,N)** in Python.
The function should Pop out the last **N** elements of the list **L Pop** and Push the min to thelist **LPush.**Forexample: 4
If the contents of the list **L Pop** are **[10,15,20,30] a**nd value of **N** passed is **2,**
Then the function should create the list **L Push** as **[30,20]** and the list **L Pop** should now Contain **[10,15]**
NOTE: If the value of **N** is more than the number of elements present in **L Pop**, the n display the message **"Popnotpossible"**

or

Write a function in Python **POP STACK(L)** where **L** is as tack implemented by a list of numbers. The function returns the value deleted from the stack.

Q32. A school library is connecting computers in its units in a LAN.The library has 3 units
As shown in the diagram below:



The three units are providing the following services:

TeachersUnit:For access of the Library Books by teachers

StudentsUnit:For access of the Library Books by Students

Circulation Unit: For issue and return of books for teachers and

Students Centre to Centre distances between the 3 units are as follows:

Circulation Unit to Teachers Unit 20 metres Circulation Unit to Students Unit30 MetresTeachers UnittoStudentsUnit10metres

Number of computers in each of the units is as follows:CirculationUnit15

TeachersUnit 10

StudentsUnit 10

i) Suggestthemmost msuitableplace(i.e.the Unit name) to install the serverofthisLibrarywithasuitablereason.

ii) Suggest an ideal lay out for connecting these Units for a wired connectivity.

iii) Which device will you suggest to be installed and where should it be placed to provide internet connectivity to all the Units?

iv) Suggest the type of them os tefficient and economical wired medium for connecting all the computers in the network.

Section - E

Q33.Roshni of Class12 is writing a program in Python for her project work to create a CSV file 5

"Teachers.csv" Which will contain information for every teacher's Identification Number, Name for some entries. She has written the following code. However, she is unable to figure out the correct statements in a few lines of the code, hence she has left the blank. Help her to write the statements correctly for the missing parts in the code.

```
import _____ # Line 1
def addrec(Idno, Name) :# to add record into the CSV
        file=open("Teachers.csv", _____ )#Line 2
        Fileriter = CSV. Writer (f)
        Filewriter. Writerow([Idno,name])f.close()
def readfile ():        # to read the data from CSV filef = open "Teachers.csv",
_____)                                  # Line3
FileReader = CSV. _____ (f)

                                #Line4forrowinFileReader:
```

print(row)

f._____ #Line 5

(a) Name the modules he will import in Line1

(b) In which mode will she open the file to add data into the file in Line2?

(c) In which mode will she open the file to read the data from the file in Line3.

(d) FileintheblankinLine4toreadthedatafromaCSVfile.

(e) Fill in the blank in Line5 to close the file

Q34. Anmol maintains that database of Medicines for his pharmacy using SQL to store the data. The structure of the table PHARMA for the purpose is as follows: 5

Name of the table-PHARMA

The attributes of PHARMA areasfollows:

MID-numeric

MNAME-character of size 20.

PRICE-numeric

UNITS-numeric

EXPIRY-date

Table: **PHARMA**

MID	MNAME	PRICE	UNITS	EXPIRY
M1	PARACETAMOL	12	120	2022-12-25
M2	CETRIZINE	6	125	2022-10-12
M3	METFORMIN	14	150	2022-05-23
M4	VITAMINB-6	12	120	2022-07-01
M5	VITAMIND3	25	150	2022-06-30
M6	TELMISARTAN	22	115	2022-02-25

I)Write the degree and cardinality of the table **PHARMA.**

II) Identify the attribute best suitable to be declaired as a primary key

III) Anmol has received anew medicine to be added into his stock, but for which he does not know the number of UNITS.So he decides to add the medicine without its value for UNITS. The rest of the values are as follows :

MID	MNAME	PRICE	EXPIRY
M7	SUCRALFATE	17	2022-03-20

Write the SQL command which Anmol should execute to perform the required task.

(a) Anmol wants to change the name of the attribute UNITS to QUANTITY in the table PHARMA. Which of the following commands will he use for the purpose?

UPDATE

DROPTABLE

CREATETABLE

ALTERTABLE

(b)Now Anmol wants to increase the PRICE of all medicines by 5. Which of the following commands will he use for the purpose?

UPDATESET

INCREASEBY

ALTERTABLE

INSERTINTO

Q35.

(a) Write one difference between CSV and text files. 5

Write a program in Python that defines and calls the following user defined functions:

(i) COURIER ADD(): It takes the values from the user and adds the details to a csv file 'courier.csv'. Each record consists of a list with field elements as cid, s_name, Source, destination to store CourierID, Sender name, Source and destination address respectively.

(ii) COURIER SEARCH (): Takes the destination as the input and displays all the courier records going to that destination.

OR

(b) Why it is important to close a file before exiting?

Write a program in Python that defines and calls the following user defined functions:

(i) Add_Book(): Takes the details of the books and adds them to a csv file 'Book.csv'. Each record consists of a list with field elements as book_ID, B_ name and pub to store book ID, book name and publisher respectively.

(ii) Search_Book(): Takes publisher name as input and counts and displays number of books published by them.