VAILANKANNI PUBLIC SCHOOL, KRISHNAGIRI

REVISION TEST -03

COMPUTER SCIENCE(083)

GRADE –XII **SET-A** **MARKS -70**

General Instructions:

1. **This question paper contains five sections, Section A to E.**
2. **All questions are compulsory.**
3. **Section A have 18 questions carrying 01 mark each.**
4. **Section B has 07 Very Short Answer type questions carrying 02 marks each.**
5. **Section C has 05 Short Answer type questions carrying 03 marks each.**
6. **Section D has 03 Long Answer type questions carrying 05 marks each.**
7. **Section E has 02 questions carrying 04 marks each.**
8. **All programming questions are to be answered using Python Language only.**

SECTION - A

Q.no	PART A	Marks
1	Which of the following is not a relational operator a) > b)<= c)!= d)=	1
2	Identify the data type of result of expression 10<5 a)bool b)int c)float d)None	1
3	Which is not a type of tokens from the following. a)keyword b) literals c)Operators d)Class	1
4	Identify valid declaration of tuple a)T={'a','b','c','d'} b) T='a','b','c','d' c)D=('a','b','c','d') d) both b and c	1
5	Write the module that need to be imported to execute the function dump(): a)random b)csv c)mysql.connector d)pickle	1
6	Given the list L=[-1,4,6,-5] ,write the output of print(L[-1:-3]) a)[4,6,-5] b)[] c)[6,-5] d)error	
7	What will be the output of following:x,y=10,5 x,y=y,x print(x,y) a) 10,5 b)5 10 c) 5,10 d)10 5	1
8	A function can return------number of values a)0 b)None c)Many d)2	1
9	The default file open mode is --------- mode a)r b)r+ c)w d)a	1
10	Which of the following is/are mutable data type? a)int b)string c)list d)tuple	1
11	Which operator in SQL is used to compare a value to a specified list ofvalues a)BETWEEN b)= c)IN d)ALL	1
12	Which of the following is not an aggregate function? a)MIN() b)SUM() c)UPPER() d)COUNT()	1
13	Which keyword is used to eliminate duplicate values in an SQL select query? a)unique b)distinct c)key d)all	1
14	Which of the following network device is a broadcasting device a)switch b)hub c)gateway d)router	1

15	What is the degree of the following relation? a)3 b)5 c)2 d)1	1
16	If all devices are connected to a central hub, then topology is called a)tree topology b)bus topology c)star topology d)mesh topology	1
	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	
17	Assertion(A):The resultset refers to a logical set of records that are fetched from the database by executing an SQL query. Reason(R):Resultset stored in a cursor object can be extracted by using fetch(…) functions.	1
18	Assertion(A):Python overwrites an existing file or creates a non-existing file when we open a file with 'w' mode . Reason(R):a+ mode is used only for write operations	1
	SECTION B	

19	Sona has written the following code to check whether number is divisible by3 .She could not run the code successfully. Rewrite the code and underline each correction done in the code.
	x=10
	for i range in (a):
	if i%3=0:
	print(i)
	else:
	pass
		2

20	Write disadvantage of bus topology and star topology(1 each). **or** What are Routers? How is it differs from gateway?.	2
21	Write output. (i) a=5 a+=27 print(a) (ii) a=5 print(a+4<10)	2

22	Write output for the following code.
	def encrypt(str):
	str1=" "
	for i in str:
	if i.isupper():
	str1+=i.lower()
	else:
	str1+="*"
	return str1
	s=encrypt("HeLLo")
	print(s)
		2

23	(a)Expand the following terms: i)MAN ii)HTML (b)What is URL ?	2
24	Go through the python code shown below and find out the possible output(s) from the suggested options i to iv. Also specify maximum andminimum value that can be assigned to the variable j. *import random* *i=random.random()* *j=random.randint(0,6)* *print(int(i),":",j+int(i))* (i)0:0 (ii)0:6 (iii)1:7 (iv)1:6	2
25	Differentiate ORDER BY and GROUP BY with an example. OR Classify the following statements into DDL and DML a)delete b)drop table c)update d)create table	2

SECTION C

26 (3)

Consider the following tables CABHUB and CUSTOMER

CABHUB

Vcode	VehicleName	Make	Color	Capacity	Charges
100	Innova	Toyota	WHITE	7	15
102	SX4	Suzuki	BLUE	4	14
104	C Class	Mercedes	RED	4	35
105	A-Star	Suzuki	WHITE	3	14
108	Indigo	Tata	SILVER	3	12

CUSTOMER

CCode	CName	VCode
1	HemantSahu	101
2	Raj Lal	108
3	FerozaShah	105
4	Ketan Dhal	104

a) What will be the output of following statement?
select VehicleName,Capacity from Cabhub c, Customer s wherec.Vcode=s.Vcode and c.capacity<4;

b) Write the output of the queries (i) to (iv) based on the table CABHUB
- i) select count(VCode),Color from CABHUB group by Color;
- ii) select distinct capacity from Cabhub;
- iii) select min(Charges),max(charges) from CABHUB;
- **iv)** select VehicleName,Make from CABHUB order by Vehicle Name.

27	Write a function in python to count number of words ending with 'n'present in a text file "ABC.txt" If ABC.txt contains "A story of a rich man And his son", the output of thefunction should be Count of words ending with 'n' is 2	3

Or

A text file contains alphanumeric text (say an.txt).Write a program that reads this text file and prints only the numbers or digits from the file.

28 (a) Write the output of the SQL commands for (i) to (iv) on the basis of tables **BOOKS** and **ISSUES**. 3

Table: BOOKS

Book_ID	BookName	AuthorName	Publisher	Price	Qty
L01	Maths	Raman	ABC	70	20
L02	Science	Agarkar	DEF	90	15
L03	Social	Suresh	XYZ	85	30
L04	Computer	Sumita	ABC	75	7
L05	Telugu	Nannayya	DEF	60	25
L06	English	Wordsworth	DEF	55	12

Table: ISSUES

Book_ID	Qty_Issued
L02	13
L04	5
L05	21

(i)select sum(price) as TOTAL_PRICE from BOOKS;
(ii)select * from BOOKS where publisher=”DEF”;
(iii)select BookName,AuthorName from BOOKS,ISSUES where BOOKS.Book_ID=ISSUES.Book_ID and Qty_Issued>10;
(iv)select BOOKS.Book_ID,BookName,Publisher,Price,Qty,Qty_Issued from BOOKS,ISSUES where BOOKS.Book_ID=ISSUES.Book_ID;

b)Write SQL command to display structure of the table BOOKS.

29 Write a function SUMNOS() that accept a list L of numbers and find sum ofall even numbers and sum of all odd numbers. 3

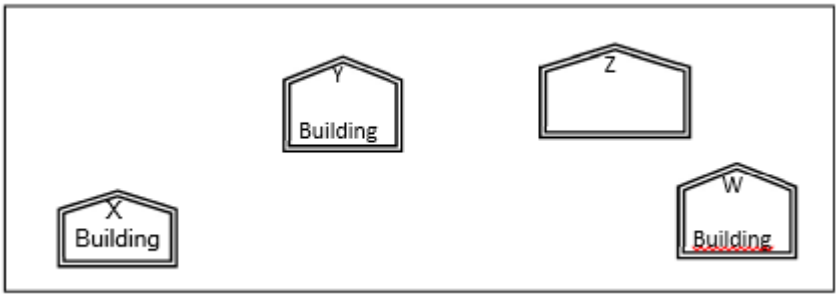
If L=[1,2,3,4],
Output :
sum of even nos:6
Sum of odd numbers:4

30 A stack S contains Name of countries.Write a function POP(A), to remove Name from stack. Function should handle underflow condition and shouldreturn removed element. **OR** 3

Write a function PUSH(STACK,Name) to add new name to the STACK data structure . Also display all the names having at least 4 characters from the stack.

SECTION D

31 “Learn Together” is an educational NGO. It is setting up its new campus at Jabalpur for its web based activities. The campus has 4 compounds as shownin the diagram below: 5



Center to center distances between various buildings is as follows:

X Building to Y Building	25 m
Y Building to Z Building	100m
X Building to W Building	110 m
W Building to Y Building	135 m
X Building to Z Building	115 m
Z Building to W Building	35 m

Number of Computers in each of the buildings is follows:

X Building	150
Y Building	15
Z Building	5
W Bulding	20

(i)Suggest the most suitable place (i.e. building) to house the server of this organisation with a suitable reason.

(ii)Suggest a cable layout of connections between the buildings.

(iii)The organisation is planning to link its admin counter situated in various parts of the same city, which type of network out of LAN, MAN or WAN will be formed? Justify your answer.

(iv)Suggest the placement of the following devices with justification:

(i)Repeater (ii)Hub/Switch

(v)In each of the buildings,the management wants that each LAN segmentgets a dedicated a bandwidth ie.bandwidth must not be shared. How can thisbe achieved?

32	a) Write the output of the code given below
	def f():
	global s
	s += ' Is Great'print(s)
	s = "Python is funny"s =
	"Python"
	f() print(s)
	b) The code given below inserts the following record in the table Student:
	RollNo – integerName –
	string Marks – integer
	Address –String Phone-
	integer
	Note the following to establish connectivity between Python and MYSQL:
	• Username is root
	• Password is root
	• The table exists in a MYSQL database named school.
	• The details (RollNo, Name, Marks,Address,Phoneno) are to beaccepted from the user.
	Write the following missing statements to complete the code:
	Statement 1 – to establish connection to the database
	Statement 2 – to execute the command that inserts the record in the table Student. Statement 3- to add the record permanently in the database.
	`import mysql.connector as con`
	`mycon=con._____(host="localhost",user="root",passwd="root",datab`
	`ase="school")  #statement 1`
	`if mycon.is_connected():`
	`  print("SUCCESSFULLY CONNECTED")`
	`else:`
	`  print("CONNECTION FAILED")`
	`mycursor=mycon.cursor()`
	`r=int(input("Enter roll no "))`
	`s=input("Enter name ")`
	`q=int(input("Enter marks "))`
	`g=input("Enter address ")`
	`l=int(input("Enter phone no "))`
	`query="insert into student values({},'{}',{},'{}',{})"`
	`mycursor._____(query.format(r,s,q,g,l))# statement 2`
	`mycon.____()#statement3`
	`mycon.close()`
		5

33	When do we use csv file?. Write a Program in Python that defines and callsthe following user defined functions: (i) insert_ROLL()– To accept and add data of a student to a CSV file 'marks.csv'. Each record consists of a list with field elements as rollno, mark to store roll number and mark of students respectively. (ii) read_ROLL()- To display and count the records of the students.	5

SECTION E

34	Advaith,a manager has stored the details of departments in a table called	4

	DEPARTMENT. DEPTNO DNAME LOC ----- ---------- -------- 10 ACCOUNTING NEW YORK 20 RESEARCH DALLAS 30 SALES CHICAGO 40 OPERATIONS BOSTON He wants to add one more record to this table and has written the followingcode and unable to insert that record. INSERT INTO DEPARTMENT VALUES(43,"HRD"); i. Help him to correct the code for adding the record ii. How can he restrict Null values in the table iii. Write a commands to : a. show the names of department starting with "R". b.update LOC as "New York" for DEPTNO 30. OR(Option for part iii only) iv.Write a commands to : a.insert the following record into the table:DEPTNO-47,DNAME-Accounting,LOC-Paris b.delete the records of location(LOC) "Boston"	

35	Manju has created a program using two functions for storing his friends' exam roll numbers and marks in a binary file "STUDENT.DAT" and to displaytotal mark.But he forgot some lines of code. As a programmer, help him to complete the task and to run the program successfully.
	_____ #Line 1
	def create_File():
	f=open("STUDENT.DAT","ab")
	rollno=int(input("Enter roll number"))
	m1=int(input("Enter Mark1")) m2=int(input("Enter Mark2")) m3=int(input("Enter Mark3"))
	d={"rollno":rollno,"M1":m1,"M2":m2,"M3":m3}
	pickle._____(d,f) #Line2
	f.close()
	s={}
	def read_File():
	with open("STUDENT.DAT","rb") as f:
	try:
	while True:
	s=_____ #Line3
	t=s["M1"]+s["M2"]+s["M3"]
	print("RollNo:",s[rollno],"Total Mark:",t)
	except:
	_____#Line 4
	a)Fill in the blank in Line 1 to import required module.
	b)Fill in the blank in Line 2 to write the record
	c)Complete Line 3 for reading the record
	d)Write the code in the line marked Line4
		4