THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

Date: 04/10/2024 **Term-I Examination(2024-2025)** **Max.Marks:70**
Grade: XII **Computer Science(083)** **Time: 3 hours**

SECTION A

1.	What is the advantage of DBMS over File Processing System? a. Redundancy is controlled. b. It provides backup and recovery. c. It provides multiple user interfaces. **d. All of these**	1
2.	Which one is correct? a. import mysql.connector() **b. import mysql.connector** c. import mysql.connect as sqltor d. import mysql.connect()	1
3.	State True or False : "In Python, tuple is a mutable data type". **FALSE**	1
4.	The primary key is selected from the set of _____ a. composite keys b. alternate keys c. foreign keys **d. candidate keys**	1
5.	What will be the output of the following statement? print(6+5/4**2//5+8) a. –14.0 **b. 14.0** c. 14 d. –14	1
6.	Identify the valid Python identifier from the following: a. 2user b. user@2 **c. user_2** d. user 2	1
7.	In SQL, which command will be used to add a new record in a table? a. UPDATE b. ADD **c. INSERT** d. ALTER TABLE	1
8.	For the following Python statement: N = (25) What shall be the type of N? a. Integer b. String **c. Tuple**	1

	d. List	
9.	Mr. Ravi is creating a field that contains alphanumeric values and fixed lengths. Which MySQL data type should he choose for the same? **a. VARCHAR** b. CHAR c. LONG d. NUMBER	1
10.	Identify the invalid Python statement from the following: a. d=dict() b. e={} c. f=[] **d. g=dict{}**	1
11.	Consider the statements given below and then choose the correct output from the given option: myStr="MISSISSIPPI" print(myStr[:4]+'#'+myStr[-5:]) **a. MISS#SIPPI** b. MISSI#SIPPI c. MISS#IPPIS d. MISSI#IPPIS	1
12.	Identify the statement from the following which will raise and error: a. print("15"*3) **b. print("15"+3)** c. print("15"+"3") d. print(5*3)	1
13.	Consider the given expression: not ((True and False) or True) Which of the following will be correct output if the given expression is evaluated? a. True **b. False** c. NONE d. NULL	1
14.	Which of the following statement(s) would give an error after executing the following code? D={'rno':32,'name':'MsArchana','subject':['hindi','english','cs'],'marks':(85,75,89)} **#S1** print(D) **#S2** D['subject'][2]='IP' **#S3** D['marks'][2]=80 **#S4** print(D) **#S5** a. S1 b. S3 **c. S4** d. S3 and S4	1
15.	Given a Tuple T=(10,20,30,40,50,60,70,80,90). What will be the output of	1

	print(T[-1:-4])? a. (90,80,70) b. (70,80,90) **c. ()** d. error	
16.	Select the correct output of the code: a=‘ ICC T-20 WCP @Australia’ a=a.split(‘C’) b=a[3]+‘*’+a[0]+‘#’+a[1]+‘$’+a[2] print(b) a. T-20 @Australia*I # $ WW **b. P @Australia* I#$ T-20 W** c. P@Australia* I#$ T-20W d. None of these	1
17.	All aggregate functions except _ _ _ _ _ ignore null values in their input collection. a. count(attribute name) **b. count(*)** c. avg() d. none of these	1
18.	What will be the output of the following code: Language=[“C”, “C++”, “JAVA”, “Python”, “VB”, “BASIC”, “FORTRAN”] del Language[4] Language.remove(“JAVA”) Language.pop(3) print(Language) a. [‘C’, ‘C++’, ‘VB’, ‘FORTRAN’] b. [‘C’, ‘C++’, ‘BASIC’, ‘FORTRAN’] **c. [‘C’, ‘C++’, ‘Python’, ‘FORTRAN’]** d. [‘C’, ‘C++’, ‘Python’, ‘BASIC’]	1
19.	Riya wants to remove a column “Name” from her table. Which command she has to use for this? **a. ALTER** b. UPDATE c. REMOVE d. DELETE	1
	Q20and 21 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. is True but R is False d. A is false but R is True	
20.	**Assertion (A) :**Keyword arguments are related to the function calls. **Reason (R):**When you use keyword arguments in a function call, the caller identifies the arguments by the parameter name. **a. Both A and R are true and R is the correct explanation for A**	1

21.	For a given list L=[11,12,13,14,15,16], the index of element 13 will be: **Assertion[A]:** The index of element 13 will be either 2 or -4. **Reason[R]:** Python list supports forward and backward indexing. Forward indexing starts with 0 given to leftmost element and backward indexing starts with index -1 given to rightmost element. **a. Both A and R are true and R is the correct explanation for A**	1
	SECTION B	
22.	Ans: A **cursor** is a database object that retrieves and navigates through query results one row at a time. The method used to execute an SQL command through a cursor is **cursor.execute()**.	2
23.	Observe the following python code and write on what value of X in this program will end. **def Fun1(X):** **X+=1** **if X%7!=0:** **Fun2(X)** **def Fun2(Y):** **Y+=1** **input()** **Fun1(Y)** **Fun1(10)** **Ans: Infinite value** **OR** Predict the output of the following code. **x="tmTmnTmt"** **for w in x:** **if w=="a":** **print("*")** **else:** **print(w)** **Ans:** **t** **m** **T** **m** **n** **T** **m** **t**	2
24.	Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code. a=5	2

	work=True
	b="hello"
	c=a+5
	for I in range(10):
	  if I%7=0:
	  continue	

25.	Re write the program and underline the corrected one. **try:** ** value = int(input("Enter a number"))** **___result = 10 / 0** **except valueError:** ** print("Error: Invalid value conversion")** **except ZeroDivisionError:** ** print("Error: Division by zero")**	2
26.	Differentiate DDL and DML commends in SQL. **DDL- CREATE,ALTER, DROP,** **DML- INSERT, DELETE, UPDATE**	2
27.	**a. Show tables;** **b. Desc tablename**	2
28.	A table Employee has 8 columns but no row. Later 8 new rows were inserted and 2 of them were deleted. What is the Degree and Cardinality of the table Employee? **Degree-8** **Cardinality-6** OR Differentiate between char(n) and varchar(n) data types with respect to databases. **Explanation needed.**	2
	SECTION C	
29.	Predict the output of the following if x=10 and y=5. **Enter the first number10** **Enter the second number"5** **Result is 2.0** **No exception raised** **Result is 2.0**	3
30.	Write a function in python, to check whether the input is alphabets in both capital and small letters. If the user inputs an upper case letter it shows the output as True otherwise the output will be false. **def is_uppercase_letter(char):** ** if len(char) != 1:** ** return False** ** return char.isupper()** **user_input = input("Enter a character: ")**	3

result = is_uppercase_letter(user_input)
print(result)

31. Find and write the output of the following Python program: 3

Ans:
21
23
26
30
35
4
6
9

SECTION D

32. Navdeep creates a table RESULT with a set of records to maintain the marks secured by students in Sem1, Sem2, Sem3, and their divisions. After the creation of the table, he entered data of 7 students in the table. 4

ADNO	ROLLNO	SNAME	SEM1	SEM2	DIVISION
123	101	KARAN	366	410	I
245	102	NAMAN	300	350	I
128	103	ISHA	400	410	I
129	104	RENU	350	357	I
234	105	ARPIT	100	75	IV
187	106	SABINA	100	205	II
181	107	NEELAM	470	450	I

Based on the data given above answer the following questions:

a. **Rollno**
b. **Degree-7**
   Cardinality-4
c. **Update result set sem2=(sem2)+30 where sem2 between 70 and 100;**
d. **Select rollno,sname from result where sem1>=400;**

33. Rewrite the following code after handling all possible exceptions. 4

```
try:
    num = int(input("Enter a number: "))
    result = 10 / num
    print("Result:", result)
except ValueError:
    print("Error: Invalid input. Please enter a valid
number.")
except ZeroDivisionError:
    print("Error: Division by zero is not
allowed.")
except Exception as e:
        print("An unexpected error occurred:", e)
```

34. What will be the output of the following code if the input is: 2 and 2.2 4

a. Enter a number: 2
Entered number: 2
Enter a number: 2.2
Error: Invalid input

Rewrite the following code in Python after removing all the syntax errors. Underline each correction done in the code.

```
b. num1, num2 = 10, 45
   while num1 % num2 == 0 :
     num1+= 20
     num2+= 30
   else:
    __print('hello')
```

35. Write the output of the SQL queries (i) to (iii) based on the relation CAR and CUSTOMER given below. 4

CAR

CCODE	CNAME	MAKE	COLOR	CAPACITY	CHARGES
201	Triber	Renault	Yellow	7	1000
203	Altroz	Tata	Black	5	1500
208	Innova	Toyota	Silver	8	3000
209	Harries	Tata	White	6	2000
212	Duster	Renault	Red	6	2500
217	Ertiga	Suzuki	Grey	7	2300

CUSTOMER

CUSTCODE	CUSTNAME	CCODE
101	Gopinath	201
102	Ashok	203
103	Harshini	209
104	Vishnu	212

a. SELECT MAKE,COUNT(*) FROM CAR GROUP BY MAKE HAVING COUNT(*) < 2;

Make	Count(*)
Toyota	1
Suzuki	1

b. SELECT CNAME,MAKE FROM CAR ORDER BY CHARGES DESC;

Cnnme	Make
Triber	Renault
Altroz	Tata
Harries	Tata
Ertiga	Suzuki
Duster	Renault
Innova	Toyota

c. SELECT CUSTNAME,CNAME FROM CAR R,CUSTOMER C WHERE R.CCODE = C.CCODE;

custname	Cname
Gopinath	Triber
Ashok	Altroz
Harshini	Harries
Vishnu	Duster

d. SELECT C.CODE,COLOR,CAPACITY FROM CUSTOMER C,CAR R WHERE R.CCODE = C.CCODE;

code	Color	capacity
201	Yellow	7
203	Black	5
209	White	6
212	Red	6

SECTION E

36. 2+3

Write the output of the following code given below.

```
def fun(s):
    k=len(s)
    m= ""
    for i in range(0,k):
        if(s[i].isupper()):
            m=m+s[i].lower()
        elif s[i].isalpha():
            m=m+s[i].upper()
        else:
            m=m+"bb"
    print(m)
fun("school2@com")
```

Ans: SCHOOLbbbbCOM

OR

The given program is used to connect with my SQL, show the name of the all records from the table "Observation" from the database "Abasoft". You are required to complete the statements so that the code can be executed properly.

Note the following code to establish connectivity between python and MySQL.
- User name is root
- Password is admin
- Database is Abasoft

Write the following missing statements to complete the code:

```
# Statement 1 : mysql
# Statement 2: connect
# Statement 3: passwd
# Statement 4: cursor()
# Statement 5: query
# Statement 6: commit
```

37. 5

Consider this table and write the queries.

PLAYER

PID	PNAME	GENDER	GAME	RANK
P01	Ashok	M	CRICKET	5
P02	Sayna	F	BADMINTON	9
P03	Saniya	F	TENNIS	15
P04	Aravind	M	CRICKET	1
P05	Lakshya	F	BADMINTON	51

1. Create this table with appropriate constraints.
   CREATE TABLE PLAYER(PID VARCHAR(5)PRIMARY KEY,PNAME VARCHAR(20),GENDER CHAR(1),GAME VARCHAR(20),RANK INT);
2. Add one more column named place to this table.
   ALTER TABLE PLAYER ADD COLUMN PLACE VARCHAR(20)
3. Display player name along with game whose rank is more than 5.
   SELECT NAME,GAME FROM PLAYER WHERE RANK>5;
4. Update the player's name Saniya to Sandra.
   UPDATE PLAYER SET PNAME='Sandra' WHERE PNAME='Saniya';
5. Display player's names whose name starts with S.
   SELECT PNAME FROM PLAYER WHERE PNAME LIKE 'S%';