THE VILLAGE INTERNATIONAL SCHOOL
"We Nurture Dreams"

CLASS XII **FIRST TERMINAL EXAMINATION 2023-24** **Time: 3 HRS**

Date:14/09/23 **Subject: COMPUTER SCIENCE (083)** **Max Marks: 70**

MARKING SCHEME

QNo.	**Section-A**	Marks
1	Find the invalid identifier from the following a) **sub%marks** b)age c)_subname_ d)subject1	1
2	Given the list L=["A", "E", "I", "O", "U"] , write the output of print(L[2:5]) **O/P** **["I","O","U"]**	1
3	Which module is required to work with CSV files in Python? **CSV**	1
4	Identify the invalid logical operator in Python from the following. a) and b) or c**) by** d) not	1
5	Suppose a tuple K is declared as K = (100, 102, 143, 309), which of thefollowing is incorrect? a)print(K[-1]) **b) K[3] =405** c) print(min(K)) d) print(max(K))	1
6	Write a statement in Python to declare a dictionary whose keys areSub1, Sub2, Sub3 and values are Physics, Chemistry, Math respectively. **D={"Sub1":"Physics","Sub2":"Chemistry","Sub3":"Math"}**	1
7	A List is declared as List1=[2,3,5,7,9,11,13] What will be the value of len(List1) **7**	1

8	Select the correct output of the code:
	`s = "Python is fun"`
	`l = s.split()`
	`s_new = "-".join([l[0].upper(), l[1], l[2].capitalize()])`
	`print(s_new)`
	Options:
	a. PYTHON-IS-Fun **b. PYTHON-is-Fun** c. Python-is-fun d. PYTHON-Is -Fun
		1

9	In MYSQL database, if a table, Alpha has degree 5 and cardinality 3, and another table, Beta has degree 3 and cardinality 5, what will be the degree and cardinality of the Cartesian product of Alpha and Beta? a. 5,3 b. 8,15 c. 3,5 **d. 15,8**	1

10	Which of the following statements is FALSE about keys in a relational database? a. Any candidate key is eligible to become a primary key. b. A primary key uniquely identifies the tuples in a relation. **c. A candidate key that is not a primary key is a foreign key.** d. A foreign key is an attribute whose value is derived from the primary key of another relation.	1
11	In SQL, name the clause that is used to sort the records in ascending/descending order of an attribute. a**)order by** b)where c) having d) group by	1
12	Riya wants to transfer pictures from her mobile phone to her laptop. She uses Bluetooth Technology to connect two devices. Which type of network will be formed in this case? **a. PAN** b. LAN c. MAN d. WAN	1
13	Which of the following will delete key-value pair for key = "Red" from a dictionary D1? a. delete D1("Red") b**. del D1["Red"]** c. del.D1["Red"] d. D1.del["Red"]	1
14	Which of the following is not a DDL command? a) **UPDATE** b)ALTER TABLE c)CREATE TABLE d)DROP TABLE	1
15	Consider the statements given below and then choose the correct output from the given options: pride="#G20 Presidency" print(pride[-2:2:-2]) Options: a. ndsr b. **ceieP0** c. ceieP d. yndsr	1
16	Identify the data type of INFO: INFO = ['hello',203,'9',[5,6]] a. Dictionary b. String c. Tuple **d. List**	1
17	**Assertion (A):-** If the arguments in function call statement matchthe number and order of arguments as defined in the function definition, such arguments are called positional arguments. **Reasoning (R):-** During a function call, the argument list first containsdefault argument(s) followed by positional argument(s). 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	1

18	**Assertion(A):** List is an immutable data type **Reasoning(R):** When an attempt is made to update the value of an immutable variable, the old variable is destroyed and a new variable is created by the same name in memory. (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**	1
	SECTION-B	
19	Evaluate the following expressions: a) 16 // 3 + 3 ** 3 + 15 / 4 – 9 **26.75** b) x>y or y<z and not x!=z If x, y, z=25, 16, 9 **True**	2

20	Ms. Shalini has just created a table named "Employee" containing columns Ename, Department and Salary.
	After creating the table, she realized that she has forgotten to add a primary key column in the table. Help her in writing an SQL command to add a primary key column EmpId of integer type to the table Employee.
	Thereafter, write the command to insert the following record in the table:
	EmpId- 999
	Ename- Shweta
	Department: Production
	Salary: 26900
	ALTER TABLE Employee ADD EmpId INTEGER PRIMARY KEY;
	As the primary key is added as the last field, the command for inserting data will be:
	`INSERT INTO Employee`
	`VALUES("Shweta","Production",26900,999);`
	Alternative answer:
	`INSERT INTO Employee(EmpId,Ename,Department,Salary)`
	`VALUES(999,"Shweta","Production",26900);`
	OR
	Zack is working in a database named SPORT, in which he has created a table named "Sports" containing columns SportId, SportName, no_of_players, and category.
	After creating the table, he realized that the attribute, category has to be deleted from the table and a new attribute TypeSport of data type string has to be added. This attribute TypeSport cannot be left blank. Help Zack write the commands to complete both the tasks.
	To delete the attribute, category:
	`ALTER TABLE Sports`
	`DROP category;`
	To add the attribute, TypeSport
		2

```
ALTER TABLE Sports
ADD TypeSport char(10) NOT NULL;
```

21 Give one difference between alternate key and candidate key. 2

The candidate key is a set of attributes that uniquely identify the rows in a table. An alternate key is a column or group of columns that uniquely identify every row in a table.

OR

Define cardinality and degree with example.

For example, if a table has five rows, it has a cardinality of five. Degree and cardinality are important concepts in database design and optimization. The degree of a table determines the number of attributes that need to be defined and stored for each row, impacting the storage requirements and query performance.

22 Differentiate between positional parameters and default parameterswith suitable example program for each. 2

The positional parameters are declared within a square bracket [] and can be omitted when the function is called.

Keyword-Only Argument	Positional-Only Argument
Parameter Names are used to pass the argument during the function call.	Arguments are passed in the order of parameters. The order defined in the order function declaration.
Order of parameter Names can be changed to pass the argument(or values).	Order of values cannot be changed to avoid the unexpected output.
Syntax : – $FunctionName(paramName = value, ...)$	Syntax :- $FunctionName(value1, value2, value3, ...)$

OR

How can a function return multiple values? Illustrate with an example program.

You can return multiple values from a function in Python. To do so, return a data structure that contains multiple values, like a list containing the number of miles to run each week. Data structures in Python are used to store collections of data, which can be returned from functions.

```
def miles_to_run(minimum_miles):
    week_1 = minimum_miles + 2
    week_2 = minimum_miles + 4
    week_3 = minimum_miles + 6
    return [week_1, week_2, week_3]

print(miles_to_run(2))
# result: [4, 6, 8]
```

	A function can return multiple values which is written after the return statement and the values are separated by commas. The multiple return values are returned as a tuple object to the statement that made the function call. **Ex:** **def fun1(x,y,z): return** **x+y,y+z,z+x** **a,b,c= 3,5,9** **#multiple returned values accepted as a tuplem = fun1(a,b,c)**	

23	The code given below accepts a number as an argument and returns the reverse number. Observe the following code carefully and rewrite it after removing all syntax and logical errors. Underline all the corrections made.
	`def revNumber(num):`
	`  rev = 0`
	`  rem = 0`
	`  while num > 0:`
	`  rem =num %10`
	`  rev = rev*10 + rem`
	`  num = num//10`
	`  return rev`
	`print(revNumber(1234))`
		2

24	What are the incorrect output(s) from the given options when the followingcode is executed? Also specify the minimum and maximum values that canbe assigned to the variable VALUE.
	import random
	VALUE = random.randint (0,3)
	SUBJECT=[“PHY”,”CHEM”,”MATHS”,”COMP”];
	for I in SUBJECT:
	for J in range(1, VALUE):
	print(I, end=””)
	print()
	Minimum VALUE = 0
	Maximum VALUE = 3
	Options (ii) & (iii)are incorrect.
		2

25	What do you understand by Alternate Keys in a table? Give a suitable example of Alternate Keys from a table containing some meaningful data. **Alternate Key: The candidate key other than the primary key is called an alternate key. All the keys which are not primary keys are called alternate keys. It is a secondary key. It contains two or more fields to identify two or more records.**	2
	Section- C	

26

```
PLACES={1:"Delhi",2:"London",3:"Paris",4:"New York",5:"Dubai"}
def countNow(PLACES):
    for place in PLACES.values():
        if len(place)>5:
            print(place.upper())
countNow(PLACES)
```

OR

```
def lenWords(STRING):
    T=()
    L=STRING.split()
    for word in L:
        length=len(word)
        T=T+(length,)
    return T
```

3

27 Predict the output of the Python code given below:
ND-*34

3

28

3

i.

Make	Count(*)
Toyota	1
Suzuki	1

ii.

Cname	Make
Innova	Toyota
Duster	Renault
Ertiga	Suzuki
Harrier	Tata
Altroz	Tata
Triber	Renault

iii.

Custname	Cname
Gopinath	Triber
Ashok	Altroz
Harshini	Harrier
Vishnu	Duster

29	
	`def test():`
	`  fObj1 = open("Alpha.txt","r")`
	`  data = fObj1.readlines()`
	`  for line in data:`
	`  L=line.split()`
	`  if L[0]=="You":`
	`  print(line)`
	`  fObj1.close()`
	
	OR
	
	`def vowelCount():`
	`  fObj = open("Alpha.txt","r")`
	`  data = str(fObj.read())`
	`  cnt=0`
	`  for ch in data:`
	`  if ch in "aeiouAEIOU":`
	`  cnt=cnt+1`
	`  print(cnt)`
	`  fObj.close()`
		3

30	OUTPUT : pRE2bOARDxeXAMaddd	3
	Section-D	
31.	(a) csv (b)a (c) csv.reader() (d) not mandatory	4

32.	**i. <u>r+ mode:</u>**
	▪ Primary function is reading
	▪ File pointer is at beginning of file
	▪ if the file does not exist, it results in an error
	<u>w+ mode:</u>
	▪ primary function is writing
	▪ if the file does not exist, it creates a new file.
	▪ If the file exists, previous data is overwritten
	▪ File pointer is at the beginning of file
	(ii)
	`def copyData():`
	`  sport_file = open("SPORT.DAT", "r")`
	`  basket_file = open("BASKET.DAT", "w")`
	`  count = 0`
	`  for line in sport_file:`
	`  fields = line.split(",")`
	`  if fields[0] == "Basket Ball":`
	`  basket_file.write(line)`
	`  count += 1`
	`  sport_file.close()`
	`  basket_file.close()`
	`  return count`	

OR

(i) Text files:

- Extension is .txt
- Data is stored in ASCII format that is human readable
- Has EOL character that terminates each line of data stored in the text files

Binary Files

- Extension is .dat
- Data is stored in binary form (0s and 1s), that is not human readable.

(ii)

```
def findType(mtype):
    cinema_file = open("CINEMA.DAT", "rb")
    for record in cinema_file:
        movie = pickle.load(record)
        if movie["MTYPE"] == mtype:
            print(movie["MNO"], movie["MNAME"], movie["MTYPE"])
    cinema_file.close()
```

SECTION E

33. 5

(**a**) Predict the output of the following code:

190

(b (i) BookNo

(ii) Degree=4 Cardinality =7

iii)UPDATE collections SET quantity = quantity + 20 WHERE quantity < 50;

OR

(a) Write the output of the code given below

5#

34.

a)write the output of the following code.

65#70@

b)

i.mysql.connector()

ii.mycursor.execute(query)

iii.mycursor.fetchall()

35.	(i) Select Cname, Charges from Car where Colour='silver'; (ii) Select distinct Ccode from customer; (iii) Select min(Charges), max(Charges) from Car; (iv) Update Car set Charges=Charges - Charges*0.1 from Car R, Customer C where R.Ccode=C.Ccode; Select Cname, Make from Car where Charges between 2000 and 3000;	5