ARMY PUBLIC SCHOOL SHILLONG
ANNUAL EXAMINATION – 2022 - 23
Subject: Informatics Practices Class XI

Time: 3 Hrs.   **Max. Marks: 70**

(i). All the Questions are compulsory.
(ii). Number written at the right margin indicates the Marks.
(iii). Give appropriate syntax and examples wherever necessary.
(iv). There are questions where you have to show the output of the program and show the
     evaluation process as a part of answer.
(v). Any assumption regarding table, command, text etc. are allowed.
(vi). Ensure that there is no overwriting in the program, query.
(vii). Question no 2 has option to answer any 5 out of 6.
(viii). Question no 3 has option to answer any 4 out of 5.
(ix). Question no 5 is MCQ where you have to attempt only 10 questions out of 13.

1. Answer the following question in short.   1 X 10 = 10

   a)   Define a loop of a program?

   b)   Which character(s) is/are used as **NOT** operator in a python program?

   c)   Code A | **Q = 5**
        Code B | **Q += 2**

        What actually the line **Code B** of the above code is doing in the given snippet?

   d)   **SELECT name from STU where MARK > 90;**

        Rectify the mistake if any in the above code and re-write the correct SQL statement (Assume
        that STU tables has created with corresponding columns).

   e)   A graphical representation of solving a problem in any computer programming language is
        known as _____.

   f)   What will be the value of C after executing the following python code.

        B = 56
        C = A // 3

   g)   Name any two attribute which can used with ALTER command in MySQL.

   h)   **D = (1:2, 3:4, 5:6)**

        What is wrong in the above code of Python dictionary? Rectify the mistake and re-write the
        corrected expression.

   i)   Python dictionary is immutable. TRUE/FALSE   .

   j)   Which command is used to display the structure of a table in MySQL?

2 Answer any five questions from the following program snippets of python. 2 X 5 = 10

 a) Refer the following python code and predict the output.

```
str_val="HELLO"
L1=list(str_value)
print(L1)
```

 b) What will be the output from the following code.

```
L1 =[5,2,3,7,1]
for a in L1:
  print(i)
```

 c) What will be the value of **L1** after executing the following code.

```
L1=[2,3,7,1]
L2=[0,9,3]
L1.append(L2)
print(L1)
```

 d) What will be the value of **D1** after executing the following Dictionary code.

```
D1 = {'Mohan':95, 'Ram':89, 'Suhel':92, 'Sangeeta':85}
for key in D1:
   print(key,':',D1[key])
```

 e) What will be the value of **D1** after executing the following Dictionary code.

```
D1 = {'Mohan':95, 'Ram':89, 'Suhel':92, 'Sangeeta':85}
D1['Meena'] = 78
print(D1)
```

 f) What will be the value of **D** after executing the following Dictionary code.

```
D = {'M':95, 'R':89, 'S':92}
D1 = {'A':25, 'K':35}
D.update(D1)
print(D)
```

3. Answer any four from the following. 3 X 4 = 12

 a) Consider the following given python dictionary and predict the output of the code given in Python w.r.t. the given dictionary.

```
R = {'Mohan': 95, 'Ram': 89, 'Suhel': 92, 'Sangeeta': 85, 'Meena': 78}
```

  i) print(R.get('Ram'))
  ii) print(R.keys( ))
  iii) print(R.values( ))

b)   Consider the following MySQL table name as EMP and write the query to perform the task.

```
+----------+----------+-----------+----------+
| EMP_CODE | NAME     | ADDRESS   | Father   |
+----------+----------+-----------+----------+
|      201 | Nitish   | Delhi     | Rahul    |
|      202 | Samprada | Meghalaya | Ahim     |
|      203 | Rahul    | Assam     | Rohit    |
|      204 | Anushka  | Shillong  | AAAA     |
|      205 | Aneesha  | Shillong  | Samprada |
+----------+----------+-----------+----------+
```

i) to display all the details who has "a" as the last letter of the ADDRESS.

ii) to display NAME, FATHER of those whose EMP_CODE between is 202 and 204.

iii) to remove all the data of 'Rahul'.

c)   Define a Primary key. Write the syntax to create the EMP table given in Q3(b) with EMP_CODE as primary key. And write the query to insert at least a row.

d)   Differentiate between the Relational Data Model and Heirarchical Data Model. Explain with examples.

e).   Write the rules for nomenclature of a variable.

4.   Consider the following table and write the query for (i) to (vi) and output for (vii) to (x).   1 X 10 = 10

Table name : MARKET

ADM_NO	CATEGORY	FATHER	STU_NAME	SALARY	PHONE	VEHICLE
APS101	JCO	Jason	Rameshor	50000	1234567	Yes
APS 105	ORs	Rishab Das	Asween	60000	7956411	No
APS 103	Civil	Proloy Nath	Anil Kasya	70000	1024668	Yes
APS 102	Staff	Kukrejha	Thomson	80000	5787999	Yes
APS 104	Teacher	Sunita	Alexendir	90000	3547899	No
APS 108	MTS	Pintu	Anita	20000	7897888	No
APS 109	LDC	Sany	Santosh	30000	8968888	No
APS 111	JCO	Ammy	Anthony	25000	7878787	Yes

i). to insert all the values using appropriate command. (write only one in the answer script)

ii). change the data type of attribute " SALARY " to varchar with size 20.

iii). to replace the category " Civil " by " General ".

iv). to display all those Father whose STU_NAME has " x " as the fourth letter.

v). display all the Admission no. in descending order of the Name who work as JCO.

vi). to increase the SALARY of all by increasing 10% of the existing SALARY.

vii). select ADM_NO from MARKET where SALARY between 50000 and 80000;
viii). alter table MARKET drop VEHICLE ;
ix). update MARKET set ADM_NO= ' ' where STU_NAME like '_ _ _ e%';
x). select CATEGORY, FATHER from MARKET order by SALARY desc;

5. Choose the correct option of any ten questions from the following.   1 X 10 = 10

a) What will be the order of the data being sorted after the execution of given SQL query?

SELECT * From School Order by Class;
(a) Order of inserting records in a table   (b) Ascending order
(c) Descending order   (d) None of these

b) Which clause in SQL is used to apply a condition in a transaction of SQL?
(a) As   (b) Having   (c) Where   (d) On

c) Identify the valid variable name from the following literals
a) P Q   b) P$Q   c) P+Q   d) PQ

d) _____ constraint is used to check duplicity of values in MySQL tables and discard if repeated.
(a) Unique   (b) Remove   (c) Distinct   (d) All

e) Which of the following commands will change row(s) of the table from MySQL database?
(a) REPLACE TABLE   (b) CHANGE TABLE   (c) UPDATE   (d) ALTER TABLE

f) DML stands for _____.

g) "Keywords can be used as identifiers/variables in Python programming language."
(a) True   (b) False   (c) Sometimes based on condition   (d) None of the above

h) Which statement consists of a logical operator?
(a) a + b ** c   (b) a > b: (c) a and b not c   (d) 2 in a

i) len( ) is used to input the values to be used in the dictionary program. True/False

j) Type casting is used between dissimilar _____ .
a) datatypes   b) variables   c) constant   d) conditions

k) The meaning of **a==5** in python script is:
a) The constant value a is stored/assigned in variable 5
b) The constant value 5 is stored/assigned in variable a
c) a is equal to 5   d) None of the above

l) Consider the lists below and select the correct statement
L1 = [1,2,3]
L2 = [1,[2,3]]
a) L1= =L2   b) L1 Not equal L2   c) L1< > L2   d) L1!=L2

m) Consider the lists below and select the correct statement
L1 = [1,2,3,7,9]
L2 = [1,2,5,8]
L1< L2
a) True   b) False   c) Error in the condition   d) None of the above

6. a) WAP in python to a) add two list elements b) to delete an element.   2 + 2 = 4

b) WAP in python to a) remove an element from a dictionary using POP function
                 b) clear the entire elements of dictionary using clear function.   2 + 2 = 4

c) WAP in python to search an element in an user inputted list (Linear search).   5

d) WAP to find the largest element number in a list using sorting method.   5