**WORKSHEET 2**

**PYTHON**

# Q1 to Q8 have only one correct answer. Choose the correct option to answer your question.

1. Which of the following is not a core data type in python?
   1. list B) struct

C) tuple C) set

Ans- B

1. Which of the following is an invalid variable name in python?
   1. \_init\_ B) no\_1

C) 1\_no D) \_1

Ans- C

1. Which one of the following is a keyword in python?
   1. in B) \_init\_

C) on D) foo

Ans- A

1. In which of the following manner are the operators of the same precedence executed in python?
   1. Left to Right B) BODMAS

C) Right to Left D) None of these

Ans- A

1. Arrange the following in decreasing order of the precedence when they appear in an expression in python?

i) Multiplication ii) Division iii) Exponential iv) Parentheses

A) iii – iv – ii – i B) iii – iv – i – ii

C) iv – iii – ii – i D) iii – ii – i – iv

Ans- C

6. (28//6)\*\*3/3%3 = ?

A) 7.1111… B) 0

C) 0.3333… D) 1

Ans- B

1. Which of the following is not equal to x16 ?

A) x\*\*4\*\*4 B) x\*\*16

C) x^16 D) (x\*\*4)\*\*4

Ans- C

1. a = input(“Enter an integer”). What will be the data type of a?
   1. int B) str

C) float D) double

Ans- A

# Q9 and Q10 have multiple correct answers. Choose all the correct options to answer your question.

1. Which of the following statements are correct?
   1. Division and multiplication have same precedence in python
   2. Python’s operators’ precedence is based on PEDMAS
   3. Python’s operators’ precedence is based on VBODMAS
   4. In case of operators’ having same precedence, the one on the left side is executed first.

Ans- A, D

1. Which of the following is(are) valid statement(s) in python?

A) abc = 1,000,000 B) a b c = 1000 2000 3000

C) a,b,c = 1000, 2000, 3000 D) a\_b\_c = 1,000,000

Ans- A,C,D

# Q11 to Q13 are subjective questions, answer them briefly

1. Differentiate between a list, tuple, set and dictionary.

Ans- A **List** is a collection of comma-seperated values (items) within square brackets.

* Values can be modified, i.e. it is mutable
* The values that make up a list are called its elements
* Elements in alist need not to be of same type

**Tuples**: A tuple is a sequence of comma separated values

* Values in the tuple cannot be modified
* The comma separated values can be in enclosed in parenthesis but not mandatory
* The index value of tuple start from 0

**Set:** It is defined as the unordered collection of various items enclosed in curly braces. The elements of the set can not be duplicate . It must be immutable. There is no index attached to the elements of set unlike others i.e. we cannot directly access any elements of the set by index. We can get the list of elements by looping through the set

**Dictionary**: It is an unordered collection of items where each item is a key:value pair. We can also refer

to a dictionary as a mapping between a set of keys/indices and a set of values

* Each key map to a value. The association of a key and value forms key:value pair
* The dictionary is enclosed in curly brackets
* Keys are unique while value may not be
* The values of a dictionary can be of any type, but the keys must be of an immutable data type such as strings,numbers, or tuples
* It is mutable in nature

1. Are strings mutable in python? Suppose you have a string “I+Love+Python”, write a small code to replace ‘+’ with space in python.

Ans- Python strings is a sequence of characters enclosed in quotes.

* Strings are immutable i.e. the contents of the string cannot be changed after it is created
* Python does not support character data type . A string of size 1 can be treated as characters

Code:-string = "I+Love+Python"

def remove(string):

return string.replace('+'," ")

print(remove(string))

1. What does the function **ord()** do in python? Explain with example. Also, write down the function for getting the datatype of a variable in python.

Ans- The python **ord()** function returns an integer representing Unicode code point for the given Unicode Character

Example:- # Code point of an integer

print(ord(‘8’))

# Code point of character

print(ord(‘&’))

Output:

56

38

Function for getting the datatype of a variable is type() function, it returns the type of the variable passed

Example:

a=12

print(type(a))

Output: <type ‘int’>

WORKSHEET-1

**SQL**

# Q1 and Q2 have one or more correct answer. Choose all the correct option to answer your question.

1. Which of the following is/are DDL commands in SQL?
   1. Create B) Update

C) Delete D) ALTER

Ans- A, D

1. Which of the following is/are DML commands in SQL?
   1. Update B) Delete

C) Select D) Drop

Ans- A,B

# Q3 to Q10 have only one correct answer. Choose the correct option to answer your question.

1. Full form of SQL is:
   1. Strut querying language B) Structured Query Language

C) Simple Query Language D) None of them

Ans- B

1. Full form of DDL is:
   1. Descriptive Designed Language B) Data Definition Language

C) Data Descriptive Language D) None of the above.

Ans- B

1. DML is:
   1. Data Manipulation Language B) Data Management Language

C) Data Modeling Language D) None of these

Ans- A

1. Which of the following statements can be used to create a table with column B int type and C float type?
   1. Table A (B int, C float) B) Create A (b int, C float)

C) Create Table A (B int,C float) D) All of them

Ans-C

1. Which of the following statements can be used to add a column D (float type) to the table A created above?
   1. Table A ( D float) B) Alter Table A ADD COLUMN D float

C) Table A( B int, C float, D float) D) None of them

Ans- D

1. Which of the following statements can be used to drop the column added in the above question?
   1. Table A Drop D B) Alter Table A Drop Column D

C) Delete D from A D) None of them

Ans- B

1. Which of the following statements can be used to change the data type (from float to int ) of the column D of table A created in above questions?
   1. Table A (D float int) B) Alter Table A Alter Column D int

C) Alter Table A D float int D) Alter table A Column D float to int

Ans-B

1. Suppose we want to make Column B of Table A as primary key of the table. By which of the following statements we can do it?
   1. Alter Table A Add Constraint Primary Key B B) Alter table (B primary key)

C) Alter Table A Add Primary key B D) None of them

Ans- D

# Q11 to Q15 are subjective answer type questions, Answer them briefly.

1. What is data-warehouse?

Ans- A **Data Warehouse**is separate from DBMS, it stores huge amount of data, which is typically collected from multiple heterogeneous source like files, DBMS, etc. The goal is to produce statistical results that may help in decision makings. For example, a college might want to see quick different results, like how is the placement of CS students has improved over last 10 years, in terms of salaries, counts, etc.

1. What is the difference between OLTP VS OLAP?

Ans- a) Online Analytical Processing (OLAP) is a category of software tools that analyse data stored in a database whereas Online transaction processing (OLTP) supports transaction-oriented applications in a 3-tier architecture.

b) OLAP creates a single platform for all type of business analysis needs which includes planning, budgeting, forecasting, and analysis while OLTP is useful to administer day to day transactions of an organization.

c) OLAP is characterized by a large volume of data while OLTP is characterized by large numbers of short online transactions.

d) In OLAP, data warehouse is created uniquely so that it can integrate different data sources for building a consolidated database whereas OLTP uses traditional DBMS.

1. What are the various characteristics of data-warehouse?

Ans- a) Subject-oriented: A data warehouse is always a subject oriented as it delivers information about a them

instead of organizations current operations

b) Integrated: A data warehouse is built by integrating data from various sources of data such that a

mainframe and a relational database

c) Time variant: In this data is maintained via different intervals of time such as weekly, monthly, or

annually etc. It founds various time limit which are structured between the large datasets and are held in

online transaction process (OLTP). Another feature of time-variance is that once data is stored in the data

warehouse then it cannot be modified, alter, or updated.

d) Non-volatile: As the name defines the data resided in data warehouse is permanent. It also means that

data is not erased or deleted when new data is inserted. It includes the mammoth quantity of data that is

inserted into modification between the selected quantity on logical business. It evaluates the analysis

within the technologies of warehouse.

1. What is Star-Schema??

Ans- **Star schema** is the fundamental schema among the data mart schema and it is simplest. This schema is

widely used to develop or build a data warehouse and dimensional data marts. It includes one or more fact

tables indexing any number of dimensional tables. The star schema is a necessary case of the snowflake

schema. It is also efficient for handling basic queries. It is said to be star as its physical model resembles to

the star shape having a fact table at its center and the dimension tables at its peripheral representing the star’s

points.

1. What do you mean by SETL?

Ans- **SETL** (SET Language) is a very high-level programming language based on the mathematical theory of sets. SETL provides two basic aggregate data types: unordered sets, and sequences (the latter also called tuple*s*). The elements of sets and tuples can be of any arbitrary type, including sets and tuples themselves. Map*s* are provided as sets of *pairs* (i.e., tuples of length 2) and can have arbitrary domain and range types. Primitive operations in SETL include set membership, union, intersection, and power set construction, among others.