MSD Sanjeevani Public School, Mohan Garden
Subject- Computer Science (with Python)
Class-12ᵗʰ (Non-Med)
Assignment-1 (from **Ch-1: Python Revision Tour)**

General Instructions: do all the   question answer   in a notebook (will be checked, when school reopen) and write the answer of unsolved questions in same copy.

Q1 **What do you mean by tokens in python? List themExplain.**

Ans   The smallest individual unit in a program is known as **Token** or **lexical unit**. There are five types of tokens in Python:

    i)   Keywords
    ii)   Identifiers
    iii)   Literals
    iv)   Operators
    v)   Punctuators

Q2 **Explain types of tokens in python?**

Ans   There are five types of tokens in Python:

    i)   **Keywords**: It is a word having special meaning reserved by programming language.

Example : for, if , while, or, and, not , import, elif, else, continue, break etc.

    ii)   **Identifiers (Names)**: Identifiers are the names given to different parts of the program like variables, functions, lists, dictionaries etc. The naming rules for python identifiers are:

    a) Variable name must be madeup of letters(a-z,A-Z), digits(0-9) or underscore(_).
    b) Python is a case-sensitive language and treats upper and lower letters differently.[int and Int are different]
    c) First character of variable must not a digit.
    d) First character can be _(underscore) or a letter.
    e) Keywords can not be used as variable name.
        For example : My-num, 1num, num 1 are invalid identifiers.
        Whereas : My_num, num1,num_1 are valid identifiers.

    iii)   **Literals** : Literals are data items that have a fixed/constant values.

Example : "Python", 'python' [String literals], 234, -3,0 [integer literals]
-12.05, 789.356, 0.17E5 [float/read literals], True,False[Boolean literals]

    iv)   **Operators**:   Operators triggers some action when applied to variables and other objects in an expression.   Types of

operators are:

      a) arithmetic operators (+ - * / % ** //)
      b) relational operators (> < <= >= == !=)
      c) Assignment operator(=)
      d) Logical (and or)
      e) Membership operators (in not in)
      f) Arithmetic-assignment operators(/= += -= *= etc)

v)   **Punctuators** : punctuators are symbols that are used in programming languages to organize sentence structure and indicates program structure , statements etc.

Most common punctuators in python are : ' " # \ ( ) [ ] { } , :

Q3   **Answer the following question:**

a)   **Identify the invalid identifiers and also justify (reason) from the following:**

Price*qty, For, while, 4thCol, totally, Row31, _amount,

b)   **Identify and write the type of token for following:**

elif , **, >, += , day1, { }, continue, name, 'program'

c)   **Identify and write the type of operator :**

= > in // % ** <= += and

d)   **What do you mean by mutable and immutable types? List them.**

e)   **Identify and write the type of data from (int, float, bool, str, list of int, list of str) data types for the underlined part of the code:**

  i)   if <u>temp<32</u> :
         print("Freezing")

  ii)   if <u>temp</u><32 :
         print("Freezing")

  iii) L=['Rahul','Ashu','Preet']
         print(<u>L</u>)

  iv) L=['Rahul','Ashu','Preet']
         print(<u>L[0]</u>)

  v)   L= "Python Revison Tour"
         S=L.split( ) # it makes list of words for L
         print(<u>S</u>)

  vi) L= "Python Revison Tour"
         S=L.split( ) # it makes list of words for L
         print(<u>S[2]</u>)

  vii) M=[ ]
         <u>M</u>.append( )