**20 May**

**Python Basic - 1**

Q.1. What are keywords in python? Using the keyword library, print all the python keywords.

**Ans:-Python keywords are special reserved words that have special meaning and can’t be used for anything but those specific purposes. For using keyword library ”import kwlist” and it prints all the keywords are as follows:- and, as, assert, break, class, continue, def, del, elif, else, except, finally, false, for, from, global, if, import, in, is, lambda, nonlocal, none, not, or, pass, raise, return, true, try, with, while, yield.**

Q.2. What are the rules to create variables in python?

**Ans:- Variable name must start with a letter or the underscore character.**

**A variable name cannot start with a numbers.**

**A variable name only contains alphabets (a-z, A-Z), numbers (0-9), and underscore( \_ ).**

**A variable names are case sensitive**.

Q.3. What are the standards and conventions followed for the nomenclature of variables in python to improve code readability and maintainability?

**Ans:-The nomenclature of variables in python should be lowercase and individual words can be separated by the underscores when needed to improve code readability and maintainability.**

Q.4. What will happen if a keyword is used as a variable name?

**Ans:-If a keyword are used as a variable name it shows syntax error.**

Q.5. For what purpose def keyword is used?

**Ans:-** **The def keyword is used to create, (or define) a function.**

Q.6. What is the operation of this special character ‘\’?

**Ans:- The special operation of this special character ‘\’ is to**

Q.7. Give an example of the following conditions:

(i) Homogeneous list :- **A lists are mutable.** **A homogeneous list can contain the same type of objects.** **A homogeneous list is where the elements are restricted to a specific type such as a list of Person objects, a list of String objects, a list of Book objects.**

(ii) Heterogeneous set :- **The items stored in heterogeneous set can be of any type numeric, string, boolean, objects, etc which makes it heterogeneous. This means that a list can have any type of data and we can iterate over this list using any type of loop. The elements stored are usually associated with an index that defines the position in the list.**

(iii) Homogeneous tuple :- **The tuples are immutable. Heterogeneous tuples sequence of elements that are accessed via unpacking or indexing.**

Q.8. Explain the mutable and immutable data types with proper explanation & examples.

**Ans:-** **An object whose internal state can be changed is called mutable for example a list, a set, and a dictionary. An object whose internal state cannot be changed is called immutable for example a number, a string, and a tuple.**

Q.9. Write a code to create the given structure using only for loop.

\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*

**Ans:-**

**def triangle(n):**

**k=n-1**

**for i in range (0, n):**

**for j in range(0, k):**

**print(end=” “ )**

**k=k-1**

**for j in range(0, i+1):**

**print(“\*”, end=” “)**

**print(“\r”)**

**n=5**

**triangle(n)**

Q.10. Write a code to create the given structure using while loop.

|||||||||

|||||||

|||||

|||

|

**Ans:-**

**def triangle(n):**

**k=n+1**

**while i in range (n,0):**

**while j in range(k,0):**

**print(end=” “ )**

**k=k+1**

**while j in range(0, i-1):**

**print(“I”, end=” “)**

**print(“\r”)**

**n=5**

**triangle(n)**