1. **Explain the significance of Python keywords and provide examples of five keywords.**

Ans: Python keywords are some pre-defined and reserved keywords in Python that have special meaning. Keywords are used to define the syntax of coding. They can not be used as identifiers, function, class , object or variable name.

Example-

**a) and:** It is a logical operator which returns true value if both operands are true, else returns false.

**b) or:** It is a logical operator that returns true value if either of the operands are true. If both operands are false, then only it returns false.

**c) if:** It creates a block of statements that will be executed if the associated statement is true.

**d) for:** It creates a block of statements that will be executed a certain number of times as per given range in a loop.

**e) while:** It runs a block of statements until the given conditions are met with an iterator.

1. **Describe the rules for defining identifiers in Python and provide an example.**

Ans: 1. An identifier can be the combination of alphabets(lowercase/uppercase), digits

or an underscore(\_).

2. An identifier should start with a letter or underscore.

3. An identifier cannot start with a digit.

4. Identifiers are case-sensative.

5. Python keywords cannot be used as identifiers.

6. An identifier should be descriptive and meaningful.

Example: ‘num1’, ‘Sq\_num’, ‘my\_str1’.

1. **What are the comments in Python and why are they useful? Provide an example.**

Ans: Comments are used to explain code, make code more readable and prevent execution while testing code. A single line comment starts with ‘#’ and a multi-line comment is encoded between

“””.................

…………

………… “””.

Example:

Code:

print(“Welcome to my world of Python.”) # Prints the string “Welcome to my world of Python.”

Output:

Welcome to my world of Python.

1. **Why is proper indentation important in Python?**

Ans: Indentation in Python is not only significant but also important. Obviously indentation in

coding makes code more readable and simple; most importantly in Python, looping and

conditional statements create a block of statements inside it through indentation instead of

using brackets. So if indentation is not used properly it will cause errors in it.

1. **What happens if indentation is incorrect in Python?**

Ans: If codes are not indented properly, then it will show error in code.

Example:

Code:

for i in range(5):

print(i)

Output:

Cell In[1], line 2

print(i)

^

IndentationError: expected an indented block after 'for' statement on line 1.

1. **Differentiate between expressions and statements in Python with examples.**

Ans: An expression is a sequence or combination of values, variables, operators or function calls that always produces or returns a value. The evaluation of an expression does not change the state and the result either returns to a function call or displayed in the Python prompt.

A statement is the smallest executable unit of code that has an effect like creating a variable or displaying a value. The execution of a statement changes state but it is not necessary to display or produce a value.

Example:

a = 4

a + 16 # Expression

print(f"{True}") if a == 4 else print(f"{False}") # Statement

Output:

True