**Assignment 4-**

**1. What exactly is []?**

**Ans-1** This is an empty list value that contains no items.

**2. In a list of values stored in a variable called spam, how would you assign the value hello as the**

**third value? (Assume [2, 4, 6, 8, 10] are in spam.)**

**Ans-2** spam[2] = 'hello'

(As indexing start from 0)

**Lets pretend the spam includes the list [a, b, c, d] for the next three queries.**

**3. What is the value of spam[int(int(3 \* 2) / 11)]?**

**Ans-3** its value will be “d”

**4. What is the value of spam[-1]?**

**Ans-**4 its value will be “d”

As [-1] will start from reverse end

**5. What is the value of spam[:2]?**

Ans-5 -- its value will be ['a', 'b']

**Lets pretend bacon has the list [3.14, cat, 11, cat, True] for the next three questions.**

**6. What is the value of bacon.index(cat)?**

**Ans-6** – it will return 1

**7. How does bacon.append(99) change the look of the list value in bacon?**

**Ans-7** This will add 99 at the end of list and return

[3.14, 'cat', 11, 'cat', True, 99]

**8. How does bacon.remove(cat) change the look of the list in bacon?**

**Ans-8** This will remove cat from the list and return

[3.14, 11, 'cat', True]

**9. What are the list concatenation and list replication operators?**

**Ans-9** The operator for list concatenation is +,

and the operator for replication is \*.

**10. What is difference between the list methods append () and insert ()?**

**Ans-10** The difference between append and Insert is

append () will add values only to the end of a list, insert () can add them anywhere in the list.

**11. What are the two methods for removing items from a list?**

**Ans-11** The 2 method are used for removing items two from a list is

**del statement and the remove().**

**12. Describe how list values and string values are identical.**

**Ans-12** Both lists and strings can be passed to len(), have indexes and slices, be used in for loops, be concatenated or replicated, and be used with the in and not in operators.

**13. What’s the difference between tuples and lists?**

**Ans-13** Tuples are immutable and they cannot be changed at all while the Lists are mutable their Values can be change, add or removed. Also, tuples are written using parentheses, (), while lists use the square brackets, [].

**14. How do you type a tuple value that only contains the integer 42?**

**Ans-14** It can be written as

(42,)

**15. How do you get a list values tuple form? How do you get a tuple values list form?**

**Ans-15** We get a list values tuple form Using tuple() built-in function, To convert a tuple into list in Python, call list() built-in function and pass the tuple as argument to the function. list() returns a new list generated from the items of the given tuple.

**16. Variables that list values are not necessarily lists themselves. Instead, what do they**

**contain?**

**Ans-16** They contain references to list values.

**17. How do you distinguish between copy.copy() and copy.deepcopy()?**

**Ans-17** The copy.copy() function will do a shallow copy of a list, while the copy.deepcopy() function will do a deep copy of a list. That is, only copy.deepcopy() will duplicate any lists inside the list.