**APPLICATION DEVELOPMENT USING PYTHON(18CS55) ASSIGNMENT1**

**Group1**

1. Explain how would you enter expressions into the python shell
2. Explain the data types supported by python with an example
3. What is string concatenation and replication, explain with an example? What are the possible errors
4. What is a variable and are the rules for declaring a variable in python?
5. Explain print(), len(),input(), str(), int() functions with an example
6. What should the following two expressions evaluate to? 'spam' + 'spamspam', 'spam' \* 3  
   What is a list data type and how would you access individual value from the list, explain with examples
7. Explain how would you get sublist from the lists
8. Explain pattern match operators on the lists
9. Write a short note on augment assignment operator and the methods used with list?

**Group2**

1. Write a short note on Boolean values, Boolean operators and comparison operators
2. What are the elements of flow control statements explain?
3. Explain if, else, elif , for , while statement with flowchart
4. Explain break and continue statement
5. What is importing a module stand for and why is it necessary

Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

1. What is the difference between range(10), range(0, 10), and range(0, 10, 1)in a for loop?
2. What is a list data type and how would you access individual value from the list, explain with examples
3. Explain how would you get sublist from the lists
4. Explain pattern match operators on the lists

**Group3:**

1. What is a function and how it can be defined in python explain?
2. What are the keyword arguments for print() explain with an example
3. How many global scopes are there in a Python program? How many local scopes?
4. Write a short program for which output should be displayed as:

I am thinking of a number between 1 and 20.

Take a guess.

**10**

Your guess is too low.

Take a guess.

**15**

Your guess is too low.

Take a guess.

**17**

Your guess is too high.

Take a guess.

**16**

Good job! You guessed my number in 4 guesses

1. Write a function named collatz() that has one parameter named number.
   1. If number is even, then collatz() should print number // 2 and return this value.
   2. If number is odd, then collatz() should print and return 3 \* number + 1.
2. Explain mutable and unmutable data types
3. Write a short note on references on the list
4. What is the difference between copy.copy() and copy.deepcopy()?
5. What is a dictionary data type write the differences between dictionaries and lists

**Group4:**

1. Explain dictionary methods?
2. Write a short note on nested dictionaries and lists
3. Explain Tic Toe program using dictionaries and lists
4. Write a function named displayInventory() that would take any possible

“inventory” and display it like the following:

Inventory:

12 arrow

42 gold coin

1 rope

6 torch

1 dagger

Total number of items: 62

1. Write a short note on augment assignment operator and the methods used with list?
2. Explain how would you get sublist from the lists
3. Explain pattern match operators on the lists
4. Write a short note on augment assignment operator and the methods used with list
5. Explain if, else, elif , for , while statement with flowchart