Python Programming – Class Assessment

[Time: 2 hrs]

[Total Marks: 100]

	Perform the following tasks:	**Marks**
Q.1	Write a program using list comprehension to find primes in range 2 to 100.	**[5]**
Q.2	Write a function to reverse a string.	**[5]**
Q.3	Write a program to extract the words from the given list which have their first character in uppercase. **Days = ['Monday', 'tuesday','friday', 'Sunday', 'Saturday']** **Output: ['Monday', 'Sunday', 'Saturday']**	**[8]**
Q.4	Write a program to extract the year part from the dates in the given list. **Batch = ['15-06-1997','15-06-2011','15-06-1993','15-06-2020']** **Output: ['1997','2011','1993','2020']**	**[10]**
Q.5	Write a program swap the keys to values and values to keys of the given dictionary. **Module = {'Data Science':1,'Machine Learning':2, 'SQL':3, 'Big Data':4}** **Output: {1:'Data Science',2:'Machine Learning', 3:'SQL', 4:'Big Data'}**	**[8]**
Q.6	Write a program to calculate the cumulative average of the given list using accumulate() and lambda function. **Input list: [5,2,1,4,6]**	**[10]**
Q.7	Write a program to count the number of elements in the string (given by the user) that are not present in the 'my_string'. Do not count the white spaces. Use Recursion **my_string = 'Data Science'**	**[10]**
Q.8	Define a function to check whether a number is in a range (1000,10000) or not.	**[8]**

Q.9	Write a program to print pascal triangle upto 6 steps (using list).	**[10]**
Q.10	Write a program to calculate the sum of all elements in the list. **test_score = [10, 32, 23, 14, 25]**	**[8]**
Q.11	Find the minimum value along each of the rows. Create a 2D Numpy array from list of lists Score = np.array([[210, 402, 383], [140, 375, 106], [140, 125, 217], [292, 240, 295]])	**[10]**
Q.12	Replace all even numbers in the array with -1. Use the array given below `num_array = np.array([0, 21, 32, 13, 44, 45, 26, 28, 38, 34, 65, 48, 76])`	**[8]**